Re-industrialisation in Hong Kong

Opportunities & Limitations in Manufacturing for HK Enterprises entering into ASEAN

hkpc TSF

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1. Preface

Hong Kong enterprises and those with manufacturing bases in Mainland China are facing great challenges from the rise of operating costs and the current global economic situation. With increasing labour cost and limited resources, a number of large multi-national corporations (MNCs) have either upgraded their production technologies to rely less on labour, or diversified their production bases. However, some Hong Kong manufacturers, especially small and medium-sized enterprises (SMEs), lack the information and resources to devise these strategies to stay competitive in the marketplace.

In order to better understand enterprises' needs, the Hong Kong Productivity Council (HKPC) and other key associations in Hong Kong observed that Hong Kong SMEs generally encounter five difficulties: 1) Fulfilling Country of Origin requirements under the United States (US) laws; 2) Decline of revenues and earnings in the manufacturing industry, particularly those of SMEs; 3) Hong Kong enterprises often lack integrated information when it comes to seeking alternative options for their operations; 4) Hong Kong SMEs need specific and practical guidance on the overarching matters related to doing business, such as taxation, environmental requirements, which are outside of their areas of expertise; and 5) The guidance available for enterprises from open sources, such as the internet, consultants, or peers, can be limited, biased, fragmented, or costly.

This guidebook provides useful information to address local SMEs' difficulties. Not only does it outline the re-industrialisation process in Hong Kong, but also highlights the potential opportunities and limitations in investing in the 10 Association of Southeast Asian Nations (ASEAN) countries, as well as guidance on submitting a ruling request on the country of origin under the US laws. It consists of guidebooks for each ASEAN country, covering overviews of the general operation and labour costs required to establish a manufacturing base in specific ASEAN countries; the important legal, tax, and environmental issues to be aware of; the local incentive programmes for specific industries; the availability of logistics and infrastructure; as well as the research and development environment.

1. Preface

About Hong Kong Productivity Council (HKPC)

HKPC is a multi-disciplinary organisation established by statute in 1967, to promote productivity excellence through integrated advanced technologies and innovative service offerings to support Hong Kong enterprises. HKPC is the champion and expert in facilitating Hong Kong's reindustrialisation empowered by i4.0 and e4.0 – focusing on R&D, IoT, big data analytics, AI and Robotic technology development, digital manufacturing, etc., to help enterprises and industries upgrade their business performance, lower operating costs, increase productivity and enhance competitiveness.

HKPC is a trusted partner with comprehensive innovative solutions for Hong Kong industries and enterprises, enabling them to achieve resources and productivity utilisation, effectiveness and cost reduction, and enhanced competitiveness in both local and international marketplace. It offers SMEs and startups immediate and timely assistance in coping with the ever-changing business environment, accompanying them on their innovation and transformation journey.

In addition, HKPC partners and collaborates with local industries and enterprises to develop applied technology solutions for value creation. It also benefits a variety of sectors through product innovation and technology transfer, with commercialisation of multiple market-driven patents and technologies, bringing enormous opportunities abound for licensing and technology transfer, both locally and internationally.

2. Guide to Hong Kong's Reindustrialisation

Opportunities and Limitations in Manufacturing

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1. Overview of Hong Kong's Reindustrialisation

Executive Summary

In recent years the Government of the Hong Kong Special Administrative Region has been promoting reindustrialisation in order to boost the territories' economic growth and reduce the reliance on the service industry. This policy especially focuses on developing a strong high-end manufacturing industry by leveraging for example smart production lines.

The government aims to support research and development activities (R&D) and knowledge transfer. R&D results should therefore lead to new technology commercialisation by manufacturers. Some main focus areas of the policy include advanced materials, nanotechnology, microelectronics, etc.

In order to enhance Hong Kong's R&D capacities and promote reindustrialisation, the government will focus on enhancing every aspect of the framework, from building new infrastructure and providing financial support to nurturing digital talents.

1. Overview of Hong Kong's Reindustrialisation

I. Hong Kong Profile[1,2,3,4,5,6,7]

Hong Kong possesses multiple advantages for companies wishing to establish their manufacturing operation in the territory, including: easy company registration processes, a simple tax system, low corporate tax rate, world-class infrastructure, monetary stability, well-developed banking system, in addition to an independent judiciary system. In addition, the territory is considered one of the easiest places to do business in (ranked third in the World Bank's 2020 Doing Business Report).

Due to the various uncertainties in Hong Kong over the past year, including the effects of the trade war between Mainland China and the US, Hong Kong's gross domestic product (GDP) is forecasted to drop by 1.3% between 2018 and 2019.

GDP *(in USD)*
360.7 bn (2019f)
363.4 bn (2018)

GDP Per Capita *(in USD)*
49,726 (2019f)
49,294 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 0.1%
Industry: 7.6%
Services: 92.3%

External Trade *(% of GDP)*
Import: 188.0% (2018)
Export: 188.0% (2018)

Population
7.52 million (2019)
World ranking: 104/233

Median Age
44.8 (2018)
World ranking: 8/201 (from oldest to youngest)

Official Languages
Chinese
English

English Literacy
Moderate Proficiency (2018)
World ranking: 30/88

Government Structure
Special Administrative Region of the People's Republic of China

Land Area
1,106 sq. km.

II. Hong Kong Profile on Trade

A. International Trade Agreements and Restrictions[8,9]

Numerous countries signed bilateral Free Trade Agreements (FTAs) with Hong Kong which facilitate Hong Kong's companies to enter, do business or obtain comprehensive investment protection in the relevant countries and territories. These FTAs also reduce or eliminate tariffs barriers, facilitate procurement, ease tourism or protect intellectual property rights. In addition, the FTAs reduce trade restrictions imposed by non-tariff barriers, which is expected to benefit Hong Kong exporters.

Hong Kong has eight signed and effective FTAs. In addition, there is also one FTA with the Maldives that has concluded negotiations but not yet signed.

Signed and Effective Bilateral Trade Agreements

	Affected Industry	Agreement (effective date)
	• All	**Mainland and Hong Kong Closer Economic Partnership Arrangement (2003)** • Covers trade of goods and services, investment, economic and technical cooperation • Updated agreement on trade of goods implemented on 1 January 2019
	• All	**Hong Kong – New Zealand Closer Economic Partnership (2011)** • Covers trade of goods and services, investment, measures to improve business and commerce
	• All	**Hong Kong – European Free Trade Association Free Trade Agreement (2012)** • Covers trade of goods and services, investment, and other trade related issues such as protection of intellectual property
	• All	**Hong Kong – Chile Free Trade Agreement (2014)** • Covers trade of goods and services, investments, government procurement, competition and other trade related issues
	• All	**Hong Kong – Macao Closer Economic Partnership Arrangement (2017)** • Covers trade of goods and services, investment, intellectual property, economic and technical cooperation, institutional arrangements
	• All	**Hong Kong – Georgia Free Trade Agreement (2019)** • Covers trade of goods and services, investment, intellectual property and other trade related issues
	• See next page	**Hong Kong – ASEAN Free Trade Agreement (2019)** • Covers trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas (see next page).
	• All	**Hong Kong – Australia Free Trade Agreement (2020)** • Covers trade of goods and services, investments, intellectual property and other trade related issues.

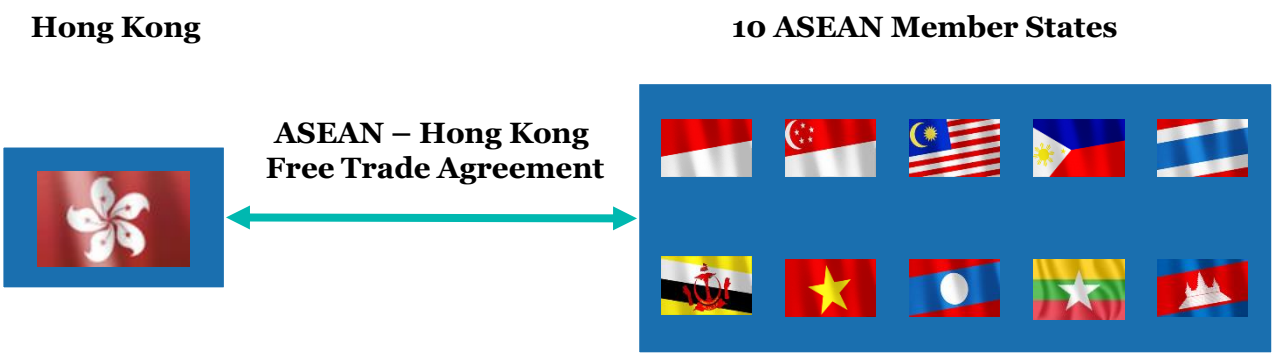
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreement in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods, trade of services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement Effective Date:

- 11 June 2019 - Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

Investment Agreement Effective Date:

- 17 June 2019 – Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

The dates of entry for the remaining four countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11]

Since 1997, when Mainland China assumed sovereignty of Hong Kong, the region structured around the principle of "one country, two systems". The Basic Law of the Hong Kong Special Administrative Region (HKSAR) ensures that the current political system will remain in effect until 2047.

- The executive power of the HKSAR government is held by the Chief Executive (CE), who is elected by the Election Committee, and appointed by the Central People's Government. Together with the Executive Council (16 principal officials appointed by the CE, along with 16 non-official members), the CE implements the Basic Law, signs bills and budgets, promulgates laws, issues government policies and Executive Orders.
- The legislative power is held by the Legislative Council which is formed by 70 members. In addition to its legislative functions, the Legislative Council is also responsible for debating, vetting and approving the budget, listening to, and debating the Chief Executive's policy address on matters relating to the public interest. The Legislative Council is also responsible for agreeing to the appointment and removal of judges from the Court of Final Appeal and the Chief Justice of the High Court.
- The judiciary system is independent from the legislative power. The Court of Final Appeal is the highest court on the territory and is headed by the Chief Justice. For more details on the judiciary system in Hong Kong, please refer to section 2.

Source:

[1] *2020 Ease of Doing Business Report, World Bank*

[2] *Hong Kong Economic Situation – Latest Developments, Government of the Hong Kong Special Administrative Region*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), World Bank*

[5] *Mid-year population for 2019 [13 Aug 2019], Census and Statistics Department*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Hong Kong, World Atlas*

[8] *Free Trade Agreements, Asia Regional Integration Centre*

[9] *Hong Kong – ASEAN Trade Relations, Trade and Industry Department*

[10] *ASEAN official website*

[11] *Government Structure, Government of the Hong Kong Special Administrative Region*

[12] *World Bank Political Stability And Absence Of Violence/Terrorism*

2. Legal Environment and Competition Law

Executive Summary

Companies that wish to register in Hong Kong can choose to set up different business entities, among which the most common are the limited company, branch office, or representative office.

Manufacturers wishing to carry out manufacturing activities on the territory will need to register with the Trade and Industry Department (TID) in order to obtain a Factory Registration (FR). Once the FR is obtained, manufacturers can require a certificate of origin to prove that their goods are of Hong Kong origin.

The Hong Kong Special Administrative Region's (HKSAR) legal environment is based on the Basic Law which states that HKSAR will continue to enforce the rule of law. Under the principle of "One Country, Two Systems", the HKSAR legal system differs from Mainland China's.

Additionally, Hong Kong is also well known for its international position as an arbitration centre in Asia.

2. Legal Environment and Competition Law

I. Types of Legal Business Entities Available for Foreign Investments

A. Company Registration[1,2]

According to business requirements, companies can set up different entity types in Hong Kong. The main forms include: a limited company, a branch office and representative office.

Limited Company

- This is the most common company type;
- This is a company which is incorporated in Hong Kong;
- Owners can take advantage of all the tax benefits and concessions available to any fully incorporated business; and
- They can enjoy benefits such as the Closer Economic Partnership Arrangement, which is a free trade agreement with Mainland China.

Branch Office

- This is for companies that are incorporated outside of Hong Kong and establish a place of business in Hong Kong;
- They must register with the Companies Registry as a 'Registered Non-Hong Kong Company' within one month of establishment; and
- Unlike a subsidiary limited company, a branch office is not a separate legal entity from the parent and can leverage funds off the credit rating of its owner.

Representative Office

- They cannot engage in profit-making activities and can only fulfil limited functions;
- They are useful for companies looking to explore the Hong Kong market before making a larger investment;
- If a decision is made to enter into a transaction which creates a legal obligation, it must change the business to a limited company or branch office.

Foreign companies must register with the Companies Registry in order to carry business in Hong Kong. It generally involves three steps:

Note: Additional detail on company registration (www.cr.gov.hk/en/services/register-company.htm)

B. Factory Registration (FR)[3]

Before applying for a Certificate of Origin (CO) to cover their exports, manufacturers and their subcontractors are required to register under FR with the Trade and Industry Department (TID), to demonstrate that they possess sufficient capacity to produce the concerned products. Manufacturers participating in the Local Subcontracting Arrangement (LSA) or Outward Processing Arrangement (OPA) must also have a valid FR.

To obtain the FR, businesses must:

- Be registered with the Business Registration Office of the Inland Revenue Department;
- Have fixed, self-contained premises (which may be self-owned or rented);
- Have suitable machinery for manufacturing operations;
- Employ a labour force to produce the goods; and
- Maintain up-to-date and accurate books and records related to the factory's operations.

An FR is valid for one year. Factories are required to pay an annual fee to renew the FR. To obtain the FR, an applicant has to complete an Application Form for FR (TID 91), provide supporting documents, and pay the registration fee. For details on the application procedures and requirements, please refer to TID's website (www.tid.gov.hk/portal/english/fra.html).

C. Certificate of Origin (CO)[4]

In Hong Kong, there are two major types of COs: non-preferential COs and preferential COs.

Non-preferential COs

Non-preferential COs include the Certificate of Hong Kong Origin (CHKO) and Certificate of Origin – Processing (COP). They are issued to facilitate customs clearance for imports and to satisfy the requirements of overseas importers. It is not mandatory for manufacturers to apply for CHKO and COP.

The CHKO certifies that the goods concerned are of Hong Kong origin, while the COP certifies that the goods concerned have undergone certain manufacturing processes in Hong Kong, but not to the extent where Hong Kong origin status can be conferred.

Preferential COs

Preferential COs include the Certificate of Hong Kong Origin - CEPA (CO(CEPA)), Certificate of Hong Kong Origin – New Zealand (CO(NZ)), Certificate of Hong Kong Origin – Georgia (CO(Georgia)) and Certificate of Hong Kong Origin – Form AHK (CO(Form AHK)). They are issued to certify that the goods concerned claiming tariff preferences meet the preferential origin rules under the respective trade agreements between Hong Kong and its trading partners.

Application Procedures

Both non-preferential COs and preferential COs can be issued by the TID or any one of five Government Approved Certification Organizations (GACOs), including the Hong Kong General Chamber of Commerce, the Federation of Hong Kong Industries, the Chinese Manufacturers' Association of Hong Kong, the Indian Chamber of Commerce Hong Kong, and the Chinese General Chamber of Commerce.

Manufacturers need to submit goods details at least two working days before departure of the consignment (can be done via online services). Usually, manufacturers must obtain an FR before applying for a CO. For additional details on the CO's electronic services and CO's application procedure, please refer to the TID website (www.tid.gov.hk/english/import_export/cert/cert_maincontent.html).

For more information on this section please refer to Appendix 1 and 2.

II. Overview on Other Business Laws and Regulations

The constitutional framework for the legal system in Hong Kong is provided by the Basic Law. Under the principle of "One Country, Two Systems", Hong Kong uses the common law system instead of Mainland China's civil law system. The robust legal system in Hong Kong protects local and foreign companies' operations, commercialisation, and branding.

A. Legal and Administrative Framework on Competition Law[5,6,7]

Competition Ordinance

The Competition Ordinance was enforced by the Competition Commission and the Communications Authority in December 2015. It was designed to create a relatively fair business environment by avoiding market's monopolies and increasing small and medium-sized enterprises (SMEs) development opportunities.

Under the Ordinance, all entities (including companies, partnerships, sole traders and trade associations), which carry out business activities that may prevent, restrict or distort competition in Hong Kong are restricted. For additional details on the Competition Ordinance please refer to the following website (www.elegislation.gov.hk/hk/cap619!en@2018-04-20T00:00:00).

International Arbitration

International arbitration is a preferred method for many businesses to resolve cross-border disputes. According to the 2018 International Arbitration Survey issued by White & Case LLP and Queen Mary University of London, Hong Kong was among the five most preferred seats of arbitration in the world (along with London, Paris, Singapore, and Geneva). Indeed, some world-class arbitration institutions which offer independent resolution services (e.g. mediation, arbitration, and adjudication) free from any government interference have set up branches in the city. Some examples include the Hong Kong International Arbitration Centre, China International Economic and Trade Arbitration Commission, China Maritime Arbitration Commission, and the International Court of Arbitration of the International Chamber of Commerce.

B. Intellectual Property Protection Law on Trademarks[8]

Madrid Agreement

To strengthen and facilitate intellectual property protection in Hong Kong, the Intellectual Property Department has proposed to enforce the Madrid System for the International Registration of Marks. The Madrid System is an international arrangement which seeks to facilitate the registration and management of trademarks in different jurisdictions by offering an efficient and cost-effective one-stop service for trademark owners. For details on the proposed application, please visit the Intellectual Department website (www.ipd.gov.hk/eng/intellectual_property/trademarks/Madrid_Protocol.htm).

C. Import/Export Regulations and Licences[9]

Certain goods are subject to import/export control in Hong Kong. Details of the controls, corresponding documents required and responsible department(s) are available on the TID website (www.tid.gov.hk/english/import_export/ie_policy.html).

If the goods to be imported or exported are "prohibited articles" or "reserved commodities" (under the Import and Export Ordinance or the Reserved Commodities Regulations), shipping companies, airlines and transportation companies are required to deliver to the TID the relevant manifests together with the import/export licences for checking within 14 days.

Subject to certain conditions, shipping companies, airlines and freight companies which are registered with the TID are exempted from the import/export licensing requirements for their transhipment cargoes. Details of the Transhipment Cargo Exemption Scheme can be found on the following website (www.tid.gov.hk/english/import_export/tces/tces_maincontent.html).

D. Jurisdiction System on Business Related Matters[10,11]

The Hong Kong legal system is built upon the Basic Law. The judicial system is divided into two for enforcement: the criminal law and the civil law. Usually commercial disputes will be judged by the Commercial Unit of the Civil Division.

The Hong Kong court system comprises different levels: the Court of Final Appeal, the High Court, the District Court and the Magistrates' Courts. In addition, there are a number of tribunals which have jurisdiction to settle disputes related to specific areas (Competition Tribunal, Lands Tribunal, Labour Tribunal, etc.).

Source:

1 Business and Company Registration Government of Hong Kong SAR

2 Companies Registry Governemnt of Hong Kong SAR,

3 Factory Registartion, Trade and Industry Department

4 Certificate of Origin, Trade and Industry department

5 Competition Ordinance, eLegislation

6 2018 International Arbitration Survey: The Evolution of International Arbitration, White & Case LLP

7 Arbitration – The International Arbitration Centre for the Asia Pacific, Department of Justice, 2019

8 Madrid Protocol, Intellectual Property Department

9 Import and Exports of Goods, Trade and Industry Department

10 Structure of the Courts, Judiciary Hong Kong

11 Organization Chart, Department of Justice

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

There are only three main taxes in Hong Kong: profits tax, salaries tax, and property tax. There is no value added tax (VAT) or any other sales tax in Hong Kong. The simple tax system and competitive tax rates help foster a favourable business environment in Hong Kong.

The HKSAR government has recently proposed many new incentives, which are targeted at strengthening Hong Kong's position as a major trading hub in Asia. Major support measures have also been proposed specifically to support small and medium-sized enterprises (SMEs) and promote reindustrialisation in Hong Kong.

Hong Kong has no foreign exchange controls, allowing free movement of capital in and out of the city. The Hong Kong dollar has been pegged to the United States dollar since 1983.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

Hong Kong has one of the most tax-friendly systems in the world. There are only three direct taxes: profits tax, salaries tax, and property tax. There is no value added tax (VAT) or related sales tax in Hong Kong. Hong Kong also does not tax capital gains. The low and competitive tax rates significantly reduce the tax burden of small and medium-sized enterprises (SMEs), allowing them to flourish and encouraging more entrepreneurs to establish companies in Hong Kong.

The main tax law in Hong Kong is the Inland Revenue Ordinance, and the main government body responsible for tax-related matters is the Hong Kong Inland Revenue Department (IRD). Hong Kong adopts the territorial basis of taxation, meaning only income or profit generated in Hong Kong is taxable. Income or profits generated outside Hong Kong will not be taxed in Hong Kong.

A. Profits Tax[1,2,3]

Tax Calculation

In Hong Kong, any person or business carrying out trade or businesses in Hong Kong will have their profits liable to tax. Expenses are generally deductible as long as they are incurred in the production of profits, except for expenses that are of a capital nature, which are generally not deductible.

The year of assessment in Hong Kong runs from 1 April of one year to 31 March of the following year.

Applicable Tax Rates

Hong Kong uses a two-tiered profits tax system, reducing the tax rate for the first HKD 2 million of profits. Unincorporated businesses such as partnerships and sole proprietorships will also have lower tax rates compared to corporations. For the specific tax rates, please see the table below:

Entity Type	Taxable Amount	Tax Rate (%)
Corporations	First HKD 2 million	8.25
	Any profits above HKD 2 million	16.5
Unincorporated Businesses	First HKD 2 million	7.5
	Any profits above HKD 2 million	15.0

For more information on profits tax, please refer to the IRD's official website (www.ird.gov.hk/eng/faq/2tr.htm).

Taxable Losses

Losses may be carried forward indefinitely to set off against future profits, but may not be carried back. Companies are not permitted to purchase a loss-making company to obtain a tax benefit.

Consolidated Filing

Hong Kong does not allow consolidated filing, and does not provide provisions for group relief. Related companies in the same group are required to file and pay tax separately.

Tax Return and Payment

The IRD will issue the tax returns to businesses usually around April. Tax filings are due one month from the date of issue of the tax return. Applications for an extension on the submission of tax returns can be made to the IRD in exceptional circumstances.

Companies and individuals are expected to pay a provisional profits tax for the upcoming year based on the current year's profits. The following year's payment will be offset using this provisional tax payment.

Double Taxation Agreements (DTAs)[4]

DTAs aim to eliminate income or profit being taxed in two or more jurisdictions at the same time. Eliminating double taxation allows both foreign investors investing in Hong Kong and Hong Kong investors looking to invest abroad to benefit. DTAs usually affect withholding tax rates on dividends, royalties, interest, and technical fees.

Hong Kong has entered into DTAs with 43 countries and regions as of December 2019, with the DTAs with Cambodia, Estonia, and Macao still pending ratification and entry into force.

For more information regarding DTAs signed between Hong Kong and other countries, please refer to the IRD's website (www.ird.gov.hk/eng/tax/dta_cdta.htm).

B. Value Added Tax and Other Business Related Taxes

Value Added Tax (VAT)

There is no VAT or any other related sales tax in Hong Kong.

Other Business Related Taxes

Property Tax

Any business or individual that owns land or buildings in Hong Kong, and earns rental income from letting these land or buildings, will be subject to property tax. The standard tax rate for property tax is 15%.

For more information regarding property tax, please refer to the IRD's official website (www.gov.hk/en/residents/taxes/property/index.htm).

C. Transfer Pricing Provisions[2]

Transfer pricing provisions in Hong Kong are mainly implemented under the Inland Revenue (Amendment) (No. 6) Ordinance 2018, which was enacted on 13 July 2018. This Amendment implemented the minimum standards of the Base Erosion and Profit Shifting (BEPS) framework developed by the Organisation for Economic Co-operation and Development (OECD) into the Inland Revenue Ordinance.

The main points of the transfer pricing provisions in Hong Kong include:

- Three tiered transfer pricing documentation requirements: the master file, local file, and country-by-country report (CbCR);
- Require Hong Kong businesses to prepare the master file and local file for years of assessment starting on or after 1 April 2018;
- Require transfer pricing adjustments for transactions not conducted at arm's length price that could lead to a tax benefit in Hong Kong (Rule 1), effective for years of assessment starting on or after 1 April 2018;
- Allow for a grandfathering provision, where transactions effective before 13 July 2018 are not subject to Rule 1 above;
- Permanent establishments of a non-Hong Kong resident company with income or loss arising from a transaction that has Hong Kong taxation implications are required to make transfer pricing adjustments under the separate enterprises principle, effective for years of assessment starting on or after 1 April 2019;
- The ultimate parent company of a multinational enterprise group is required to submit a CbCR to the IRD, if its group has an annual consolidated group revenue of HKD 6.8 billion or more; and
- Introduce a formal advance pricing arrangement (APA) scheme to Hong Kong, effective for years of assessment starting on or after 1 April 2018.

Businesses are not required to file the master file and local file if it meets any two of the following conditions:

- Total annual revenue under HKD 400 million;
- Total assets of under HKD 300 million; or
- Average number of employees of less than 100.

Local files are also not required to be prepared for related party transactions if the transaction does not exceed the following limits:

- HKD 220 million for transfer of properties other than financial assets and intangibles; or
- HKD 110 million for transactions of financial assets or intangibles; or
- HKD 44 million for any other type of transaction.

D. Statutory Auditing Requirements and Accounting Standards[2]

Audit Requirements

Under the Hong Kong Companies Ordinance, all incorporated companies in Hong Kong are required to have an annual audit of their financial statements performed meeting the applicable accounting standards set by the Hong Kong Institute of Certified Public Accountants (HKICPA). Financial statements can be prepared in any currency unless the business is a regulated entity.

Most companies will use the calendar year as the fiscal year. Records must be kept for seven years after the end of the financial year.

Accounting Standards

The HKICPA is responsible for setting accounting and auditing standards in Hong Kong. Financial statements must comply with the Hong Kong Financial Reporting Standards (HKFRS), which are essentially the same in most cases as the International Financial Reporting Standards (IFRS).

E. Support Measures in the 2019-2020 Budget[5]

Promoting Reindustrialisation

The HKSAR government has proposed allocating HKD 2 billion to build advanced manufacturing facilities in industrial estates to encourage more manufacturers to establish operations in Hong Kong. HKD 2 billion will also be injected into the Innovation and Technology Fund to provide matching grants for manufacturers setting up smart production lines in Hong Kong. The reindustrialisation of Hong Kong will be done through advanced and smart manufacturing techniques, and is crucial to reducing the Hong Kong economy's reliance on service industries.

Support for Enterprises

The HKSAR government has provided incentives to support local enterprises in light of the changing global economic and trade environment. These incentives include:

- Waiving business registration fees for 2019-2020;
- Raising the funding ceiling of the Technology Voucher Programme from HKD 200,000 to HKD 400,000;
- Injecting an additional HKD 2 billion to the Dedicated Fund on Branding, Upgrading, and Domestic Sales (BUD Fund), extending the scope of the BUD Fund to cover not only Mainland China and ASEAN countries but also all economies that have signed free trade agreements (FTAs) with Hong Kong, and increasing the total funding ceiling to HKD 4 million; and
- Enhancing the special concessionary measures under the SME Financing Guarantee Scheme.

For more information on incentives, please refer to section 9.

International Transportation Centre

Hong Kong has unique advantages given the geostrategic location, world-class infrastructure, and various transportation services. The HKSAR government aims to continue promoting the development of the maritime industry, as well as underpinning Hong Kong's status as an international aviation hub.

In the 2019-2020 Budget, the HKSAR government plans to provide higher incentives to marine insurers, and the ship leasing sector. These incentives aim to encourage ship financing in Hong Kong, strengthening the supply chain management industry, and reinforcing Hong Kong as a major Asian trading centre.

The main planned incentives include:

- 50% profits tax concessions for marine insurance and underwriting of specialty risks;
- Facilitating issuance of insurance-linked securities; and
- Profits tax concessions for aircraft leasing and related business.

II. Banking & Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)

Bank Account Setup Requirements[6]

Opening a bank account in Hong Kong is generally easy. At present, around 10,000 enterprise accounts are opened each month on average, of which about 60% to 70% are opened by SMEs and startups (including around 2,000 accounts for non-local SMEs and startup companies).

One major requirement is that all banks opening account activities must be done complying with the Anti-Money Laundering and Counter-Terrorist Financing Ordinance. The bank must conduct a customer due diligence review before opening an account with the customer.

Requirements and procedures for opening an account vary from bank to bank. General requirements for Hong Kong companies looking to open a bank account are shown in the table below.

#	General Requirements of Bank Account Setup for a Hong Kong Company
1	Date of incorporation
2	Business address, registered address, and correspondence address
3	Background and nature of business of the group(s) to which the company belongs (i.e. the parent company), if applicable
4	Nature of business, mode of operation, sales targets, and supplier information
5	Size of the company (e.g. number of employees, expected revenue)
6	Purpose of account opening, and types of transactions
7	Source of wealth and funds

Restrictions for FDI

The majority of FDI into Hong Kong is related to the banking and finance industries. There are no FDI restrictions, and the HKSAR government actively encourages FDI into the city, with many incentives to support businesses.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency

Being an international and major Asian financial centre, there are no foreign exchange controls in Hong Kong. Capital of any currency is allowed to flow in and out of Hong Kong without restriction.

C. Policy on Foreign Exchange Rate

Hong Kong has implemented a linked exchange rate system since 17 October 1983, where the Hong Kong dollar is pegged to the United States dollar. The Hong Kong Monetary Authority is responsible for maintaining the stability of the Hong Kong dollar exchange rate.

Source:

[1] *Two-tiered Profits Tax Rates Regime, Inland Revenue Department*

[2] *2019/2020 Hong Kong Tax Facts and Figures, PricewaterhouseCoopers*

[3] *Hong Kong Highlights 2019, Deloitte Touche Tohmatsu*

[4] *Comprehensive Double Taxation Agreements, Inland Revenue Department*

[5] *The 2019-20 Budget – Budget Speech, Government of the Hong Kong Special Administrative Region*

[6] *LCQ11: Opening of bank accounts by enterprises, Government of the Hong Kong Special Administrative Region*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

The main law governing employment and other labour matters in Hong Kong is the Employment Ordinance, with other supporting laws governing employee benefits.

Hong Kong's labour market has also slowly expanded during this decade, with the workforce reaching around four million in 2018. The percentage of educated working population has almost doubled over the past 20 years.

For foreign talents wishing to work in Hong Kong, there are many schemes that facilitate their entry into the city. Meanwhile, the HKSAR government and other local institutions have also launched programmes and initiatives aiming to encourage and promote the innovation and technology education in the city.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

There are multiple different ordinances to protect employees in Hong Kong. The major labour legislations in Hong Kong include:

- Employment Ordinance, Chapter 57;
- Factories and Industrial Undertakings Ordinance, Chapter 59;
- Employees' Compensation Ordinance, Chapter 282;
- Occupational Safety and Health Ordinance, Chapter 509; and
- Minimum Wage Ordinance, Chapter 608.

A. Contracts and Protection Towards Employees

Minimum Legal Working Age[1]

In Hong Kong, the minimum legal working age is 13, but only for non-industrial work. They are also subject to the condition that they must have completed Form III of secondary education, or attend full-time schooling if they have not. For industrial work, the minimum working age is 15.

The Employment of Children Regulations govern the employment of children under the age of 15 in all economic sectors, whereas the Employment of Young Persons (Industry) Regulations regulate the hours of work and the general conditions of employment of young persons over the age of 15 but under the age of 18 in industrial undertakings in Hong Kong. Children who are registered as apprentices are instead governed under the Apprenticeship Ordinance (Cap. 47).

For the purposes of art and training (such as in entertainment), the Commissioner for Labour may grant special permission for children under the age of 13 to be employed, subject to any conditions the Commissioner specifies.

Labour Contracts[2]

All labour contracts in Hong Kong are governed under the Employment Ordinance. Before beginning employment, employers must inform employees of the following employment conditions:

- Wage;
- Wage period;
- Length of notice required for termination; and
- Whether or not the employee will be titled to an end of year payment, and the amount and period if applicable.

If the employment contract is in writing, the employer must provide a copy of the written contract to the employee. If the contract is not in writing, the employer will be required to provide the above information in writing if the employee requests it.

For more information on labour contracts in Hong Kong, please refer to the "A Concise Guide to the Employment Ordinance" publication by the Labour Department (www.labour.gov.hk/eng/public/ConciseGuide.htm).

Termination of Contract[2]

Employers or employees can terminate a contract of employment through either giving the other party sufficient notice, or by payment in lieu of a notice. The required length of notice in certain circumstances are listed below.

Time	Circumstances	Length of Notice
During Probation Period	1st month of probation	Not Required
	After 1st month of probation	As per contract agreement (if applicable), but at least 7 days
After Probation Period/Contracts Without Probation Period	Contract with length of notice provision	As per contract agreement, but at least 7 days
	Contract without length of notice provision	At least 1 month

During the first month of a probation period, payment in lieu of a notice is also not required. In all other situations, the terminating party may provide a payment in lieu of a notice according to the following formula:

Required Payment = **Length of Notice Required** × **Average Daily/Monthly Wage *(Note)***

Note: Average daily wage is used if the length of notice is in days or weeks. Average monthly wage is used if the length of notice is in months.

B. Minimum Wage Level[3]

The Minimum Wage Ordinance, enacted in July 2010, allows for the establishment of a Statutory Minimum Wage (SMW). The SMW came into effect on 1 May 2011.

As of 1 May 2019, the SMW rate has been raised to HKD 37.50 per hour. Since the SMW rate is expressed as an hourly rate, for wages that are not paid on an hourly basis, the average hourly wage cannot be lower than the SMW rate.

C. Maximum Working Hours and Days[4]

Hong Kong does not have standard maximum working hours. However, for young persons between the ages of 15 and 18 working in industrial undertakings, the Employment of Young Persons (Industry) Regulations provides maximum working hours and days. Under this regulation, young persons can only work eight hours per day (limited to between 7am and 7pm), for a maximum of 48 hours a week, or six days a week.

D. Mandatory Welfare[5]

Mandatory Provident Fund (MPF) Scheme

The main social security scheme in Hong Kong is the MPF Scheme. The scheme is intended to help support retirees and other old-aged members of the population. Under the MPF Scheme, the mandatory minimum contributions are as follows:

Monthly Income (HKD)	Employer's Contribution	Employee's Contribution
<7,100	5%	Not Required
7,100 – 30,000	5%	5%
>30,000	HKD 1,500	HKD 1,500

Employees' Compensation Ordinance

The Employees' Compensation Ordinance establishes a no-fault, non-contributory employee compensation system for work injuries. Major provisions of the Ordinance are:

- An employer is liable to pay compensation in respect of injuries sustained by its employees as a result of an accident arising out of and in the course of employment, or in respect of occupational diseases specified in the Ordinance suffered by the employees; and
- The Ordinance in general applies to employees who are employed under a contract of service or apprenticeship. Employees who are injured while working outside Hong Kong are also covered if they are employed in Hong Kong by local employers.

The major compensation items include:

- Compensation for death;
- Funeral and medical attendance expenses in fatal cases; and
- Compensation in cases of permanent total incapacity.

For more details of the Employees' Compensation, please refer to the Labour Department's website (www.labour.gov.hk/eng/legislat/content1.htm).

Occupational Safety and Health Ordinance

The Occupational Safety and Health Ordinance provides health and safety protection to employees in workplaces, both industrial and non-industrial. In addition to factories, construction sites and catering establishments, other places, such as offices, laboratories, shopping arcades, educational institutions are also covered under this law.

For more information regarding the Occupational Safety and Health Ordinance, please refer to the Labour Department's website (www.labour.gov.hk/eng/legislat/content4.htm).

Factories and Industrial Undertakings Ordinance

The Factories and Industrial Undertakings Ordinance provides safety and health protection to workers in the industrial sector. The ordinance applies to all industrial undertakings, including factories, construction sites, catering establishments, cargo and container handling facilities, repair workshops, and other industrial workplaces.

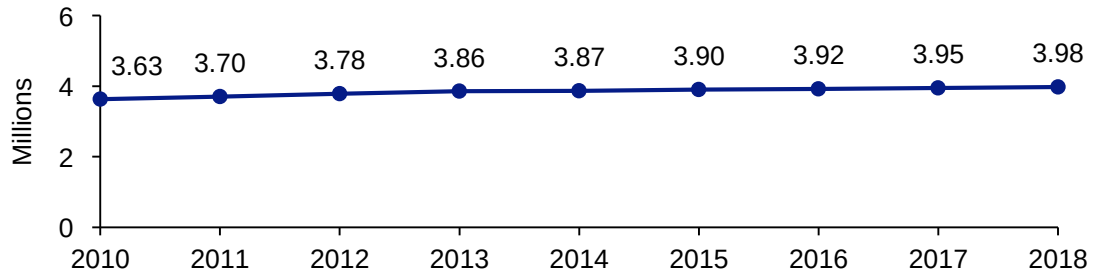
The ordinance includes 30 sets of subsidiary regulations covering various aspects of hazardous work activities in the industrial workplaces listed above. The subsidiary regulations prescribe detailed safety and health standards on work situations, plant and machinery, processes and substances.

For more details on the Factories and Industrial Undertakings Ordinance, please refer to the Labour Department's website (www.labour.gov.hk/eng/legislat/content3.htm).

II. Local Labour Supply Market Condition

A. Supply Situation for Total Labour Force[6]

Hong Kong's Total Labour Force (2010 – 2018)

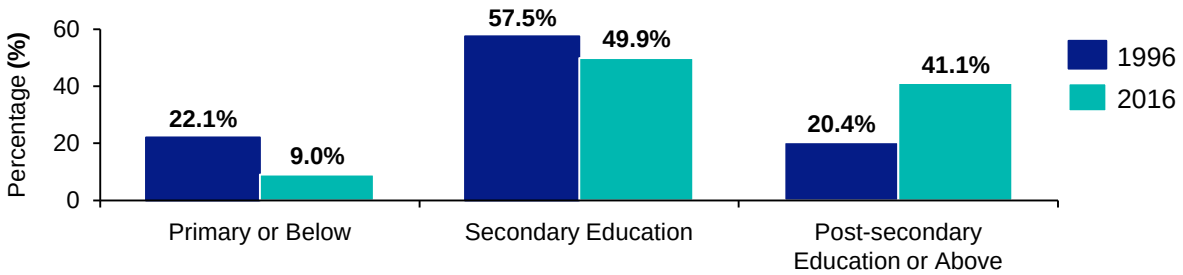


The supply of labour has been gradually increasing since 2010, from just over 3.6 million in 2010 to almost 4.0 million in 2018. In addition, Hong Kong has maintained a low unemployment rate under 3.4% over the past five years (2014-2019).

However, the labour force in Hong Kong is ageing, and this trend is expected to continue. The number of elderly persons (aged 65 or above), is projected to more than double in the next 20 years. As a result, the overall labour force participation rate (i.e. the proportion of the population aged 15 and above in the labour force) is expected to decrease from 59.2% in 2016 to 49.6% in 2066.

B. Supply on Educated Employees[7,8]

Hong Kong's Estimated Employed Population with Higher Education (1996, 2016)



Compared to 1996, Hong Kong's labour force has become much better educated. Approximately 41% of the labour force had post-secondary education or above (compared to 20% in 1996). Likewise, 9% had only primary education or below, a big improvement from 22% in 1996.

The total number of graduates under the University Grants Committee (UGC)-funded programmes by universities is around 28,500 per year. Under the UGC programme, between 2008 and 2018, the number of graduates in the following fields all increased: science (2,881 to 3,176), computer and information technology (930 to 1,070), and engineering and technology (4,014 to 4,829), bolstering the available talent pool in Hong Kong.

Post-secondary Education

The improvement of post-secondary education in Hong Kong can be attributed to the increase of institutions and relevant programmes in the city. There are 22 local degree-awarding post-secondary education institutions in Hong Kong, eight of which are funded by the public and the other 14 are self-financing post-secondary institutions. For a full list of universities and post-secondary institutions in Hong Kong, please refer to Appendix 4 and 5.

In addition, the Vocational Training Council (VTC) provides a comprehensive system of vocational and professional education and training (VPET) for school leavers and adult learners through both full-time and part-time courses. VTC's member institutions offer a wide range of courses, covering applied sciences, design, engineering, hotel, service and tourism, childcare, elderly and community services, business administration, information technology, and other study areas, and are available for post-secondary three up to degree level. For more information about the VTC's member institutions and courses offered, please refer to the VTC's website (www.vtc.edu.hk/html/en/institutions.html).

In addition to the VTC's member institutions, there are also vocational-based academies bridging the gap between career training and higher education, including the HKPC Academy, Hong Kong Institute of Construction, Clothing Industry Training Authority, Towngas Engineering Academy, MTR Academy, Hong Kong International Aviation Academy and the CLP Power Academy.

Vocational-based Academies in Hong Kong (Part 1/2)

Academy/ Institute	Description
HKPC Academy	The Productivity Training Institute was established in 2004 by HKPC to coordinate, plan, develop, and manage HKPC's professional training services. In 2018, this Institute was upgraded to the HKPC Academy, which aims to nurture a pool of talents to keep pace with the continually changing international markets, and to support Hong Kong's development both locally and in the region. The Academy aligns with HKPC's industry support strategies to promote productivity and enhance the capabilities of businesses, helping local industries to enhance competitiveness and sustainability. The HKPC Academy provides enterprises and individuals with quality diversified training programmes and services, including • Public training programmes, workshops and study missions; • Customised corporate training services for diversified sectors; and • Corporate academy consultancy services. For more details about the programmes offered by the HKPC Academy, please refer to HKPC's official website (www.hkpc.org/en/hkpc-academy/background).
Hong Kong Institute of Construction	The Hong Kong Institute of Construction (HKIC), previously named the Construction Industry Training Authority, was first established in 1975 to offer training and skill enhancement courses for construction workers. It is now a member organisation of Construction Industry Council (CIC) and reports to the Construction Industry Training Board (CITB). For more details, please visit HKIC's website (http://www.hkic.edu.hk/chi/home)
Clothing Industry Training Authority	The Clothing Industry Training Authority (CITA), established in 1975, aims to enhance clothing industry's global competitiveness by offering training and learning courses. It has training centres in Lai King and Kowloon Bay. Part-time and full-time programs are also provided by the Fashion Academy, which is a member of CITA, for students pursing a Technical Diploma or Bachelor degree. The CITA has three missions: • Training and cultivating management and technical professionals • Promoting application and innovation of technology • Encouraging healthy industrial practices and commercial operations For more details, please refer to CITA's website (https://www.cita.org.hk/en/)

Vocational-based Academies in Hong Kong (Part 2/2)

Academy/ Institute	Description
Towngas Engineering Academy	The Towngas Engineering Academy was established in 2009 by the Hong Kong and China Gas Company Limited (Towngas) to provide comprehensive gas-related training in Mainland China and Hong Kong. The Academy aims to nurture professionals, enhance gas safety, and provide quality services to customers. In addition to expanding the company's talent pool, the Academy also works with tertiary institutions to provide gas engineering courses, including certificate, diploma, and Bachelor's elective programmes in order to promote gas knowledge and technology. For more details, please refer to Towngas' official website (www.towngas.com/tc/Careers/Job-Opportunities/Apprentice-Trainee-Programme).
MTR Academy	The MTR Academy was established in 2016 by the MTR Corporation to train and develop railway experts and executives, advancing service and operational excellence in the railway industry both locally and worldwide. The MTR Academy's objectives include: • Providing executive and professional training courses for railway operators and authorities; • Establishing a railway operator community in pursuit of best practices in management, and service and operational excellence; • Offering accredited programmes and topical short courses for the local community; and • Conducting applied research in partnership with railway operators, universities and research institutes. For more details, please refer to the MTR Academy's official website (www.mtracademy.com/en/aboutus/aboutMTRAcademy.html).
Hong Kong International Aviation Academy (HKIAA)	The HKIAA was established in 2016 and is Hong Kong's first civil aviation academy. It is run by the Airport Authority Hong Kong. The HKIAA offers a comprehensive aviation-related curriculum, including placement programmes, professional certificate courses and other advanced programmes, through partnerships with local and overseas education and vocational training institutions, industry practitioners, and other organisations. The HKIAA aims to both nurture young talents and provide career advancement for the continuous development of Hong Kong's aviation industry, and develop a training hub in Hong Kong that will support the sustainable growth in the regional aviation industry. For more details about the HKIAA, please refer to the HKIAA's official website (www.hkinternationalaviationacademy.com)
CLP Power Academy	The CLP Power Academy was launched in 2017 by the Hong Kong utilities company CLP Power. The Academy aims to become a world-class professional training institution, providing high quality and recognised training programmes for people who want to pursue a career in the power industry. The CLP Power Academy cooperates with a variety of educational institutions to offer accredited programmes, covering technical aspects including generation engineering, electrical engineering, operational safety and management. For more details about this Academy, please refer to CLP's website (www.clp.com.hk/en/about-clp/clp-power-academy)

C. Work Permits and Visa[9,10]

Short-term (less than 90 days) foreign visitors to Hong Kong are permitted to conduct business negotiations and sign contracts while on a visitor's visa or entry permit. Hong Kong allows visa-free entries into the city for foreign nationals of over 170 countries and territories, for stays between seven to 180 days. For foreign nationals aiming to work or stay in Hong Kong for longer periods of time, a visa is required to be applied through the Immigration Department before they can live or work in Hong Kong. The main visa for foreigners working in Hong Kong can be applied under the General Employment Policy (GEP), which consists of two types, the Professional, and the Entrepreneur. Mainland Chinese professionals wishing to work in Hong Kong can use the Admission Scheme for Mainland Talents and Professionals (ASMTP). Both the GEP and the ASMTP are quota-free and non-sector specific.

General Employment Policy (GEP) – Professionals

Under this program, a foreigner with a good education background, no record of serious crime, and fulfilling a job vacancy in Hong Kong may apply to enter and work in Hong Kong. It must be demonstrated that a prospective employee has special skills, knowledge or experience not readily available in Hong Kong. The proposed employee must be sponsored by an employer in Hong Kong. Under this program, foreigners may also apply to bring in their spouse and unmarried dependents into Hong Kong.

The application process will normally take around four weeks after the Immigration Department has received all the necessary documents. The visa will normally be granted for 24 months (or two years) initially, or according to the duration of the employment contract, whichever is shorter. Foreigners can apply for an extension four weeks before the initial visa expires. Visa extensions will normally be given for three years. For more information, please refer to the Immigration Department's website (www.immd.gov.hk/eng/services/visas/GEP.html).

General Employment Policy (GEP) – Entrepreneurs

The Entrepreneur scheme under the GEP is similar to the GEP – Professionals in terms of application time visa duration, and visa extension period. However, foreigners in the Entrepreneurs scheme will be considered more favourably if they establish or join a business supported by a government-supported programme such as:

- StartmeupHK Venture Programme by InvestHK;
- Incu-App, Incu-Bio, and Incu-Tech programmes by the Hong Kong Science and Technology Parks Corporation (HKSTPC);
- Cyberport Incubation Programme;
- Small Entrepreneur Research Assistance Programme and Enterprise Support Scheme by the Innovation and Technology Commission; or
- Design Incubation Programme by the Hong Kong Design Centre.

For more information on the Entrepreneur Scheme, please refer to the Immigration Department's website (www.immd.gov.hk/eng/services/visas/investment.html).

Admission Scheme for Mainland Talents and Professionals (ASMTP)

The ASMTP is similar to the GEP programme, but is targeted for Mainland Chinese professionals who wish to work and stay in Hong Kong. The eligibility criteria, application time, visa duration and visa extension period for the ASMTP are the same as for the GEP. For more information on the ASMTP, please refer to the Immigration Department's website (www.immd.gov.hk/eng/services/visas/ASMTP.html).

Quality Migrant Admission Scheme (QMAS)

The QMAS aims to attract high-skilled individuals to Hong Kong, especially those working in the advanced technology fields. The QMAS provides a source of high-skilled foreign talent for small and medium-sized enterprises (SMEs). There is a quota for QMAS applicants each year.

Applicants are assessed under the General Points Test or the Achievement-based Points Test under the QMAS. Under the General Points Test, applicants will be assessed based on age, academic qualifications, work experience, language proficiency, family background, and whether they fulfil a profession on the Talent List of Hong Kong (www.talentlist.gov.hk/en/). Applicants are not required to have an offer of employment before entering under the QMAS. For more details, please refer to the Immigration Department's website (www.immd.gov.hk/eng/services/visas/quality_migrant_admission_scheme.html).

Technology Talent Admission Scheme (TechTAS)

The TechTAS was launched by the Innovation and Technology Bureau (ITB), and is a pilot scheme that provides a fast-track arrangement for admitting foreign and Mainland Chinese technology talents for research and development (R&D) work in Hong Kong.

Technology companies need to first apply for a quota. A company that has been allotted a quota can then sponsor applicants in applying for an employment visa or entry permit within the quota validity period. As of September 2018, 123 quotas have been approved.

The key requirements for companies looking to apply for a quota under TechTAS are listed as below.

Category	Criteria
Tenancy	Must be a tenant of either: • HKSTPC (including Hong Kong Science Park, InnoCentre, or the industrial estates managed by HKSTPC); or • Hong Kong Cyberport Management Company Limited (Cyberport)
Industry	Must be engaged in one or more of the following industries: • Biotechnology; • Artificial intelligence; • Cyber security; • Robotics; • Data analytics; • Financial technologies; and • Material science.

Any foreign applicant workers must also fulfill requirements, including:

- Be engaged in R&D work in the seven technology industries listed above;
- Hold a Science, Technology, Engineering, or Math (STEM) degree from a well-recognised university; and
- Have minimum one-year work experience in the relevant field if only holding a Bachelor's degree (no work experience is required for Master's or Doctoral degree holders).

Under the TechTAS, for every three foreign employees admitted through the scheme in a company, the company must also employ one local full-time employee, and two local interns.

For more information on TechTAS, please refer to the Innovation and Technology Commission's website (www.itc.gov.hk/en/techtas/index.htm).

III. Local Supporting Labour Schemes[11]

Reindustrialisation requires a talented research and development (R&D) workforce to assist in developing high-end manufacturing. The HKSAR government has implemented a series of programmes and schemes to retain high-skilled talents.

Time Period	Programmes for Locals	Programmes for Overseas
Short-term	• Researcher Programme • Postdoctoral Hub (PH)	TechTAS
Mid-term	• Reindustrialisation and Technology Training Programme (RTTP) • Massive Open Online Course	QMAS
Long-term	• Professional Diploma in Industry 4.0 • Higher Diplomas in Data Science and Analytics • Higher Diplomas in Financial Technology	N/A

A. Researcher Programme

The Researcher Programme, formerly known as the Internship Programme, is under the Innovation and Technology Fund (ITF) of the Innovation and Technology Commission. Through the Researcher Programme, applicant projects can apply to recruit students from universities in Hong Kong to assist in R&D projects. Each applicant can use up to two researchers through this programme at any one time.

The maximum monthly allowance in 2019 is HKD 18,000 for graduates with a Bachelor's degree, and HKD 21,000 for a Master's degree. Each researcher can be engaged on a project for up to 36 months. As of 2019, over 3,700 researchers have worked on R&D projects through the Researcher Programme. For more details on the Researcher Programme, please refer to the ITF's website (www.itf.gov.hk/l-eng/RP.asp).

B. Technology Talent Scheme

The ITF has also launched the Technology Talent Scheme, comprising the PH and RTTP. The Technology Talent Scheme was launched in August 2018 to nurture more talents in innovation and technology (I&T) fields in Hong Kong. The Scheme provides funding support to I&T companies for R&D recruitment.

Postdoctoral Hub (PH)

The PH programme provides funding support to eligible companies for recruiting postdoctoral graduates for R&D work to fill any short-term high-skilled talent gap. Each eligible PH applicant can use up to two postdoctoral graduates or researchers at any one time.

As of 2019, the maximum engagement period is 36 months for each researcher. The maximum monthly allowance is HKD 32,000 per researcher. Over 350 postdoctoral graduates have worked in I&T fields through this programme, and as of September 2018, 124 out of 151 PH applications have been approved, with a total funding of over HKD 56 million.

For more details on the PH programme, please refer to the ITF's website (www.itf.gov.hk/l-eng/TTS-PH.asp).

Reindustrialisation and Technology Training Programme (RTTP)

The RTTP subsidises Hong Kong companies for staff trainings in advanced technologies, particularly in the Industry 4.0 (i4.0) fields. The RTTP grants funds on a 2:1 matching basis. The technologies covered by the training courses should be advanced in nature and not yet widely adopted in Hong Kong. The adoption of such technologies should also benefit the economy of Hong Kong. As of September 2018, the RTTP has received over 115 applications for public course registration, of which 54 have been approved.

The types of trainings funded by RTTP include:

- Public courses: training courses that are open to the public for enrolment; and
- Tailor-made courses: training courses that are designed for a particular company.

For more details on the RTTP, please refer to (www.itf.gov.hk/l-eng/TTS-RTTP.asp).

IV. Reinforcing STEM Education

Universities and institutes in Hong Kong have also been offering programmes to upskill the workforce in Hong Kong. This allows the local workforce to better contribute to the advanced technologies industries, and the reindustrialisation of Hong Kong.

Massive Open Online Course (MOOC)[12]

The Hong Kong Polytechnic University (PolyU) has launched a free MOOC entitled "Industry 4.0: How to Revolutionize your Business" on the edX platform, which is jointly hosted by Harvard University and the Massachusetts Institute of Technology.

The course lasts for six weeks (with six to eight hours per week), covering the crucial topics of cloud computing, big data, internet of things, cyber physical systems, and their roles in Industry 4.0. Intelligent automation, machine intelligence, and human-machine collaborations, and how they relate to smart manufacturing, products, and services are also discussed.

Professional Diploma in Industry 4.0 (i4.0)[13]

To strengthen awareness of i4.0 in Hong Kong, and to enhance the relevant skills of the workforce in these industries, the HKPC Academy, the VTC and Germany's Fraunhofer Institute for Production Technology (Fraunhofer IPT) have worked together to offer Hong Kong's first Professional Diploma Programme in i4.0, starting in 2018.

Accredited as a Qualifications Framework Level 4 course, the diploma programme comprises four modules: 1) Implementation of Industry 4.0; 2) Cyber physical systems; 3) Smart automation; and 4) Internet of Things applications. Students are eligible to apply for the Vplus Engineering programme that would provide a refund on tuition fees of up to 60%.

Higher Diplomas by the Vocational Training Council (VTC)[14]

The VTC also offers Higher Diplomas (equivalent to post-secondary level), which aim to cultivate the future workforce for the I&T industry. The Higher Diploma in Data Science and Analytics was launched in 2017, and Higher Diploma in Financial Technology in 2018. Both programmes feature artificial intelligence and machine learning modules, which teach skills critical in i4.0 and for the reindustrialisation of Hong Kong. For more information, please refer to the VTC's website (www.vtc.edu.hk/admission/en/programme/s6/higher-diploma/).

Source:

[1] *Employment of Children Regulations, Labour Department*

[2] *A Concise Guide to the Employment Ordinance, Labour Department*

[3] *Minimum Wage Ordinance, Labour Department*

[4] *Overview Of Major Labour Legislation, Labour Department*

[5] *Contributions, Mandatory Provident Fund Schemes Authority*

[6] *Labour Force, Census and Statistics Department*

[7] *Graduates of UGC-funded Programme Statistics, University Grants Committee*

[8] *Compositional changes in Hong Kong's labour force, Government of the Hong Kong Special Administrative Region*

[9] *Visa & Immigration, InvestHK*

[10] *Introduction of Admission Schemes for Talent, Professionals and Entrepreneurs, Immigration Department*

[11] *Innovation and Technology Fund official website*

[12] *PolyU launches a Massive Open Online Course in Industry 4.0, Hong Kong Polytechnic University, Feb 2018*

[13] *HKPC Academy, VTC and Fraunhofer IPT to launch the first Professional Diploma in Industry 4.0, Vocational Training Council, 2019*

[14] *Higher Diploma, Vocational Training Council*

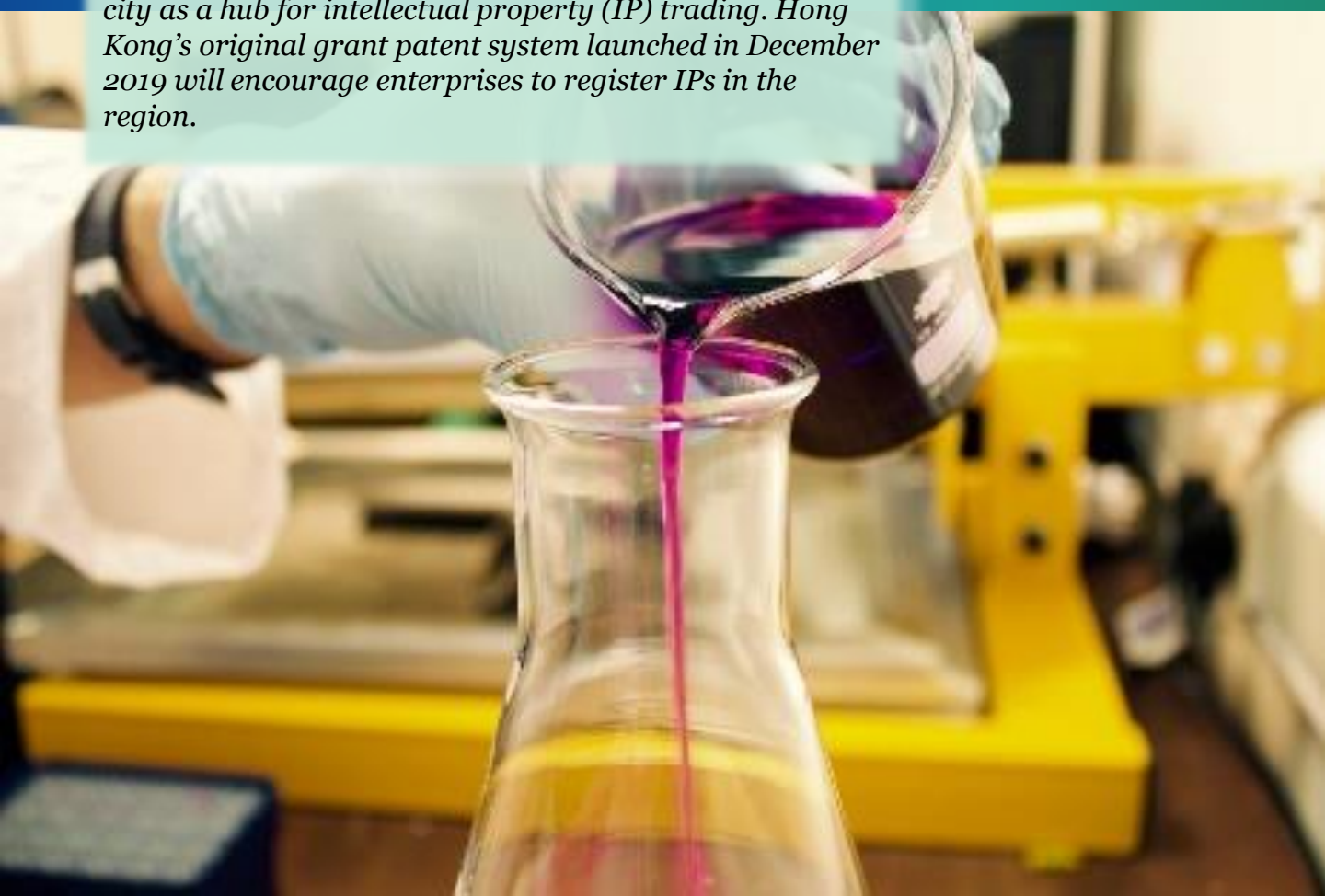
5. Research and Development Environment

Executive Summary

To promote Hong Kong's reindustrialisation, the HKSAR government has been implementing numerous policies and increasing its research and development (R&D) expenditures over the past five years.

The territory has extensive R&D capacities: established infrastructure (research centres and supporting government organisations), science and technology (S&T) proficient universities, multiple funding programmes available (including the Innovation Technology Fund), and a large workforce of researchers. In addition, Hong Kong has a well-developed testing and certification ecosystem that can provide extensive services to local and foreign companies engaging in R&D.

The HKSAR government is also planning to establish the city as a hub for intellectual property (IP) trading. Hong Kong's original grant patent system launched in December 2019 will encourage enterprises to register IPs in the region.



5. Research and Development Environment

I. The Science and Technology (S&T) in Hong Kong

Rapid development of the science, technology and innovation (STI) sector in Hong Kong is a result of strong government support. Among the key identified industries for the reindustrialisation of Hong Kong are: biotechnology, artificial intelligence, smart cities and financial technology.

A. Policies and Trends in S&T[1,2,3,4]

Policies on Reindustrialisation

To promote the reindustrialisation of Hong Kong, the government has enacted numerous policies providing companies with support in terms of land, technology, capital and talents. These policies also aim to assist the transformation and upgrade of existing industries, as well as the development of new high value-added industries.

Research and Development (R&D) Investments

In recent years, the government has been increasing its expenditure on R&D to encourage and support Hong Kong enterprises in this sector.

2016	2017	2018/2019	2019/2020
• Set aside HKD 2 billion to set up a venture capital fund to co-invest with private venture capital funds in local innovation and technology startups	• Proposed to double the total R&D expenditure within five years • Build a data technology centre • Build an advanced manufacturing centre • Set aside HKD 500 million for the Innovation and Technology Bureau • Launch a technology voucher scheme to support small and medium-sized enterprises (SMEs) technology use to upgrade their transformation and enhance their productivity	• Allocated an additional HKD 50 billion to promote innovation and technology development • Build technological innovation platforms on medical technology, artificial intelligence and robot technology • Allocated funds to the Cyberport to strengthen support for startups and promote the development of a digital technology ecosystem.	• Allocated an additional HKD 2 billion to the Innovation and Technology Fund to implement a reindustrialisation funding scheme and to subsidise manufacturers on setting up smart production lines in Hong Kong

Outlook

As a result, Hong Kong's innovation capabilities are quite strong compared to other countries and territories. Hong Kong was ranked 26th out of 140 countries and territories on the "Innovation Capability" criteria of the 2018 Global Competitiveness Index.

B. S&T Related Organisations

The HKSAR government assists the companies through the Innovation and Technology Bureau and the Innovation and Technology Commission. Their main missions are to support the STI sector and to promote the development of a high-end manufacturing industry. For additional details please refer to the related homepages (www.itb.gov.hk) and (www.itc.gov.hk).

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[5]

In Hong Kong, there are multiple centres, agencies, councils or institutes that support R&D activities of companies. The government has specifically funded the Hong Kong Applied Science and Technology Research Institute, the Hong Kong Science Park (HKSTP), Cyberport and another five R&D centres to assist in the development of innovation and technology in Hong Kong.

HKSAR Government Funded Institutes

Institute	Description
Hong Kong Productivity Council (HKPC)	• Helps Hong Kong enterprises enhance their productivity through advanced technologies and innovative services • Experts of Industry 4.0 (i4.0) and Enterprise 4.0 (e4.0) to assist companies on their reindustrialisation journey • Focuses on scientific and technological research in: Internet of Things (IoT), big data, artificial intelligence or intelligent manufacturing

Hong Kong Science Park (HKSTP)	• Hosts around 800 technology companies (with nearly 8,700 technology professionals)
	• Divided into five major technology clusters:
	  ○ Biomedical technology;
	  ○ Electronics;
	  ○ Green technology;
	  ○ Information and communications technology; and
	  ○ Materials and precision engineering.
	• Research focuses on: smart city, healthy ageing, and robot technology

Cyberport	• Hosts 1,500 digital technology companies
	• Wholly-owned by the HKSAR government
	• Research focuses on:
	  ○ Financial technology;
	  ○ E-commerce and IoT;
	  ○ Wearable technology;
	  ○ Big data and artificial intelligence.
	• A HKD 5.5 billion expansion project is planned to attract more powerful technology companies and support additional startups (with offices, shared workshops, conference space and data service platforms). The expansion is expected to be completed in 2024.

HKSAR Government Funded R&D Centres

R&D Centres	Description
Automotive Platforms and Application Systems R&D Centre (APAS)	• APAS carries out R&D activities to promote the development of automotive parts industry • Merged with the HKPC in November 2012
Hong Kong Applied Science and Technology Research Institute (ASTRI)	• Created by the government in 2000 to assist the development of the technology industry through applied technology research • In April 2006, the government designated ASTRI as the main development centre for information and communications technology (ICT) • Since its establishment, ASTRI has completed nearly 500 research projects and transferred more than 750 technologies to the industry
Hong Kong Research Institute of Textiles and Apparel (HKRITA)	• HKRITA is hosted by the Hong Kong Polytechnic University • HKRITA focuses on R&D in: o New materials, textiles and apparel products; o Advanced textiles and clothing production technologies; o Innovative design and evaluation technologies; and o Enhanced industrial systems and infrastructure.
Logistics and Supply Chain MultiTech R&D Centre (LSCM)	• LSCM is hosted by the University of Hong Kong, the Chinese University of Hong Kong and the Hong Kong University of Science and Technology. • LSCM focuses on multiple areas: o Infrastructure information technology system (IoT, Radio Frequency Identification (RFID) technology, location-based service technology); o Logistics and supply chain analytics and applications, o Supply chain security (authentication/logistics security); and o Financial services and e-commerce technology. • Researches focus on ready-to-market technologies for commercialisation by industries
Nano and Advanced Materials Institute (NAMI)	• NAMI was established in 2006 as the main Hong Kong R&D centre for nanotechnology and advanced materials • NAMI focuses on five R&D areas: o Energy; o Electronics; o Construction; o Environmental; and o Healthcare.

B. University-based R&D Institutes[6]

Apart from the government, universities are important players in the R&D field. According to the 2019 QS Asia University Rankings, Hong Kong has seven universities ranked in the top 300. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The top Hong Kong institution, the University of Hong Kong, comes in second place, implying that research conducted in the university have a very strong impact in the international S&T scene. In addition, another five universities are ranked in the top 100. Below is an overview of the top six institutions.

University (Ranking)	Research Fields in the University
The University of Hong Kong (2nd)	Focuses on the development of advanced S&T. There are two main R&D centres: • HKU-TCL Joint Research Centre for Artificial Intelligence (AI): TCL Corporation provided HKD 30 million over five years to support AI research. • HKU-TCL Joint Laboratory for New Printable OLED Materials and Technology: develops high performance solution used in the fabrication of OLEDs.
The Hong Kong University of Science and Technology (7th)	Engaged in enhancing synergies and promoting interdisciplinary research within each research area. The main R&D centres in the university are: • Centre for Artificial Intelligence Research: promotes interdisciplinary research, education and knowledge transfer in all aspects of artificial intelligence. • Centre of Systems Biology and Human Health: the first system biology-oriented research centre in Hong Kong.
The Chinese University of Hong Kong (9th)	Set up joint research units in collaboration with a number of Mainland and overseas academic institutions: • Asian Institute of Supply Chains & Logistics (AISCL): carries out R&D activities on supply chain management and logistics. • CUHK-ASTRI Joint Research Laboratory: focuses on 5G mobile network technology, financial technology and intelligent production technology.
City University of Hong Kong (21st)	Hosts two research institutes, 20 research centres, and eight applied strategic development centres which focus on areas such as: • Data science; • Software engineering; or • Precious metals.
The Hong Kong Polytechnic University (31st)	Hosts research centres such as: • Life sciences and engineering R&D platform: promotes innovative applications related to life sciences and engineering. • AI Laboratory: the research facility features the world's fastest artificial intelligence supercomputer.
Hong Kong Baptist University (65th)	Hosts a number of research institutes/centres and key laboratories: • Institute of Advanced Materials: dedicated to the study of optical and electrical properties of advanced materials. • The Institute of Computational and Theoretical Studies (ICTS): aims to expand computing research platforms and promote interdisciplinary cooperation.

III. Priority Areas in Hong Kong[7,8]

Hong Kong's main exports are related to electronics. In 2018, the top five exports from Hong Kong were:

Top 5 Exports	% of Total Exports (2018)
Electrical Machinery and Equipment	54.4%
Machinery and Mechanical Appliances	13.1%
Precious or Semi-precious Stones	12.0%
Optical and Medical Equipment	3.2%
Plastics and Related Products	1.8%

According to the World Bank's latest data available (from 2016), only 14% of Hong Kong's exported products were classified as hi-tech (e.g. products with high R&D intensity, such as in computers, aerospace, pharmaceuticals).

IV. Funding for S&T and R&D[9]

The main S&T funding initiative in Hong Kong is the Innovation Technology Fund (ITF). The ITF aims to increase the economic productivity and competitiveness of Hong Kong by assisting companies in their technological upgrade journey. Under the ITF, companies can apply for more than 15 funding programmes, schemes or grants which support R&D activities, facilitate technology adoption, nurture technology talents or specifically support startup development. Some of the main funding initiatives are described below.

Programme	Description

Innovation and Technology Support Programme (ITSP)	• Supports R&D projects undertaken by local public research institutes and R&D centres
	• Focuses on supporting two types of projects:
	  ○ Platform projects: industry oriented R&D projects with commercialisation potential;
	  ○ Seed projects: exploratory and forward-looking projects.

Mainland – Hong Kong Joint Funding Scheme (MHKJFS)	• Aims to support and encourage R&D collaboration between Hong Kong and multiple Mainland Chinese provinces • Provides funding for platform and collaborative R&D projects

Programme	Description

Guangdong – Hong Kong Technology Cooperation Funding Scheme (TCFS)	• Aims to enhance the R&D collaboration between the Hong Kong and Guangdong/Shenzhen governments
	• Focuses on supporting three types of projects run by the respective governments:
	  ○ Projects which are solicited, vetted and funded solely by Hong Kong
	  ○ Projects which are solicited, vetted and funded solely by Guangdong/Shenzhen
	  ○ Projects which are jointly solicited, vetted and funded by Guangdong/Shenzhen and Hong Kong

For additional information on funding please visit the ITF website (www.itf.gov.hk/l-eng/about.asp).

V. Human Resources for S&T[10]

Hong Kong has a steady supply of proficient S&T workforce. Overall, in the 2019 Global Innovation Index, the territory ranked 27th out of 126 countries and territories in the criteria of "Researchers, FTE/mn pop." with a ratio of 3,412 researchers per 1 million people.

VI. Testing and Certification[11,12,13,14,15]

The HKPC, HKSTP, Hong Kong Council for Testing and Certification (HKCTC) and Hong Kong Accreditation Service (HKAS) have been offering testing and certification services to the industries through their laboratories and support centres. By offering a wide range of systems and product certification services, they help stimulate the STI ecosystem.

Hong Kong Productivity Council (HKPC)

HKPC has been cooperating with local industries to develop various applied technology solutions. The testing and certification support centres operated by HKPC include:

Centre	Target Industries	Services
Reliability Testing Centre	• Manufacturing • Electronics	Provides reliability engineering and testing services for components and printed circuit board: • Environmental stress testing; • Printed circuit board testing; • Accelerated life test and life data analysis; or • Infrared thermography
Hong Kong Plastic Machinery Performance Testing Centre	• Plastic Machinery	Specialised in testing and certifying the quality and performance of plastic machinery: • CE mark consultancy; • Performance testing; • Machine health check services; • Individual model certification schemes; or • Machine model certification schemes.
Software Testing and Certification Centre	• ICT	Facilitates the exploration and development of testing and certification services for the ICT industry: • Independent testing services; • Project outsourcing management and quality assurance; • Software engineering and testing process improvement; • Mobile testing laboratory; or • Automated laboratory testing.

For additional information, please visit (www.hkpc.org/en/support-resource/support-centres).

Hong Kong Science Park (HKSTP)

HKSTP provides indirect testing and certification services through research centres:

- The Robotics Catalysing Centre (RCC): established in 2017 to support robotics solution providers throughout their system development cycle. The RCC is undergoing an expansion project to provide additional laboratory facilities and equipment to support companies across proof-of-concept testing, product development, prototyping, and technology trials, etc.

HKSTP also provides direct testing and certification services catered to electronics device R&D projects:

- Integrated circuit development and pilot production: testing programme development, mixed-signal, radio frequency, and memory products, load board design, probe card design, tester platform conversion, etc.
- Reliability testing: high/low temperature operating life test, temperature and humidity test, reflow soldering simulation, high temperature storage, moisture sensitivity level, etc.

For additional information on testing and certification services provided by HKSTP, please visit the following website (www.hkstp.org/en/how-we-serve/)

Hong Kong Council for Testing and Certification (HKCTC)

The HKCTC provides strategic views to the HKSAR government on the development of the testing and certification industry.

Hong Kong Accreditation Service (HKAS)

The HKAS provides accreditation services mainly to laboratories, certification bodies and inspection bodies located in Hong Kong through three accreditation schemes:

- The Hong Kong Laboratory Accreditation Scheme (HOKLAS);
- The Hong Kong Certification Body Accreditation Scheme (HKCAS); and
- The Hong Kong Inspection Body Accreditation Scheme (HKIAS).

Accredited certificates issued by HKAS are recognised by over 80 accreditation bodies in more than 60 countries and territories. They facilitate trading by assuring the quality and safety of products sourced from Hong Kong.

VII. Intellectual Property Policy[16,17,18]

Intellectual property protection is important for enterprises to stay competitive in the market. The HKSAR government offers companies multiple options to protect their patents.

Original Grant Patent (OGP) System

The Intellectual Property Department offers patents registration in Hong Kong for two types of patents:

- Standard patent: protection for a minimum of three years, and is renewable annually, up to a maximum of a total of 20 years.
- Short-term patent: protection renewable after four years from filing, for a maximum of eight years.

A new OGP system was implemented in December 2019 for standard patents. It will facilitate patent applications by erasing the need for double filing (in and outside of Hong Kong), which was imposed by the previous "re-registration" system.

Patent Application Grant (PAG)

Local companies and inventors are encouraged to patent their inventions by applying for financial support provided by the PAG in Hong Kong. Administered by the Innovation and Technology Commission, the PAG funds the companies' patent applications of up to HKD 250,000 (or 90% of the total cost).

For additional details on the PAG, please refer to (www.itc.gov.hk/en/funding/pag.htm).

Source:

[1] *Innovation and technology Industry in Hong Kong, HKTDC, 2019*

[2] *The 2019-20 Budget, Government of the HKSAR*

[3] *Innovation and technology industry in Hong Kong, Legislative Council, Secretariat*

[4] *The Global Competitiveness Report 2018, World Economic Forum*

[5] *Homepages of the different council, institutes and centres*

[6] *QS Asia University Rankings 2019, QS World University Rankings*

[7] *Trade Map, International Trade Centre*

[8] *Hi-tech exports (as % of manufactured exports), World Bank*

[9] *Innovation Technology Fund*

[10] *Global Innovation Index 2019, INSEAD*

[11] *Robotics Catalysing Centre, HKSTP*

[12] *How we serve, HKSTP*

[13] *Support Centres, HKPC*

[14] *About HKCTC*

[15] *About HKAS*

[16] *Patent protection in Hong Kong, China, Intellectual Property Department*

[17] *Updated background brief on progress of implementation of the patents reform, Legislative Council, 2018*

[18] *Patent Application Grant, Innovation and Technology Commission*

6. Supply Chain Environment

Executive Summary

Hong Kong's economy is heavily dependent on the services sector, generating over 90% of the city's GDP in 2017. The city's four main economic pillars: financial services, professional services, trading and logistics, and tourism, all belong to the services sector.

To facilitate the supply chain logistics in Hong Kong, the Hong Kong Trade Development Council (HKTDC) has developed e-Procurement platforms to connect suppliers with buyers in Hong Kong.

Hong Kong has always been a major well-connected regional logistics hub, with world-class airport and port facilities. Combined with efficient customs processes, Hong Kong ranks well in global connectedness and logistics performance. Hong Kong's advantages in logistics development and infrastructure also allow Hong Kong to capitalise on the latest development opportunities arising in the Greater Bay Area.

6. Supply Chain Environment

I. Industry Profiles in Hong Kong

Breakdown of 2018's Top 10 Exports[1,2,3]

Hong Kong's major sectors by gross domestic product (GDP) in 2017 were services (92.3%), industry (7.6%) and agriculture (0.1%).

The services sector in Hong Kong mainly includes tourism, banking, finance, and professional services. As a major financial centre, Hong Kong's economy is heavily dependent on the services sector.

The industry sector in Hong Kong mainly consists of the clothing and textiles, electronics, and jewellery, clocks, and other luxury items.

There is virtually no agricultural industry in Hong Kong, with fresh vegetables and meats such as poultry, pork and fish being the main produce sold locally.

In 2018, Hong Kong's total exports amounted to USD 569 billion, of which over 90% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Electrical machinery and equipment	USD 309.7 billion	54.4%
2. Machinery, and mechanical appliances	USD 74.5 billion	13.1%
3. Precious metals, precious stones, and pearls	USD 68.2 billion	12.0%
4. Optical and medical equipment	USD 18.3 billion	3.2%
5. Plastics and related products	USD 10.0 billion	1.8%
6. Clocks, watches, and related components	USD 8.5 billion	1.5%
7. Toys and games	USD 7.2 billion	1.3%
8. Apparel and clothing, knitted or crocheted	USD 7.0 billion	1.2%
9. Apparel and clothing, not knitted or crocheted	USD 6.2 billion	1.1%
10. Leather and related products	USD 4.6 billion	0.8%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp.

Hong Kong is a major player in the global electronics market. In 2017, Hong Kong was the sixth largest exporter of broadcasting equipment in the world (USD 12.6 billion), and the sixth largest exporter of telephones in Asia (USD 3.8 billion).

The jewellery, watches, and precious metals industry in Hong Kong is also extremely important for trade. In 2017, Hong Kong was the largest exporter of pearls in the world with USD 3.2 billion making up 74% of the world's exports, the third largest exporter of gold in the world with USD 25.6 billion, the third largest exporter of metal watches with USD 1.2 billion, and the fourth largest exporter of diamonds in Asia with USD 5.4 billion.

II. Raw Materials Sourcing Platforms/Channels[4]

hktdc.com

hktdc.com Sourcing

The Hong Kong Trade Development Council (HKTDC) has developed and manages the award-winning online procurement platform, hktdc.com Sourcing (sourcing.hktdc.com). The platform connects over 130,000 suppliers with more than two million buyers, generating more than 24 million business connections per year. It supports English and Chinese as well as Spanish, French, German, Italian, Portuguese, and Russian, to facilitate use by foreign buyers and businesses.

HKTDC assists in providing information verification services to ensure mutual confidence between buyers and suppliers. Suppliers' information can be verified by internationally renowned organisations. HKTDC also provides many support services to both suppliers and buyers, including buyer loyalty rewards and tailored business matching services to both simplify usage and enhance user experience. HKTDC will also support international buyers and suppliers' participation in the many events and trade conventions held in Hong Kong annually.

hktdc.com Small Orders

HKTDC provides a separate procurement platform, hktdc.com Small Orders, to handle orders in small quantities (ranging from five to 1,000 units). This allows businesses to test market acceptance of products, and also enhance flexibility for high-end industries producing products in small quantities.

Using hktdc.com as a Supplier

Register with HKTDC	Register for a PayPal Account	Upload Product Information	Receive Orders & Payments	Arrange Delivery
Step 1:	Step 2:	Step 3:	Step 4:	Step 5:
Once the account has been registered and activated, the business will be verified as a supplier. The business can then build their online profile and product offerings.	A PayPal Business Account must be used for online transactions.	Businesses can prepare product information, photos, prices and shipping details to advertise their products and give buyers more information.	Businesses can check for orders at any time on the My HKTDC page. Once an order has been placed, the supplier account will receive an email notification. Payment will be credited to the registered PayPal account.	Delivery can be arranged using any courier companies. Businesses may also benefit from offers and options provided by hktdc.com's logistics services and business partners.

III. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered[5,6]

Hong Kong is the world's leading cargo hub, and plays a key part in the global supply chain by facilitating financing for Mainland Chinese factories. However, as the trade war between Mainland China and the US is leading to shifts in the global supply chain, and factories are looking to relocate or expand from Mainland China, Hong Kong needs to reposition itself in the global supply chain. Luckily, Hong Kong is well-positioned between Mainland China and Southeast Asia, enabling it to become a logistics and trade financing hub for investments. Hong Kong can also take advantage of the free trade agreement signed with the Association of Southeast Asian Nations (ASEAN), which is Hong Kong's second largest trading partner after Mainland China.

According to a 2020 report by the World Bank, Hong Kong ranked third out of 190 countries and territories in "Ease of Doing Business", an increase from fourth in 2019. Hong Kong provides a favourable business environment for both local businesses and overseas companies looking to establish regional offices. Hong Kong ranked extremely well in many of the 10 criteria, including ranking first worldwide in "Dealing with Construction Permits", second worldwide in "Paying Taxes", third worldwide in "Getting Electricity", and fifth worldwide in "Starting a Business". Even with the high rankings, the HKSAR government is committed to further enhancing regulatory efficiency and reducing costs to create an even better business environment in the city.

B. Efficiency of Customs and Clearance Process[7,8]

The Hong Kong Customs and Excise Department (C&ED) is the government agency responsible for managing all imports and exports of goods in Hong Kong. Hong Kong uses the 8-digit Hong Kong Harmonized System (HKHS), which is based on the 6-digit Harmonized System (HS) developed by the World Customs Organization. The first six digits in the HKHS uses the HS classification, while the last two digits are a further breakdown in commodity classification to match the needs of Hong Kong.

The C&ED provides different customs clearance systems for cargo imported and exported through land, air, and sea to facilitate fast customs clearance. Air cargo can use the Air Cargo Clearance System, land cargo can use the Road Cargo System, while sea cargo can use the Electronic System for Cargo Manifests.

The following table shows the documents normally needed for customs clearance:

Customs Clearance Documents
Bill of lading
Airway bill
Commercial invoice
Packing list
Manifests
Import or export licence or removal permit (if required)
Copy of detention notice (if applicable)
Any other product specific supporting documents

For more information regarding customs clearance procedures, please refer to the C&ED's official website (www.customs.gov.hk/en/cargo_clearance/index.html) or the How to Complete and Lodge Import/Export Declarations document provided by the C&ED (www.customs.gov.hk/filemanager/common/pdf/Book_2018_IEDC.pdf).

IV. Logistics Support

A. Infrastructure Conditions (e.g. major airport/ports/highways)[9,10,11]

Hong Kong's well-developed transportation infrastructure provides the city with smooth connections to the rest of the world, especially Mainland China.

Airport

As one of the major regional airline hubs in Asia, Hong Kong has connections to all major Asian urban centres. Currently, more than 120 airlines operate about 1,100 flights daily out of Hong Kong International Airport (HKIA), linking Hong Kong to over 220 destinations worldwide, including around 50 destinations in Mainland China. HKIA has been ranked as the world's busiest airport since 2010.

HKIA also has five first-tier air cargo handling facilities, with an annual handling capacity of over seven million tonnes of cargo. In 2018, HKIA continued to be the leading air cargo hub in the world, with a total cargo throughput of over five million tonnes.

The Third Runway System (3RS) began construction in 2016 and is expected to be completed by 2024. According to the International Air Transport Association (IATA) Consulting, the 3RS project will allow HKIA to handle over 100 million passengers, around nine million tonnes of cargo, and over 600,000 aircraft annually by 2030, which should be enough to satisfy expected future traffic demands.

Port

For maritime trade, there are nine container terminals in the Port of Hong Kong, comprising 24 container berths capable of handling over 20 million TEUs (twenty-foot equivalent units) annually. The Port of Hong Kong is one of the world's busiest container ports with 19.6 million TEUs handled in 2018. The port is capable of handling ultra large container vessels, allowing for connections and shipping lanes to major destinations throughout the world.

Border Crossing Points

There are four land border crossing points between Hong Kong and Mainland China, at Lok Ma Chau, Man Kam To, Sha Tau Kok and Shenzhen Bay. Over 40,000 vehicles cross these four border points daily, with over 20,000 of these vehicles being cargo and container vehicles.

Passengers can also enter Mainland China using the Guangzhou-Shenzhen-Hong Kong Express Rail Link, or the Hong Kong-Zhuhai-Macao Bridge. The Express Rail Link was officially opened on 23 September 2018, reducing the travel time between Guangzhou and Hong Kong to 50 minutes. The Hong Kong section spans 26km, and connects the city to the high-speed railway network in Mainland China. The Hong Kong-Zhuhai-Macao Bridge was opened on 24 October 2018, and is the world's longest cross-harbour bridge or tunnel. It greatly reduces the time required for vehicles travelling between the three cities.

Public Transportation

Hong Kong also has one of the most reliable, fast, and affordable public transportation systems in the world. Public transport in Hong Kong serves over 12 million passengers per day, and the Transport Department has launched the HKeMobility mobile app to further facilitate use of public transportation in the city.

B. Key Logistics Hubs[12]

Being an international financial centre and a major maritime trading hub, the trading and logistics industry is crucial to Hong Kong's economy. In terms of both value-added and number of people employed, the trading and logistics industry is the largest among the four main economic pillars in Hong Kong. Trading and logistics accounted for 22% of the city's GDP in 2017, and provided 727,500 jobs. In 2017, the logistics industry alone contributed 3% of Hong Kong's GDP and accounted for 180,000 jobs, while transportation services made up 29% of Hong Kong's service exports. In DHL's Global Connectedness Index 2018, Hong Kong ranked second worldwide in depth of global connectedness, after only Singapore.

C. Logistics Information Tractability and Transparency[13]

In the 2018 World Bank's Logistics Performance Index (LPI), Hong Kong ranked 12th out of 160 countries and territories for the overall LPI, a decrease from 2016's result (ranked ninth out of 160 countries and territories). Hong Kong ranked fourth in Asia, behind Japan, Singapore, and the United Arab Emirates.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Hong Kong performed well in International shipments (eighth) and Customs (ninth).

D. Aviation Arrangements with Global Partners[14]

Connectivity with the World

The HKSAR government is committed to expanding Hong Kong's external aviation network. One method is through signing bilateral air services agreements (ASAs). ASAs provide a legal framework for establishing air links between two countries or territories, which will help to foster cooperation, economic development, and cultural exchange. As of October 2019, Hong Kong has signed ASAs with 67 countries and regions.

Connectivity with Mainland China

In February 2019, a Memorandum of Understanding (MoU) was signed between the Transport and Housing Bureau of Hong Kong and the Civil Aviation Administration of Mainland China. This MoU is part of the implementation of the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area, consolidating and enhancing Hong Kong's status as an international aviation hub and strengthening its role as an aviation management training centre. The new MoU not only expands the air services and the intermodal arrangements between Mainland China and Hong Kong, but is also a major step in creating a world-class airport cluster in the Greater Bay Area.

V. Opportunities in the Greater Bay Area (GBA)[15]

According to the World Trade Organization (WTO), Mainland China was the world's leading merchandise trader in 2018. In addition, over the past 10 years, Hong Kong, along with Mainland China, India, Mexico, and Ireland, rose the most in the world rankings among the top 20 traders of goods and services. Riding on the competitive economic advantage of Mainland China and Hong Kong, the Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area was signed in 2017 by the regional and provincial governments of the three relevant regions, with the National Development and Reform Commission.

The Guangdong-Hong Kong-Macao GBA initiative helps strengthen Hong Kong as an international financial, transportation, and trade centre, as a global offshore RMB hub, and as an international asset management centre, through leveraging the strengths of the "9+2" cities – the nine cities of the Pearl River Delta in Guangdong, and the two Special Administrative Regions of Hong Kong and Macao, promoting integration across the GBA cities, and supporting coordinated economic development among them.

Logistics companies in Hong Kong have extensive trade and business networks worldwide. They are well-experienced in logistics management, and use advanced management systems to improve efficiency at lower logistics costs compared with Guangdong. As the GBA cities continue to strengthen connection of transportation networks, implement more efficient customs clearance processes, and develop transport infrastructure in the three regions, logistics efficiency in the GBA is expected to further improve in the future.

Hong Kong's logistics operators can capitalise on the opportunities in the GBA through collaboration with businesses among the cities, and by relying on Hong Kong's sound international logistics network. Apart from boosting the import-export business of the relevant industries, they can help enterprises connect with emerging production bases throughout Asia to further strengthen their supply chain management.

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Hong Kong, Central Intelligence Agency*

[3] *Hong Kong, The Observatory of Economic Complexity*

[4] *hktdc.com Sourcing official website*

[5] *What is Hong Kong's role in a new economic world order as supply chains shift amid US-China trade war?, South China Morning Post, Jan 2019*

[6] *Hong Kong ranked world's fourth easiest place to do business, Government of the Hong Kong Special Administrative Region*

[7] *Cargo Clearance, Customs and Excise Department*

[8] *How to Complete and Lodge Import/Export Declarations, Customs and Excise Department*

[9] *Facts and Figures – At a Glance, Hong Kong International Airport*

[10] *Hong Kong: The Facts – The Port, Government of the Hong Kong Special Administrative Region*

[11] *Control Point Locations, Immigration Department*

[12] *Logistics Industry in Hong Kong, HKTDC Research*

[13] *Logistics Performance Index, The World Bank, 2018*

[14] *Air Services Income Agreements concluded, Inland Revenue Department*

[15] *Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area, The Government of the Hong Kong Special Administrative Region, Jul 2017*

7. Infrastructure

Executive Summary

Currently there are three operating industrial estates in Hong Kong which cater to industries such as: light industry, food manufacturing or pharmaceuticals.

Hong Kong has an excellent geographical location with world-class infrastructure, including three industrial estates. In addition, to promote Hong Kong's reindustrialisation, new centres are being built to support the development of high value-added manufacturing and hi-tech industries, such as software and IT systems. These new centres, including the Advance Manufacturing Centre (AMC) and the Hong Kong-Shenzhen Innovation and Technology Park at Lok Ma Chau Loop, among others, will be equipped with the most advanced equipment and facilities.

7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates[1,2]

Currently there are three operating industrial estates in Hong Kong, located in Tai Po, Yuen Long and Tseung Kwan O. They are all managed by the Hong Kong Science and Technology Parks Corporation (HKSTPC). As of October 2019, all plants located in the industrial estates have been leased.

In line with the HKSAR government's plan for reindustrialisation, HKSTPC is implementing the Industrial Estate Programme 2.0 (IE 2.0), which focuses on supporting smart production and high value added manufacturing. The overall goal of the programme is to enhance the value chain of innovation and technology industries (I&T). In order to do so, the programme specifically targets five key industries: 1) Pharmaceutical, healthcare and biomedical, 2) Electronics and optical; 3) Precision engineering and assembly; 4) Specialised manufacturing or advanced materials; 5) Information, communications and telecommunications. For additional information, please visit the HKSTPC website. (www.hkstp.org/our-stories/our-footprint/industrial-estates/).

Industrial Estates' Locations and Regional Implications

Yuen Long Industrial Estate

- Main types of industries: pharmaceuticals and biomedical production, petrochemical, and logistics services
- Area: 67 ha
- Second industrial estate in Hong Kong
- Ideal for companies engaged in cross-border business

Tai Po Industrial Estate

- Main types of industries: food manufacturing, media services, and lifestyle goods
- Area: 75 ha
- First industrial estate in Hong Kong.
- Refurbished in 2017 to promote intelligent production

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Tseung Kwan O Industrial Estate

- Main types of industries: heavy industries, light commercial manufacturing, and IT/ICT related services
- Area: 75 ha
- Third industrial estate in Hong Kong
- Suitable for marine access-related projects

Foreign Direct Investment (FDI)[2]

Hong Kong is an international trading hub and therefore attracts numerous FDI. In 2018, the city received a total of USD 115 billion in FDI, a 4% increase compared with 2017. However, the FDI was mainly (80%) directed at the service sector (e.g. holding, real estate, finance, insurance, banking). Other sectors attracting FDI are trade, construction, information and communications. The main investments came from Mainland China, the British Virgin Islands, the Cayman Islands, the United Kingdom, the Netherlands, the United States, Bermuda and Japan.

II. Potential Infrastructure Shortfall[3]

Hong Kong has some of the most established infrastructure in the world. In the World Economic Forum's 2018 Competitiveness Report, Hong Kong ranked second out of 140 countries and territories for the quality of its infrastructure. Some of the city's of main assets are:

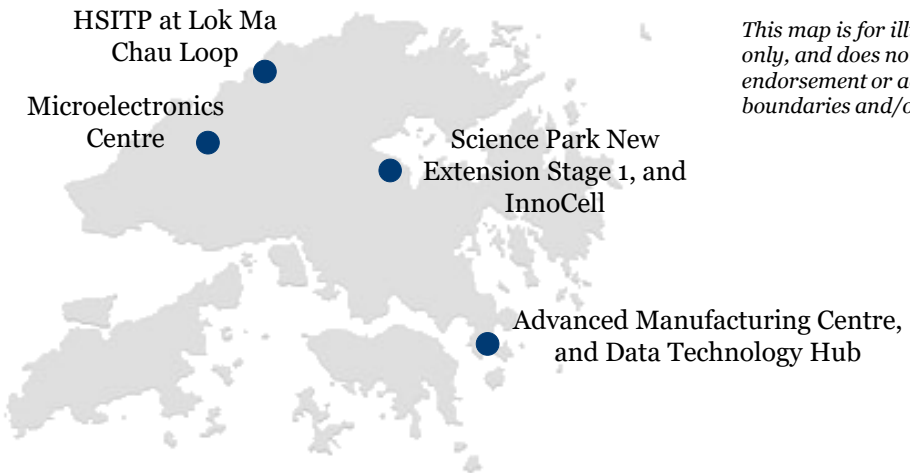
- 100% electrification rate (ranked first);
- Efficiency of air transport services (ranked second);
- Efficiency of train services (ranked third); and
- Efficiency of seaport services (ranked fourth).

Telecommunications networks also cover the entire city, allowing enterprises in Hong Kong to use reliable, safe, and fast communications and internet services. The main shortfall identified from the report is a lower airport connectivity (21st) than other major hubs (such as Singapore). In addition, the current limitation to Hong Kong's reindustrialisation is the relatively low number of industrial estates in the city.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending[4,5,6,7,8,9,10,11,12]

To help promote and encourage reindustrialisation in Hong Kong, the HKSAR government has approved and proposed many projects to upgrade the I&T infrastructure available in the city. These projects will be mainly developed and managed by the HKSTPC, including the Advanced Manufacturing Centre and Data Technology Hub in Tseung Kwan O Industrial Estate, Microelectronics Centre in Yuen Long Industrial Estate, the Hong Kong-Shenzhen Innovation and Technology Park (HSITP) at Lok Ma Chau Loop, and the Science Park New Extension Stage 1 and InnoCell in Science Park.

Map of Major Upcoming I&T Infrastructure Projects in Hong Kong



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Advanced Manufacturing Centre (AMC)

The AMC will be developed and managed by HKSTPC, and is the core of Hong Kong's reindustrialisation strategy. It is predicted to cost around HKD 6.65 billion, and will be located in Tseung Kwan O Industrial Estate. It aims to provide companies with advanced manufacturing production facilities to shorten their production cycle and respond promptly to market needs.

The AMC will provide adaptable and low cost production facilities, with integrated customer to manufacturer order information to meet the ever-changing customer needs. Upon completion, the AMC will allow companies of all sizes, including low-volume producers, to produce technologically innovative, high value-added, high-mix, and highly customised products.

The AMC is expected to employ around 2,500 I&T related staff, and will include:

- Scalable high-end production base: allowing for both big companies with large-scale production or startups prototyping customised creations to use the AMC's self-contained units;
- Comprehensive critical support services: lowering costs for low-volume production by providing shared logistics, warehousing, prototyping, assembly, and clean room services; and
- Communal distribution centre: providing an advanced cargo hoist system for efficient flow of goods, dynamic scheduling system to optimise the movement of goods, and on demand storage.

Project Specifications

The project specifications for the AMC are shown below.

Target Year of Completion	**Land Area**	**Gross Floor Area**	**Ceiling Height**	**Grid Size**	**Floor Loading**
Phase 1: 2020 Phase 2: 2022	2.71 ha	108,580 m^2	6m	12m x 12m	12.5 kilopascals

Even though the AMC site will be over 100,000 m^2 when completed, the high demand for space means there is a need to build additional similar facilities. Facilities like the AMC allow Hong Kong companies to move their hi-tech and advanced materials production back to Hong Kong, where the companies may have better access to technical resources and support. The AMC is intended as a pilot project for promoting the construction of similar advanced production facilities and pushing ahead reindustrialisation in Hong Kong.

Promoted Industries

The AMC aims to foster innovation, support high value-added industries, advance high-end manufacturing, and enable I&T applications to help fuel economic growth in Hong Kong. Industries that have been identified for promotion in the AMC include:

Robo-electronics and Smart Power Equipment

Smart Sensors and Optical Equipment

Smart Electronics and Semiconductors

Medical, Healthcare and Hospital Equipment

Biomedical Engineering Implants and Equipment

For more information on the AMC, please refer to its official website (amc.hkstp.org).

Data Technology Hub (DT Hub)

The DT Hub aims to support the development of high value-added software, big data and artificial intelligence which are key to Hong Kong's reindustrialisation process. The hub is expected to be completed in 2020, and will host technology equipment, business centres, exhibition halls and offices. DT Hub will provide a comprehensive range of services and encourage research and development (R&D) in the following fields: data centre, multimedia processing and submarine cable landings.

Microelectronics Centre

In recent years, there has been growing interest from industries to develop microelectronics and other advanced material production lines in Hong Kong. However, the manufacturing of microelectronics products require specialised facilities such as dangerous goods storages, super-clean rooms, dedicated chemical waste and sewage treatment systems, etc. However, Hong Kong currently lacks such facilities, so the production of microelectronics is performed by manufacturing plants outside Hong Kong, such as in Singapore, Taiwan, and Mainland China, before being imported back to Hong Kong.

The HKSAR government proposes the conversion of a factory building in Yuen Long Industrial Estate into a Microelectronics Centre. The project is expected to cost around HKD 2 billion, and will result in a two-storey factory with a gross floor area of 36,180 m^2, a flexible design plan, and be equipped with the necessary facilities to produce microelectronics and other advanced materials. It will also provide supporting facilities such as shared laboratories and workspaces, offices, and conference rooms.

The Microelectronics Centre aims to provide support for local manufacturers moving towards high value-added production, smart production lines, and upgrading to Industry 4.0. The Centre will also directly provide more I&T jobs, as well as indirectly encourage expansion in different supporting industries such as supply chain management, testing and certification, wholesale and distribution, etc. Such advanced manufacturing activities will also encourage more R&D investment in the city, and help Hong Kong develop into an international I&T hub. The Microelectronics Centre is expected to create 420 jobs directly each year, and generate a value-added of over HKD 600 million annually.

The Hong Kong-Shenzhen Innovation and Technology Park (HSITP) at Lok Ma Chau Loop

A Co-operation Agreement was signed on 25 November 2011 between Hong Kong and Shenzhen for the development of the Lok Ma Chau Loop. The Lok Ma Chau Loop project borders Shenzhen, and involves three development directions: 1) R&D of new and advanced technologies; 2) use of cultural and creative industries, and 3) higher education. The Loop will be developed using the principles of sustainable development, environmental protection, energy efficient, and people-oriented principles.

Meetings have been held regularly between Hong Kong and Shenzhen to discuss the development of the Loop, and the progress being made. Its target is to make the first batch of land parcels available by 2021 or earlier. Several studies have been commenced by HKSTPC in order to formulate the Park's project development and operation plans, including Master Planning Study, Business Model and Business Planning Study, Technical Feasibility Study and the Economic Impact Analysis Study of Batch 1 Development.

As stated in the 2018-2019 Budget, HKD 50 billion was set aside to support the development of the I&T industry in Hong Kong. Of this sum, HKD 20 billion was reserved for the first phase development of the HSITP in Lok Ma Chau Loop. The HSITP will be four times bigger than the HKSP, therefore providing room for Hong Kong's I&T ecosystem to grow. Its proximity to the border additionally offers an opportunity for companies to tap into the supply chain, manufacturing capabilities, and talent pool across of Shenzhen and its surroundings. HSITP aims to attract worldwide R&D companies looking to accelerate their access into the Mainland China market. This R&D expertise inflow should therefore contribute to making Hong Kong a global leading innovation hub.

Science Park New Extension Stage 1 (SPX1)

SPX1, the new extension stage at Science Park consisting of two buildings, will provide research-related infrastructure and facilities to I&T companies to build their dedicated laboratories and workspaces. The construction of SPX1 aims to accelerate the development of healthcare, artificial intelligence, and robotics technological research when completed in 2019. Several smart features including app-connected space, hi-tech security, green facilities, transportation, and mobile design were built into the building. Being a part of HKSTPC's ecosystem, the construction should also enhance connections among the R&D community at a global level.

InnoCell in Hong Kong Science Park

InnoCell, adjacent to the southeast entrance of the Hong Kong Science Park, aims to provide around 500 residential units of affordable accommodation for talents and incubatees working in the Park. As a part of the larger effort to attract local, mainland and overseas I&T talents, InnoCell hopes to create a more vibrant ecosystem for innovation and technology companies and showcase a smart living & co-creation community. In May 2019, a Memorandum of Understanding was signed between HKSTPC and the Construction Industry Council (CIC) to collaborate on accelerating the development and adoption of construction robotics and automation systems. InnoCell is also one of the pilot projects adopting Modular Integrated Construction (MiC) systems, and is expected to be completed by the end of 2020.

IV. Availability of Natural Resources[13,14,15,16]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• The major types of vegetation in Hong Kong are woodland, shrubland and grassland. • About 38% of the land is labelled as country parks or special areas under the Country Parks Ordinance.
Agriculture, Fishing, Livestock	• Agriculture only accounted for 0.1% of Hong Kong's GDP in 2017. • Local fish production has shrunk and the number of commercially valuable deep-sea bottom fish in Hong Kong has declined.
Water Resources	• Between 70% to 80% of Hong Kong's potable water supply comes from Dongjiang in Guangdong Province. In 2018, 740 million m^3 of water were imported from the region. • The Dongshen-Hong Kong water supply system can provide Hong Kong with 1.1 billion m^3 per year
Minerals	• There are four active mining sites in Hong Kong. • Mining activities cover: sand, stones and large amounts of marine gravel excavated from the seabed waters.
Fossil Fuels, Electricity Generation	• Electricity in Hong Kong is mainly supplied by three fossil fuel power stations, including Lamma Island and Castle Peak Power Station, which use coal to generate electricity; and Black Point Power Station, which uses gas. • Gas is mainly produced locally in Hong Kong, while oil is imported by sea. • Hong Kong's fossil fuels are mainly imported from Southeast Asia and Australia. • Additionally, 70% of the electricity produced by the Guangdong Daya Bay Nuclear Power Plant is transmitted to Hong Kong.
Renewable Energy	• The government is trying to launch large-scale renewable energy projects. • The largest solar farm in Hong Kong (Siu Ho Wan Sewage Treatment Plant), can generate 1.1 million kilowatt-hours (kWh) of electricity annually.

Source:

[1] Industrial Estates, HKSTP

[2] Hong Kong Foreign Investment, Santander

[3] The Global Competitiveness Report 2018, World Economic Forum

[4] AMC, HKSTP

[5] With new state-of-the-art manufacturing centre facing 'overwhelming' tenant response, can Hong Kong find space for innovation sector?, South China Morning Post, Jan 2019

[6] Hong Kong's Science Park to take the lead on driving innovation and technology as it receives major cash injection, South China Morning Post, 2018

[7] Hong Kong-Shenzhen Innovation and Technology Park, HKSTP

[8] Fifth meeting of Joint Task Force on the Development of the HK-Shenzhen Innovation and Technology Park in the Loop held, Hong Kong Government Press Release

[9] Data Technology Hub, HKSTP

[10] SPX1, HKSTP

[11] InnoCell, Hong Kong Science Park, HKSTP

[12] HKSTP Commences Construction on InnoCell, Showcasing Construction Innovation for Smart Living and Co-creation Community, HKSTP

[13] The Vegetation of Hong Kong, Hong Kong Herbarium

[14] Hong Kong Water Supplies, Water Supplies Department

[15] Energy Efficiency and conservation, Government of the HKSAR

[16] Renewable Energy, Government of the HKSAR

8. Types of Industries Identified by the Local Government

Executive Summary

Reindustrialisation is the main focus of Hong Kong's future development. While traditional industries are fading, the innovation and technology (I&T) industry, which involves high-end manufacturing processes, has been gaining prominence.

The establishment of the Innovation and Technology Bureau (ITB) reinforces policies formulation and execution towards the development of Hong Kong's I&T capacities.

In order to support the I&T industry, the government has rolled out funding schemes, while government-supported funding institutions provide companies with incubation programmes.

8. Types of Industries Identified by the Local Government

I. List of Government Programmes Encouraging Specific Industries

Key Identified Sectors[1]

The HKSAR government is committed to encouraging industry development in Hong Kong. In the Chief Executive's 2018 Policy Address, innovation and technology (I&T) was identified as a key focus in supporting Hong Kong's reindustrialisation. Specifically, efforts should revolve around four main sectors, which have already been identified as Hong Kong's strengths:

Biotechnology

Artificial Intelligence

Smart City

Financial Technology

In 2015, the government established the Innovation and Technology Bureau (ITB). Its role is to foster coordination between the public, private, academic, and research sectors. The ITB works closely with all the ecosystem's stakeholders to examine possible I&T developments. An example of a current initiative is the transformation of Hong Kong into a smart city by leveraging big data applications and optimising the use of public sector information.

To achieve these goals, the ITB finances the I&T industry via the Innovation and Technology Fund (ITF), and supports startups with incubation programmes.

Innovation and Technology Fund (ITF)

The ITF funds local companies wishing to upgrade their technological level and introduce innovative ideas to their businesses. The ITF programmes and its various funding schemes have five well defined goals:

Supporting R&D

Facilitating Technology Adoption

Nurturing Technology Talent

Supporting Tech Startups

Promoting I&T Culture

For a detailed list of ITF funded projects, please refer to the ITF's website (www.itf.gov.hk/l-eng/about.asp), and section 9 of this report.

Incubation Programmes[2,3]

The two main institutes offering incubation programmes in Hong Kong are: the Hong Kong Science and Technology Park Corporation (HKSTPC) and Cyberport. Both aim to support technology related startups to develop their creative ideas into marketable solutions and products. HKSTPC and Cybeport, both receive fund from the government to enhance their programmes: in 2018, the government approved a HKD 10 billion funding proposal to be allocated to HKSTPC, and set aside HKD 5.5 billion in order to help Cyberport accommodate more companies. Some of the incubation programmes offered by the two entities are listed below.

- HKSTPC: offers three different incubation programmes for startups, in order to help them turn their innovative ideas into commercial products. As of March 2019, over 620 companies have graduated from the incubation programmes, with over 78% of them still in business. Support services mainly focus on: offering office space and facilities, providing technical and management assistance, supporting promotion efforts, providing business support and financial aid package. The three incubation programmes are:

Incu-App
For startups engaged in web and mobile technology

Incu-Tech
For startups engaged in technology industry

Incu-Bio
For startups engaged in biotechnologies

For additional details, please visit HKSTPC's website (www.hkstp.org/en/how-we-serve/incubation-programmes/).

- Cyberport: provides various incubation programmes to digital tech related companies. As of September 2018, over 300 companies have graduated from Cyberport's incubation programmes, of which more than 80% are still in business. In addition to financial support, technical assistance and business consultation support, the programmes offer startups:
  - Up to HKD 500,000 financial assistance;
  - Financial, technical, and business consultation support;
  - Rent-free working space;
  - Free of charge facilities (e.g. co-working, meeting rooms); and
  - Meeting with investors and entrepreneurs, providing networking opportunities.

For additional details, please visit Cyberport's website (www.cyberport.hk/en/about_cyberport/cyberport_entrepreneurs/cyberport_incubation_programme).

Other Funding Schemes[4]

Different schemes have been established by the HKSAR government to assist manufacturers in evolving toward high-end manufacturing. The funding schemes fall into five main categories:

- Startup/Incubation: mainly supported by the Hong Kong Science & Technology Parks Corporation (HKSTPC) and the Hong Kong Cyberport Management Company Limited for entrepreneurs;
- Research & Development (R&D): mainly supported by the Innovation and Technology Commission (ITC) to promote R&D in Hong Kong;
- Financing and Guarantees: mainly targeted at providing financing for small and medium-sized enterprises (SMEs);
- Market Development/Business Upgrading: mainly supported by the Trade and Industry Department (TID) to assist SMEs in expanding their businesses; and
- Environmental Protection: mainly supported by the Environmental Protection Department (EPD) to promote green technologies and environmentally friendly operational processes.

For a detailed list of the funding programmes in each of these categories, please refer to Appendix 3.

Source:

[1] Innovation and Technology Industry in Hong Kong, HKTDC

[2] Incubation, HKSTP

[3] Cyberport Incubation Porgramme, Cyberport

[4] A Supportive Government, Invest HK

9. Key Government Incentives

Executive Summary

There are various government funding schemes for small and medium-sized enterprises (SMEs) and startups in Hong Kong. From financing, business upgrade and transformation, technology research and development (R&D) to new market development, businesses can find relevant funding schemes in order to develop their operations.

In the 2019 Policy Address, the Chief Executive proposed a HKD 2 billion "Reindustrialisation Funding Scheme" to subsidise manufacturers to set up smart production lines in Hong Kong. The initiative could provide companies with extra incentives to engage in high-end production by tapping into innovation and technology (I&T) solutions such as application of smart technologies or automated production processes.

9. Key Government Incentives

I. Eligibility for Incentive Programmes to support Hong Kong's Reindustrialisation[1,2,3]

The Innovation and Technology Commission (ITC) and Trade and Industry Department (TID) administer most of the government funding schemes on reindustrialisation. A detailed list of the various funding schemes available in Hong Kong can be found in Appendix 3.

Innovation and Technology Fund (ITF)

The ITF is designed to fund local companies wishing to upgrade their technological level and introduce innovative ideas to their businesses. There are more than 15 funding programmes under the ITF to achieve their five goals (see section 8 of this report for details).

Aspect	Funding Scheme	Objective	Coverage
Supporting R&D	Enterprise Support Scheme (ESS)	Provides financial assistance to encourage private sector to invest in R&D	• Each project can be funded up to HKD 10 million • Project period should not exceed 2 years • Eligible to a 40% cash rebate on project's expenditure by applying for the Cash Rebate Scheme (CRS)
Facilitating Technology Adoption	Technology Voucher Programme (TVP)	Subsidises SMEs to foster use of technological solutions to improve productivity, or upgrade or transform business processes	• Funding ceiling per applicant is HKD 400,000 • A company can have a maximum of 4 approved projects
Nurturing Technology Talent	Reindustrialisation and Technology Training Programme (RTTP)	Subsidises and encourages companies to train their staff in advanced technologies, and fields related to Industry 4.0	• Companies are subject to a funding ceiling of HKD 500,000 each year
Supporting Technology Startups	Innovation and Technology Venture Fund (ITVF)	Aims to stimulate private investment in local innovation and technology startups	• The ITVF Corporation will co-invest with venture capital funds in local I&T startups at a matching investment ratio of approximately 1:2
Promoting I&T Culture	General Support Programme (GSP)	Supports non-R&D projects that contribute to the development of industries and foster the innovation and technology culture	• Projects to be supported may include conferences, exhibitions, seminars, workshops, promotional events, etc.

For additional information please refer to section 5 of this report or consult the ITF website (www.itf.gov.hk/l-eng/about.asp)

Dedicated Fund on Branding, Upgrading Domestic Sales (BUD)

The BUD Fund was launched in 2012 to help Hong Kong companies grasp economic opportunities and boost their competitiveness. In early 2020, the total funding of the BUD Fund was raised to HKD 4.5 billion, therefore allowing the creation of two different programmes supporting companies' expansion in specific geographic locations: the Mainland Programme, and the ASEAN and FTA Programme.

Funding Scheme	Objective	Eligibility	Coverage
Mainland Programme FTA Programme	Provide funding to local companies considering developing their brands, upgrading and restructuring their business operations or promoting sales in Mainland China, and all economies with which Hong Kong has signed Free Trade Agreements (FTAs), including ASEAN markets	• Non-listed company registered in Hong Kong • Companies with substantive business operations in Hong Kong	• Government covers a maximum of 50% of the total project cost • Each company can have a maximum of 40 approved projects • Cumulative funding ceiling per enterprise is HKD 4 million • A funded project should be completed within 24 months

Financing Schemes

The HKSAR government has established various funding schemes to provide financial assistance to businesses. The main scheme for SMEs is the SME Funding Scheme, designed for SMEs looking to expand their markets outside of Hong Kong. The two major programmes under the Scheme are: the SME Export Marketing Fund (EMF) and the SME Loan Guarantee Scheme (SGS).

Funding Scheme	Objective	Eligibility	Coverage
SME Export Marketing Fund (EMF)	Provides financial assistance to SME for participation in export promotion activities	• SME registered in Hong Kong • Employs less than 100 people • Has substantive business operation in Hong Kong	• Grants covers 50% of eligible expenditure or HKD 100,000 • A company may receive a maximum of HKD 800,000 in cumulative grants
SME Loan Guarantee Scheme (SGS)	Provides loans guarantee to SMEs with the aim of helping them to secure loans for acquiring business installations and equipment; or meeting working capital needs of general business uses	• SME registered in Hong Kong • Employs less than 100 people • Has substantive business operation in Hong Kong	• The amount of guarantee is 50% of the loan amount • Maximum total guarantee of HKD 6 million • Guarantee period for a maximum of 5 years

For additional information, please refer to the Trade and Industry Department official website (www.smefund.tid.gov.hk/eindex.html).

Source:

[1] About the Innovation and Technology Fund, Innovation and Technology Fund

[2] Dedicated Fund on Branding, Upgrading and Domestic Sales, HKPC

[3] SME Fund, Trade and Industry Department

10. Environmental Requirements

Executive Summary

There are environmental laws and regulations that control polluters in Hong Kong, covering air, waste, water, noise, and chemical pollutions. Industries have to comply with the regulations, or else face the risk of penalties, or even jail terms in certain circumstances.

The Environmental Protection Department (EPD) is the government agency responsible for overseeing environmental issues and enforcing the environmental laws. Businesses that wish to operate in Hong Kong may also require certain permits, licences, and approvals before commencing operations, which are all processed and approved by the EPD.

10. Environmental Requirements

I. Environmental Laws and Regulations in Hong Kong

A. The Main Environmental Protection Administration in Hong Kong

In Hong Kong, the Environment Protection Department (EPD) is the main government department responsible for addressing policies and plans concerning environmental protection.

B. The Main Environmental Legislation in Hong Kong[1]

There are various legal regulations on pollutant emissions for industries within Hong Kong. Businesses will be monitored on air, noise, water and waste pollution arising from their business operations. Offenders may be fined and/or be subject to imprisonment in certain circumstances.

The relevant environmental ordinances in Hong Kong are listed below.

Ordinance	Effects	Details
Air Pollution Control Ordinance	• Empowers the EPD to control air pollution from industrial, construction, and commercial activities; • Prohibits the use of high sulphur and leaded fuels; and • Prohibits the open burning of construction waste, tyres, and cables.	Cap. 311
Waste Disposal Ordinance	• Prohibits the dumping of waste in public places or on government land, or on private premises without the consent of the owner or occupier.	Cap. 354
Water Pollution Control Ordinance	• Requires all discharge, other than domestic sewage to a foul sewer or unpolluted water to a storm drain, to be covered by an effluent discharge licence. The licence specifies the permitted physical, chemical and microbial quality of the effluent, to ensure the effluent does not damage sewers or pollute inland or inshore marine waters.	Cap. 358
Noise Control Ordinance	• Controls neighbourhood noise, as well as noise from industrial, construction, and commercial activities.	Cap. 400
Ozone Layer Protection Ordinance	• Controls the production, import, and export of products containing ozone-depleting substances; • Controls the recycling of ozone-depleting substances; and • Fulfils Hong Kong's obligations under the 1985 Vienna Convention and the 1987 Montreal Protocol.	Cap. 403
Dumping at Sea Ordinance	• Requires anyone involved in marine dumping and related loading operations to have a permit from the EPD; and • Requires all dumping vessels to be equipped with an automatic self-monitoring system which records their position, and their operations.	Cap. 466
Hazardous Chemicals Control Ordinance	• Regulates the import, export, manufacture, and use of non-pesticide hazardous chemicals that have potentially harmful or adverse effects on human health or the environment, including those regulated by the Stockholm Convention and the Rotterdam Convention.	Cap. 595

C. The Main Environmental Permits in Hong Kong[2,3]

Hong Kong has many licences, permits, and approvals required for environmental protection. The different types of licences required for a business will depend on the industry that the business operates in. Certain environmental licences and permits can be applied through the EPD's website, covering the following five main areas:

- Air pollution control;
- Water pollution control;
- Waste disposal;
- Noise control; and
- Environmental impact assessment.

For more information on applications for environmental permits, please refer to the EPD's website (www.epd.gov.hk/epd/english/application_for_licences/online_applic/online_app.html).

Licences, Permits and Approvals Required for Different Industries (Part 1/4)

Licence/Permit	Who Should Apply	Typical Examples
Licence to conduct specified processes	Any owner of premises which is engaged in the conduct of any of the 31 specified processes (in refer to Schedule 1 of Cap. 311 of Air Pollution Control Ordinance)	Quarries, concrete batching plants, asphalt concrete plants, manufacturing plants that involve melting or recovery or metals, electricity plants that have an installed generation capacity exceeding 5 MW, etc.
Approval for installation or alteration of furnaces, ovens and chimneys	Any occupier of the premises who wants to install or alter any furnace, oven or chimney with a total fuel consumption rate exceeding 25 L of liquid fuel per hour, or 35 kg of solid fuel per hour, or 1150 MJ of gaseous fuel per hour	Factories, cleaning services, educational or medical institutions, restaurants or housing estates in which boilers, cooking stoves, emergency generators or other fuel-using equipment is to be installed or altered, etc.
Open Burning Permit	Any person who intends to apply for permit to conduct open burning, except for those prohibited or exempted	Establishment who needs to conduct open burning activities for fire fighting training, etc.
Asbestos investigation report, asbestos abatement plan and asbestos management plan	The owner of premises who intends to carry out asbestos related works in their premises, except when the works are exempted	Owner of premises intending to carry out building works, or activities involving insulation materials in mechanical plant items, etc.
Notification of commencement of asbestos abatement work	The owner of premises in which asbestos related work is to be carried out	Owner of premises intending to carry out building works, or activities involving insulation materials in mechanical plant items, etc.

Licences, Permits and Approvals Required for Different Industries (Part 2/4)

Licence/Permit	Who Should Apply	Typical Examples
Notification of Construction Work under the Air Pollution Control (Construction Dust) Regulation	The contractor responsible for a construction site where any notifiable work under the Air Pollution Control (Construction Dust) Regulation is proposed to be carried out	Construction work which is classified as notifiable work such as site formation, reclamation, demolition & construction of building, road construction work, etc.
Construction Noise Permit (CNP) for general works/ prescribed construction works	Any person who intends to carry out construction activities with powered mechanical equipment during restricted hours, or carry out construction work prescribed under the Noise Control Ordinance during restricted hours in designated areas	Developer, architect, engineer or contractor involved in a construction project, etc.
CNP for percussive piling	Any person who intends to carry out piling work at the construction site in a percussive manner	Developer, architect, engineer or contractor involved in the building, civil and foundation works of a construction project which requires percussive piling work, etc.
Noise Emission Label (NEL) for air compressor	Any person who manufactures/ trades/ imports/ uses or provides rental service on any air compressor which is designed or used for the purpose of carrying out any construction works and is capable of supplying compressed air at 500 kPa pressure or above	Construction equipment manufacturer, trader, importer, rental service vendor, contractor of construction work, etc.
NEL for hand-held percussive breaker	Any person who manufactures/ trades/ imports/ uses or provides rental service on any handheld percussive breaker having a mass of 10kg or above	Construction equipment manufacturer, trader, importer, rental service vendor, contractor of construction work, etc.
Discharge Licence under WPCO	Any owner or occupier or premises which discharges trade effluent from institutional and commercial permises, domestic sewage from institutional and commercial premises in unsewered areas, domestic sewage treatment plant and domestic premises in unsewered areas	Owner or occupier of commercial, industrial, institutional premises generating trade effluent, owner of a domestic sewage treatment plant, owner of premises with septic tank, etc.

Licences, Permits and Approvals Required for Different Industries (Part 3/4)

Licence/Permit	Who Should Apply	Typical Examples
Chemical Waste Producer Registration	Any person who produces or causes to be produced chemical waste	Owner of chemical waste generating premises, for instance, factories, workshops, mining/building sites; education/medical institutions; transport agents; cleaning/repairing agents, etc.
Licence to Dispose of Chemical Waste	Any person who, with the aid of off-site or in-house disposal facilities, or any waste treatment, reprocessing and recycling facilities, wishes to carry out disposal of chemical wastes	Owner of lubricating oil recycling plant, textile factories, etc., with waste treatment, preprocessing or recycling facility
Licence to Collect Chemical Waste	Any chemical waste producer who intends to transport his own chemical waste to an off-site chemical waste disposal facility; or any person who wishes to provide chemical waste collection or removal service	Collector of asbestos, MARPOL waste and laboratory wastes, etc.
Licence to Dispose of Clinical Waste	Any person who operates disposal facilities to carry out disposal of clinical wastes	Operator of the Chemical Waste Treatment Centre
Licence to Collect Clinical Waste	Any person who provides services for the collection or removal of clinical waste	Collector of clinical waste produced from a medical clinic
Approval for using Chemical Waste Container >450L	Any chemical waste producer who intends to use large containers with a capacity exceeding 450 L for storage of chemical waste	Owner of large scale chemical waste generating premises, e.g. factories, building sites, transport agents, etc.
Waste Import/ Export Permit	Anyone who intends to import or export waste into or out of Hong Kong, unless the waste is listed in the Sixth Schedule of the Waste Disposal Ordinance, uncontaminated, and intended for reprocessing, recycling or reuse	The disposer, importer of the waste, the producer or the exporter of the waste, the freight agent who provides shipment of the waste, etc.
Approval for the use of Oil Dispersant and Similar Substances	Prospective user/trader of oil dispersant or similar substances for treating oil at sea in Hong Kong	Reclamation work contractor, user/trader of such products and marine transport agents, etc.

Licences, Permits and Approvals Required for Different Industries (Part 4/4)

Licence/Permit	Who Should Apply	Typical Examples
Marine Dumping Permit	Any person who intends to perform an operation described below *(Note)*: a) dumping substances within the waters of Hong Kong b) dumping substances anywhere in the sea c) loading an aircraft, vessel, marine structure or floating container in Hong Kong with substances or articles for dumping anywhere in the sea d) loading a vehicle in Hong Kong with substance for dumping from the vehicle anywhere in the waters of Hong Kong	Contractor of works involving dredging and dumping operations; contractors of works involving loading substances and transportation of the substances for dumping
Permits to import, export, manufacture or use the non-pesticide hazardous chemicals controlled under the Hazardous Chemicals Control Ordinance (HCCO)	Any person who acts in the capacity of an importer, exporter, manufacturer or user of the scheduled chemicals controlled under the HCCO	Local chemical manufacturers, local chemical traders, universities, research institutes and testing laboratories etc.
Approval for establishing a construction waste disposal account	• Main contractor who undertakes construction work contract with value of $1 million or above • Any person who intends to use government waste disposal facilities for disposal of construction waste generated from contracts each with value less than $1 million	• Main contractors • Construction waste producers, property management companies
Approval for using waste transfer service	Any person who intends to disposal waste at refuse transfer stations	Private waste collectors

Note: Dumping means a deliberate disposal, including an emission or discharge, at sea of substances such as any wastes, dredged mud, excavated materials, sand, rock, etc.

Applications for Permits, Licences, and Approvals

The EPD is the only government organisation processing applications of environmental related permits, licences, and approvals. The time required for application processing will vary, depending on the type of licences. The time frame as pledged by the EPD is shown below.

Category	Licence	Time Required Pledge (2019)
Air	Emission Testing and Notices to Smoky Vehicles Owners	99% in 3 working days
	Specifications and plans for installation or alteration of furnaces or chimneys	90% in 16 days
	Registration for asbestos personnel	95% in 68 days
	Asbestos abatement and management plans	95% in 25 days
Environmental Assessment and Planning	Environmental Impact Assessment Study Briefs	45 days
	Permission to apply directly for environmental permits	45 days
	Review of Environmental Impact Assessment Reports	60 days
	Approval or rejection for Environmental Impact Assessment Reports after public consultation	30 days
	Environmental permits	30 days
	Further environmental permits	30 days
	Variation of environmental permits	30 days
Noise	Construction noise permits	90% in 18 days
	Noise emission labels	90% in 15 days
Waste	Registration of chemical waste producers	98% in 30 days
	Part A Chemical waste notifications	95% 12 days
	Marine dumping permits	90% in 18 days
Water	Water Pollution Control Ordinance licences (Excluding licences requiring public notification)	95% in 14 days after payment

For more details about the processing time required for each licence, please refer to the EPD's website (www.epd.gov.hk/epd/english/about_epd/perf_pledge/perf_pledge_b.html).

Source:

[1] *Environmental Protection Department official website*

[2] *On-line Application, Environmental Protection Department*

[3] *Performance Pledge 2019, Environmental Protection Department*

Appendix

Appendix 1

Information Directory for Starting a Business in Hong Kong (Part 1/2)

Stage	Category of Information	Contacts of Organisations
Setting up a Company	Company Registration	• Company Registry - Tel: +852 2234 9933
	Factory Registration	• Trade and Industry Department - Tel: +852 2392 2922
	Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)	• Hong Kong Monetary Authority - Tel: +852 2878 8196
	Foreign Direct Investment in Hong Kong	• InvestHK - Tel: +852 3107 1000
	Tax Information	• Inland Revenue Department - Tel: +852 187 8088
Labour Employment	Laws and Regulations over Local Labour Employment	• Labour Department - Tel: +852 2544 3271
	Work Permits and Visa	• Immigration Department - Tel: +852 2824 6111
Research and Development	Government Funded R&D Centres	• Automotive Platforms and Application Systems R&D Centre - Tel: +852 2788 6262 • Hong Kong Applied Science and Technology Research Institute - Tel: +852 3406 2800 • Hong Kong Research Institute of Textiles and Apparel - Tel: +852 2627 0180 • Logistics and Supply Chain MultiTech R&D Centre - Tel: +852 2299 0551 • Nano and Advanced Materials Institute - Tel: +852 3511 3407
	Government Funded R&D Organisations	• Cyberport - Tel: +852 3166 3800 • Hong Kong Productivity Council - Tel: +852 2788 6262 • Hong Kong Science & Technology Parks Corporation - Tel: +852 2629 1818
	Testing and Certification	• The searching platform - "Lab Test One" , which can be downloaded from the App Store or Android Play.
	Intellectual Properties Registration in Hong Kong	• Intellectual Property Department - Tel: +852 2961 6901

Appendix 1

Information Directory for Starting a Business in Hong Kong (Part 2/2)

Stage	Category of Information	Contacts of Organisations
Production	Legal Regulations onto Industries with Pollutant Emissions	• Environment Protection Department - Tel: +852 2838 3111
Product Launching	Certificate of Origin	• Trade and Industry Department; - Tel: +852 2392 2922 Five Government Approved Certification Organizations including: • Hong Kong General Chamber of Commerce - Tel: +852 2529 9229 • Federation of Hong Kong Industries - Tel: +852 2732 3188 • Chinese Manufacturers' Association of Hong Kong - Tel: +852 2545 6166 • Indian Chamber of Commerce, Hong Kong - Tel: +852 2523 3877, 2845 4612, 2525 0138, 2525 0139 • Chinese General Chamber of Commerce – Tel: +852 2525 6385

Appendix 2

Key Business Associations (Part 1/3)

Association	Information and Contact
The Chinese Manufacturer's Association of Hong Kong	Year of establishment: 1934 Aims/objectives: • Promoting trade and industrial development • Improving business environment • Representing the industrial sector in the formulation and implementation of government policies • Participating in community development work • Fostering international understanding and cooperation • Fulfilling corporate social responsibility" Address: CMA Building, 64-66 Connaught Road Central, Hong Kong Tel: +852 2545 6166 Email: info@cma.org.hk Website: www.cma.org.hk
Federation of Hong Kong Industries	Year of establishment: 1960 Aims/objectives: • Promoting and fostering the interests of Hong Kong's industrial and business communities; • Promoting trade, investment, technological advancement, manpower development, and business opportunities in Hong Kong; • Representing business views and advising the government on policies and legislation which affect businesses Address: 31/F, Billion Plaza, 8 Cheung Yue Street, Cheung Sha Wan, Kowloon Tel: +852 2732 3188 Email: fhki@fhki.org.hk Website: www.industryhk.org

Appendix 2

Key Business Associations (Part 2/3)

Association	Information and Contact
The Hong Kong Chinese Importers' and Exporters' Association	Year of establishment: 1954 Aims/objectives: • Promoting members' economic and trade exchanges with localities, and gradually developing a mutual platform for members to express their opinions, and receive various political and economic information. • Fully assisting industries to understand the policy and business environmental adjustments. Allowing industries to grasp business information through economic forums, seminars and survey reports and special research reports publication. • Actively carrying out activities such as corporate exchanges, inland visits, national education, professional training, and charitable donations. Address: 7/F, Champion Bldg, 287-291 Des Voeux Rd, Sheung Wan Tel: +852 2544 8474 Email: info@hkciea.org.hk Website: hkciea.org.hk/?lang=en

Hong Kong General Chamber of Commerce	Year of establishment: 1861
	Aims/objectives:
	• Promoting, representing and safeguarding the interests of the business community in Hong Kong, and at the same time providing support, networks, training and business services to help the business community grow. Its four key functions are:
	  ○ Advocacy: safeguarding the interests of the business community
	  ○ Connections: expanding local and international networks for members
	  ○ Events: organising over 500 events for members every year
	  ○ Business Services: business documentation services, staff training, event management and venue rental
	Address: 22/F United Centre, 95 Queensway, Admiralty, Hong Kong
	Tel: +852 2529 9229
	Email: chamber@chamber.org.hk
	Website: www.chamber.org.hk/en/index.aspx

Appendix 2

Key Business Associations (Part 3/3)

Association	Information and Contact
Chinese General Chamber of Commerce	Year of establishment: 1900 Aims/objectives: • Promoting trade and industry and enhancing the prosperity of Hong Kong. • Protecting the rights and interests of the business and industrial community in Hong Kong • Participating in public affairs and reflecting the views of the business and industrial community. • Developing international and regional communication with a view to promote economic cooperation. Address: 4/F., 24-25 Connaught Road, Central, Hong Kong Tel: +852 2525 6385 Email: cgcc@cgcc.org.hk Website: www.cgcc.org.hk/en/index.php

Appendix 3

Startup/Incubation Funding Schemes (Part 1/3)

Programme	Objective	Eligibility	Coverage
Corporate Venture Fund (CVF)	• Potential investment to support technology startups • Funded by Hong Kong Science and Technology Parks Corporation (HKSTPC)	• Hong Kong-registered technology startups including HKSTP Incubatees, Incubation Programme graduates and Current Science Park tenants	• Earmarked for Seed Stage up to Series A funding rounds given certain criteria are met
Incu-Tech Programme	• Support tech startups working in research and developing differentiated solutions in electronics/green technology/ICT/ material and precision engineering industries • Funded by HKSTPC	• Hong Kong registered technology startup companies established for no more than 2 years before the date of application • Founding team members must hold more than 50% of the company at the time of application submission	• Work premises • Technology support • Business support • Financial aid package
Incu-Bio Programme	• Support biomedical tech startups in Hong Kong in various perspectives • Funded by HKSTPC	• Hong Kong registered and incorporated technology startup company limited by shares under the Companies Ordinance • Certain requirements regarding the date of incorporation, R&D focused area, licensing and staff should be met as well	• Financial aid package • Co-working environment • Laboratory support & services • Business support

For additional information, please refer to the following links (www.hkstp.org/en/how-we-serve/investment/corporate-venture-fund/), (www.hkstp.org/en/how-we-serve/incubation-programmes/incu-tech/), (www.hkstp.org/en/how-we-serve/incubation-programmes/incu-bio/).

Appendix 3

Startup/Incubation Funding Schemes (Part 2/3)

Programme	Objective	Eligibility	Coverage
Incu-App Programme	• Support companies in the electronics/green technology/ICT/ material and precision engineering industries • Funded by HKSTPC	• Hong Kong registered technology startup company limited by shares and established within 2 years, or incorporated within 3 years if the applicant is a current member or a graduate of the STEP programme or was originally incorporated overseas • The founders must (legally and beneficially) collectively hold at least 51% of the applicant company	• Work premises • Technology support • Business support • Financial aid package
Cyberport Creative Micro Fund (CCMF)	• Financially support high potential digital tech startup projects and business ideas • Funded by Hong Kong Cyberport Management Company Limited	• Hong Kong Permanent ID card holders or non-Hong Kong Permanent ID card holders if companies are registered and incorporated in Hong Kong • The principal applicant of the individual applicant must be a Hong Kong Permanent ID Card holder and aged between 18 and 35 years upon the application deadline	• A grant of HKD 100,000 can be received for successful applicants over 6 months to produce proof of concepts and prototypes

For additional information, please refer to the following links (www.hkstp.org/en/how-we-serve/incubation-programmes/incu-app/), (www.cyberport.hk/en/about_cyberport/cyberport_youth/cyberport_creative_micro_fund/hong-kong-programme).

Appendix 3

Startup/Incubation Funding Schemes (Part 3/3)

Programme	Objective	Eligibility	Coverage
Cyberport Incubation Programme	• Financially support digital tech related companies • Funded by Hong Kong Cyberport Management Company Limited	• Limited companies registered and incorporated in Hong Kong with a viable business plan for a product/service solutions to be ready for market within 12 to 18 months • Sufficient funds, or plans to raise sufficient funds to operate for at least 1 year upon admission	• Up to HKD 500,000 support over 24 months • A range of business and professional services • Incubatees can participate in the programme on-site at Cyberport, or off-site at their own premises
Cyberport Macro Fund (CMF)	• Financially support digital tech related companies • Funded by Hong Kong Cyberport Management Company Limited	• Scalable digital technology companies with operations based in Hong Kong, who are incubatees or graduates of Cyberport's other programmes, Cyberport Smart-Space companies, or Cyberport office tenants	• Between HKD 1 million to HKD 20 million for Cyberport's accumulative investment per investee
Science and Technology Entrepreneur Programme (STEP)	• Financially and technically support tech-focused entrepreneurs • Funded by HKSTPC	• Hong Kong ID Card holders aged 18 or above; • Companies incorporated in Hong Kong for less than 1 year; or • Team applicants that incorporate and register a company in Hong Kong before starting the programme	• All-rounded support from HKSTPC to acquire the essential skills to launch their new ventures, including business model design and investment training and even guidance on fine-tuning ideas and technical development • HKD 100,000 seed funding and a co-working space during the 12-month programme

For additional information, please refer to the following links (www.cyberport.hk/en/about_cyberport/cyberport_entrepreneurs/cyberport_incubation_programme), (www.cyberport.hk/en/about_cyberport/cyberport_macro_fund), (www.hkstp.org/en/how-we-serve/pre-incubation/science-and-technology-entrepreneur-programme/).

Appendix 3

Research & Development (R&D) Funding Schemes (Part 1/3)

Programme	Objective	Eligibility	Coverage
Technology Voucher Programme (TVP)	• Financially and technologically support local non-listed enterprises in using technological services and solutions to improve productivity, or upgrade or transform their business processes. • Funded by the Innovation and Technology Commission (ITC)	• Non-listed enterprises of all sizes with substantive business operation in Hong Kong	• Funding up to HKD 400,000 • Up to 4 approved projects per entity
The Innovation and Technology Venture Fund (ITVF)	• Support local I&T startups • Funded by ITC	• Local I&T startup incorporated under the Companies Ordinance within the last 7 years in Hong Kong, engaging itself or its subsidiaries in I&T business with a total number of employees being less than 250	• The ITVF will invest in I&T startups with adequate presence in Hong Kong (local I&T startups) at a matching investment ratio of approximately 1:2
General Support Programme (GSP)	• Generally support organisations and companies in the I&T industry • Funded by ITC	• The applicant must be an organization in Hong Kong, for example, non-profit making trade or industry association or chamber of commerce, public body, charitable organisations, a local university or other tertiary/post-secondary institute, District Council or local unincorporated or incorporated company under the Companies Ordinance	• Sponsorship of no less than 10% of the total project cost from private companies not relating to the applicant organisation in terms of ownership or management and/or from other sources of contribution • If the applicant is not a private company, contribution provided by the applicant itself or by its related parties will also be accepted as sponsorship for the project

For additional information, please refer to the following links (www.itf.gov.hk/l-eng/TVP.asp), (www.itc.gov.hk/en/funding/itvf.htm), (www.itf.gov.hk/l-eng/GSP.asp).

Appendix 3

Research & Development (R&D) Funding Schemes (Part 2/3)

Programme	Objective	Eligibility	Coverage
Researcher Programme (formerly known as Internship Programme)	• Support organisations and companies in the I&T industry • Funded by ITC	• Organisations or companies undertaking R&D projects funded by the Innovation and Technology Fund (ITF), including R&D Centres, designated local public research institutes may apply for funding support to engage researchers under the RP-ITF to assist in the ITF project	• Monthly allowance up to HKD 18,000 (graduates with a Bachelor's degree) or HKD 21,000 (graduates with a Master's degree) for organisations undertaking R&D projects funded by the ITF to recruit graduates from local universities as researchers to assist in the R&D projects • Each ITF project can engage up to 2 researchers at any one time. • The maximum engagement period for each researcher is 36 months
Postdoctoral Hub	• Support organisations/ companies in the I&T industry • Funded by ITC	• Organisations/ companies undertaking R&D projects funded by the ITF can apply for funding to recruit postdoctoral talent to assist in the R&D projects	• Each ITF project can engage up to 2 postdoctoral talent at any one time • The maximum engagement period for each postdoctoral talent is 36 months • The maximum monthly allowance is HKD 32,000 for each postdoctoral talent • The concerned postdoctoral talent must possess a doctoral degree in a science, technology, engineering and mathematics (STEM)-related discipline from either a local university or a well-recognised non-local institution

For additional information, please refer to the following links (www.itf.gov.hk/l-eng/RP.asp), (www.itf.gov.hk/l-eng/TTS-PH.asp).

Appendix 3

Research & Development (R&D) Funding Schemes (Part 3/3)

Programme	Objective	Eligibility	Coverage
Patent Application Grant	• Financially support local companies and individuals to apply for patent • Funded by ITC	• All locally incorporated companies, Hong Kong permanent residents or Hong Kong residents permitted to remain in Hong Kong for not less than 7 years which/who have never owned any patents in any countries or territories before will be eligible.	• A grant up to HKD 250,000 or 90% of the sum of the total direct cost of the patent application (including the cost for patent search-cum-technical assessment) and the administration fee charged by HKPC which is approximately equal to 20% of the total direct cost involved in patent application, whichever is the lower, will be provided.
Research and Development Cash Rebate Scheme	• Financially support projects in R&D industry • Funded by ITC	• Innovation and Technology Fund (ITF) projects; and • Partnership projects: R&D projects funded entirely by companies and conducted in partnership with designated local public research institutions	• Cash rebate equivalent to 40% of a company's expenditure
Technology Talent Scheme - Reindustrialisation and Technology Training Programme (RTTP)	• Financially support local companies especially those related to Industry 4.0 • Funded by ITC	• Registered in Hong Kong under the Business Registration Ordinance (Cap. 310) • Must be a non-government and non-subvented organisation; and • The employee nominated is a Hong Kong permanent resident with the necessary background/experience relevant to the advanced technology of the training course.	• Up to HKD 500,000 from the RTTP for each company in each financial year

For additional information, please refer to the following links (www.itc.gov.hk/en/funding/pag.htm), (www.itf.gov.hk/l-eng/CRS_app_guide.asp), (www.itf.gov.hk/l-eng/TTS-RTTP.asp).

Appendix 3

Financing and Guarantee Funding Schemes

Programme	Objective	Eligibility	Coverage
SME Financing Guarantee Scheme (SFGS)	• Financially support SMEs in all industries • Funded by the Hong Kong Mortgage Corporation Limited	• Registered in Hong Kong under the Business Registration Ordinance (Cap. 310) and must have business operations in Hong Kong for at least 1 year on the date of guarantee application with good loan repayment record. • Listed companies, lending institutions and affiliates of the lender are not eligible	• Funding up to HKD 12 million under the Scheme and the maximum loan tenor is 5 years • Both term loan and revolving credit facility can be provided at the same time without limitation on the proportion between the 2 types of facilities, subject to certain limitations on usage of fund
SME Loan Guarantee Scheme (SGS)	• Financially support SMEs in all industries • Funded by Trade and Industry Department (TID)	• Registered under the Business Registration Ordinance (Cap. 310) and with substantive business operation in Hong Kong • SMEs that provide services for its members and have club premises of which its members have a right of exclusive use • Lending institutions and their associates are not eligible	• The amount of guarantee for an SME is 50% of the approved loan, subject to a maximum amount of HKD 6 million • The guarantee can be used to secure loans for either business installations and equipment or working capital, or a combination of both, subject to a maximum period of 5 years • The SME may be eligible for the respective guarantee amount one more time given certain conditions are fulfilled, subject to a maximum amount of $6 million

For additional information, please refer to the following links (www.hkmc.com.hk/eng/our_business/sme_financing_guarantee_scheme.html), (www.smefund.tid.gov.hk/english/sgs/sgs_objective.html).

Appendix 3

Market Development/Business Upgrading Funding Schemes

Programme	Objective	Eligibility	Coverage
SME Export Marketing Fund (EMF)	• Financially support SMEs in all industries to do export marketing • Funded by TID	• SMEs registered in Hong Kong under the Business Registration Ordinance Business Registration Ordinance (Cap. 310) • The applicant should have substantive business operations in Hong Kong • The applicant should not be the organiser, service provider or a related company of the organiser or service provider of the export promotion activity covered by the application	• Grants for participation in certain export promotion activities (including but not limited to trade fairs /business missions in and outside Hong Kong, enhancement of corporate websites /mobile applications, etc.) organised by organisations with a good track record • The cumulative amount of grants shall not exceed the prevailing cumulative grant ceiling, with connected entities being treated as one enterprise
Enhanced BUD Fund (Mainland and FTA Programme)	• Financially support non-listed enterprises in all industries • Funded by TID	• All non-listed enterprises registered in Hong Kong under the Business Registration Ordinance (Cap. 310) with substantive business operations in Hong Kong	• Cumulative ceiling of HKD 4 million for a maximum of 40 projects • Funding ceiling of HKD 1 million per project • Initial payment of up to 75% of approved funding

For additional information, please refer to the following links (www.smefund.tid.gov.hk/english/emf/emf_scope.html), (www.bud.hkpc.org/en).

Appendix 3

Environmental Protection Funding Schemes

Programme	Objective	Eligibility	Coverage
Recycling Fund, Enterprise Support Programme	• Financially support enterprises in the recycling industry • Funded by Environmental Protection Department (EPD)	• Any enterprise with a valid business registration certificate established and registered under the laws of Hong Kong, with substantive business operations • The applicant should have been involved in recycling related operation with a proven track record for at least 1 year before submitting an application to the Recycling Fund	• Funding up to 50% of approved expenditure • Maximum cumulative funding ceiling per enterprise of HKD 15 million • Enterprise can have a maximum of 10 approved projects • All approved project should be completed within 4 years.
Recycling Fund, Enterprise Support Programme for Small-scale Standard Projects	• Help enterprises in the recycling industry implement SSP Type 1 (training workforce, improving occupational safety and health, enhancing capabilities, etc.) and SSP Type 2 (procuring small-scale equipment, hardware, machinery for enhancing processing and collection of recyclables, etc.) projects • Funded by EPD	• Any enterprise with a valid business registration certificate established and registered under the laws of Hong Kong, with substantive business operations • The applicant should have been involved in recycling related operation with a proven track record for at least 1 year before submitting an application to the Recycling Fund	• Funding ceiling for each Small-scale Standard Project application is HKD 150,000 or 50% of the approved total project expenditure, whichever is the less. • Each Small-scale Standard Project should be completed within 12 months

For additional information, please visit the Environmental Protection Department website or consult the following links (www.recyclingfund.hk/en/application_esp.php), (www.recyclingfund.hk/en/application_esp_ssp.php).

Appendix 4

Universities in Hong Kong (Part 1/2)

University	Description

The University of Hong Kong	• Founded in 1911 (oldest university in Hong Kong)
	• Ranked 25th in the QS World University Rankings 2020
	  ○ 1st in Dentistry for the 2nd consecutive year
	  ○ 7th in Education
	  ○ 9th in Civil and Structural Engineering
	  ○ 10th in Architecture
	  ○ 10th in Linguistics
	  ○ 10th in Social Policy and Administration.
	• Programmes including: undergraduate and postgraduate programmes.

The Hong Kong Polytechnic University	• Founded in 1937 • Ranked 91st in the QS World University Rankings 2020. • Nearly 96% of degree graduates from PolyU found a job or pursued further studies in 2016 • Programmes including: undergraduate and postgraduate programmes • Programmes covering fields such as: applied science, business, computing, construction and environment, design, engineering, fashion and textiles, health science, hotel and tourism management, humanities, language and culture, and social science
Hong Kong Baptist University	• Founded in 1956 • Ranked 261st in the QS World University Rankings 2020 • Programmes including: undergraduate and postgraduate programmes, and MPhil and PhD research programmes
The Chinese University of Hong Kong	• Founded in 1963 • Ranked 46th in the QS World University Rankings 2020 • Unique collegiate system: the only university in Hong Kong providing a collegiate system with 9 colleges. • Programmes including: undergraduate programmes and postgraduate programmes.
Lingnan University	• Founded in 1967 • Ranked 591-600 in the QS World University Rankings 2020 • 1st university in Hong Kong to have a service set up to help students share knowledge and expertise with charities and the community through volunteer activities • Programmes including: undergraduate and postgraduate programmes
Hong Kong Shue Yan University	• Founded in 1971 • 1st private university in Hong Kong • Programmes including: undergraduate and postgraduate programmes

Appendix 4

Universities in Hong Kong (Part 2/2)

University	Description
The Hang Seng University of Hong Kong	• Founded in 1980 • 2nd private university in Hong Kong • Programmes including: undergraduate and postgraduate programmes
The Open University of Hong Kong	• Founded in 1989 • Ranked 8th in Public Opinion Ranking of the Best University in Hong Kong in 2017 • Programmes including: undergraduate and postgraduate programmes
The Hong Kong University of Science and Technology	• Founded in 1991 • Ranked 32nd in the QS World University Rankings 2020 • 1st worldwide in Financial Times' EMBA Ranking in 2018 (for the Kellogg-HKUST EMBA Program) (9th time No.1 in the world – 2007, 2009-2013, 2016-2018) • 1st worldwide in QS Joint EMBA Rankings 2019 (for the Kellogg-HKUST EMBA Program) • Programmes including: undergraduate and postgraduate programmes
City University of Hong Kong	• Founded in 1994 • Ranked 52nd in the QS World University Rankings 2020 • Programmes including: undergraduate and postgraduate programmes. • Programmes covering fields such as: global business, social work, english studies, media and communication, environmental policy, applied physics
The Education University of Hong Kong	• Founded in 1994 • Ranked 20th in the world in Education in the QS World University Rankings 2019 • Programmes including: undergraduate and postgraduate programmes

Appendix 5

Colleges/Higher Education Institutions in Hong Kong

College/Higher Education Institution	Description
Caritas Institute of Higher Education	• Holistic person education, implementing the Catholic idea of running a school • Programmes include: Bachelor's, Top-up, and Joint Top-up Degrees, Sub-degrees, Professional Diploma, Diploma, Certificate, and other short courses
Centennial College	• Self-financing college established by the University of Hong Kong
Chu Hai College of Higher Education	• The oldest private college in Hong Kong • Programmes include: undergraduate and postgraduate programmes
Gratia Christian College	• Founded in 2015 • Programmes include: Bachelor's (Honours) Programme, Higher Diploma, and Diploma.
HKCT Institute of Higher Education	• Programmes include: Bachelor's and Master's Degrees, Higher and Professional Diploma, Diploma, and Diploma Yi Jin.
Hong Kong Academy for Performing Arts	• Founded in 1984 • The only public institution in Hong Kong specializing in the training of performing arts talents and the highest academic institution in the field of arts in Hong Kong • Programmes include: Bachelor's and Master's Degrees, Bachelor of (Honours) Programme, Higher Diploma, and Diploma
Hong Kong Nang Yan College of Higher Education	• Programmes include: Bachelor of (Honours) Programme, Higher Diploma, and Diploma
Technological and Higher Education Institute of Hong Kong	• Higher Education Institution under the Hong Kong Vocational Training Council • Programmes include: Bachelor of (Honours) Programme, Professional Diploma, and Diploma
Tung Wah College	• Programmes include: Bachelor of (Honours) Programme, Higher Diploma, Diploma, and Certificate
UOW College Hong Kong	• Programmes include: Associate and Bachelor's Degrees, and Diploma in General Studies
Yew Chung College of Early Childhood Education	• 1st undergraduate college in Hong Kong to focus on early childhood education • Programmes include: Bachelor of (Honours) Programme, Higher Diploma, and Diploma

Glossary – Section 1 to 10 Operational and Environmental Requirements

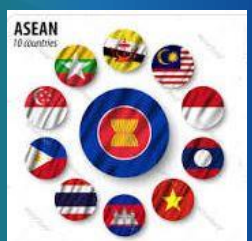
3RS	Third Runway System
AMC	Advanced Manufacturing Centre
APA	Advance Pricing Arrangement
ASA	Air Service Agreements
ASEAN	Association of Southeast Asian Nations
ASMTP	Admission Scheme for Mainland Talents and Professionals
BEPS	Base Erosion and Profit Shifting
BUD Fund	Dedicated Fund on Branding, Upgrading, and Domestic Sales
C&ED	Customs and Excise Department
CbCR	Country-by-country Report
CE	Chief Executive
CO	Certificate of Origin
DTA	Double Taxation Agreement
DTH	Data Technology Hub
EPD	Environmental Protection Department
FDI	Foreign Direct Investment
FR	Factory Registration
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GEP	General Employment Policy

HKAS	Hong Kong Accreditation Service
HKCTC	Hong Kong Council for Testing and Certification
HKD	Hong Kong Dollar
HKFRS	Hong Kong Financial Reporting Standards
HKHS	Hong Kong Harmonized System
HKIA	Hong Kong International Airport
HKICPA	Hong Kong Institute of Certified Public Accountants
HKPC	Hong Kong Productivity Council
HKSAR	Hong Kong Special Administrative Region
HKSTP	Hong Kong Science Park
HKSTPC	Hong Kong Science and Technology Parks Corporation
HKTDC	Hong Kong Trade Development Council
HS	Harmonized System
I&T	Innovation and Technology Industries
ICT	Information and Communications Technology
IFRS	International Financial Reporting Standards
IoT	Internet of Things
IP	Intellectual Property
IRD	Inland Revenue Department
ITB	Innovation and Technology Bureau
ITF	Innovation and Technology Fund
LPI	Logistics Performance Index
MOOC	Massive Open Online Course
MoU	Memorandum of Understanding

MPF	Mandatory Provident Fund
OECD	Organisation for Economic Co-operation and Development
OGP	Original Grant Patent
PAG	Patent Application Grant
PH	Postdoctoral Hub
PolyU	Hong Kong Polytechnic University
QMAS	Quality Migrant Admission Scheme
R&D	Research and Development
RCC	Robotics Catalysing Centre
RTTP	Reindustrialisation and Technology Training Programme
S&T	Science and Technology
SME	Small and Medium-sized Enterprises
SMW	Statutory Minimum Wage
STEM	Science, Technology, Engineering, and Math
STI	Science, Technology and Innovation
TechTAS	Technology Talent Admission Scheme
TEU	Twenty-foot Equivalent Unit
TID	Trade and Industry Department
USD	United States Dollar
VAT	Value Added Tax
VTC	Vocational Training Council

3. Guide to ASEAN Countries

Opportunities and Limitations in Manufacturing

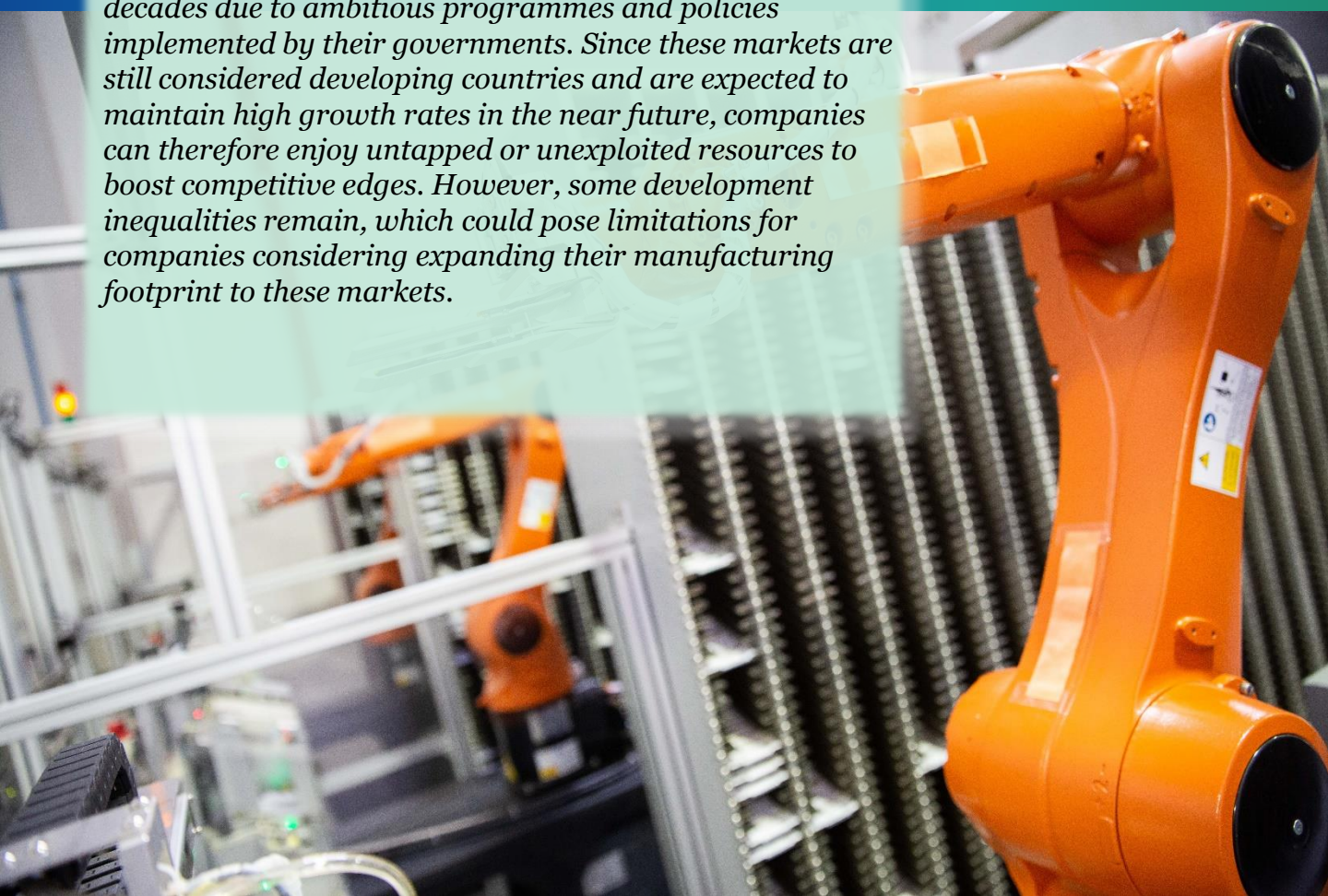


3.1. Foreword

These series of guidebooks provide overviews of manufacturing opportunities and limitations when considering expansion of operations to Southeast Asia.

Specifically targeting Mainland China and Hong Kong companies hoping to expand their manufacturing footprint to ASEAN countries, these guidebooks lay out general information on 10 ASEAN countries, including Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand, Singapore, and Vietnam, and address some broad manufacturing questions primarily analysing their operational and environmental requirements.

The 10 countries in this chapter have witnessed strong economic growth and social improvements in the past decades due to ambitious programmes and policies implemented by their governments. Since these markets are still considered developing countries and are expected to maintain high growth rates in the near future, companies can therefore enjoy untapped or unexploited resources to boost competitive edges. However, some development inequalities remain, which could pose limitations for companies considering expanding their manufacturing footprint to these markets.



3.2 Comparison Tables for the ASEAN Guides

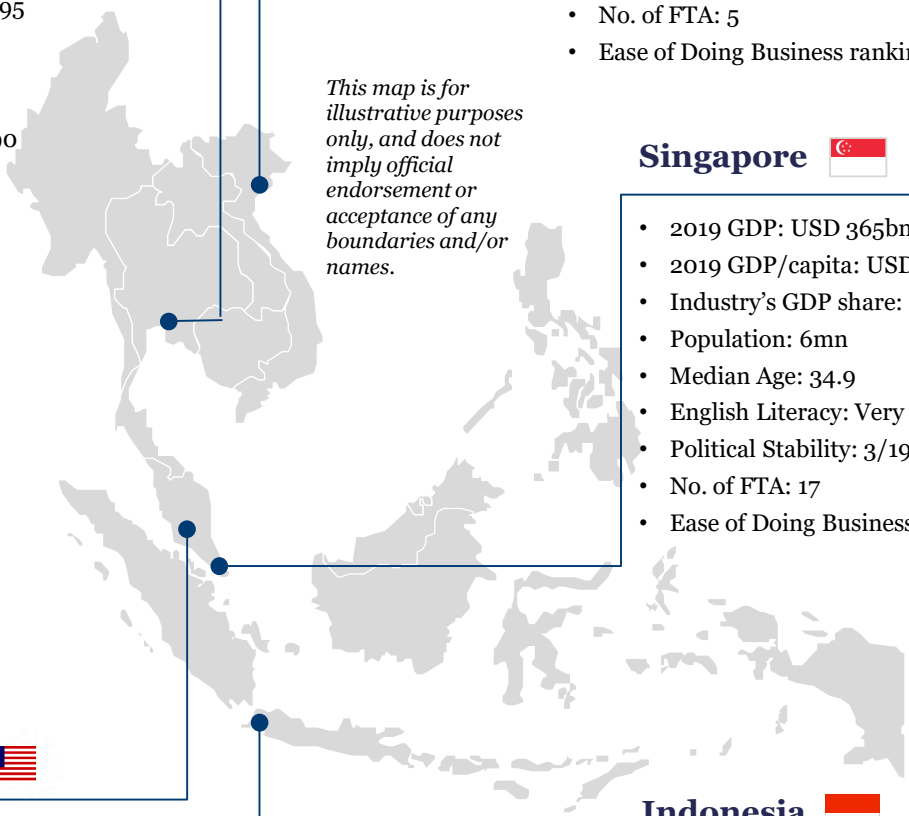
I. Overview of the ASEAN countries[1-9]

Thailand

- 2019 GDP: USD 539bn
- 2019 GDP/capita: USD 7,778
- Industry's GDP share: 36%
- Population: 69mn
- Median Age: 38.1
- English Literacy: Low
- Political Stability ranking: 157/195
- No. of FTA: 7
- Ease of Doing Business ranking: 27/190

Vietnam

- 2019 GDP: USD 261bn
- 2019 GDP/capita: USD 2,679
- Industry's GDP share: 33%
- Population: 97mn
- Median Age: 30.9
- English Literacy: Moderate
- Political Stability: 74/195
- No. of FTA: 5
- Ease of Doing Business ranking: 69/190



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Singapore

- 2019 GDP: USD 365bn
- 2019 GDP/capita: USD 52,890
- Industry's GDP share: 25%
- Population: 6mn
- Median Age: 34.9
- English Literacy: Very high
- Political Stability: 3/195
- No. of FTA: 17
- Ease of Doing Business ranking: 2/190

Malaysia

- 2019 GDP: USD 373bn
- 2019 GDP/capita: USD 11,484
- Industry's GDP share: 38%
- Population: 33mn
- Median Age: 28.7
- English Literacy: High
- Political Stability ranking: 89/195
- No. of FTA: 7
- Ease of Doing Business ranking: 15/190

Indonesia

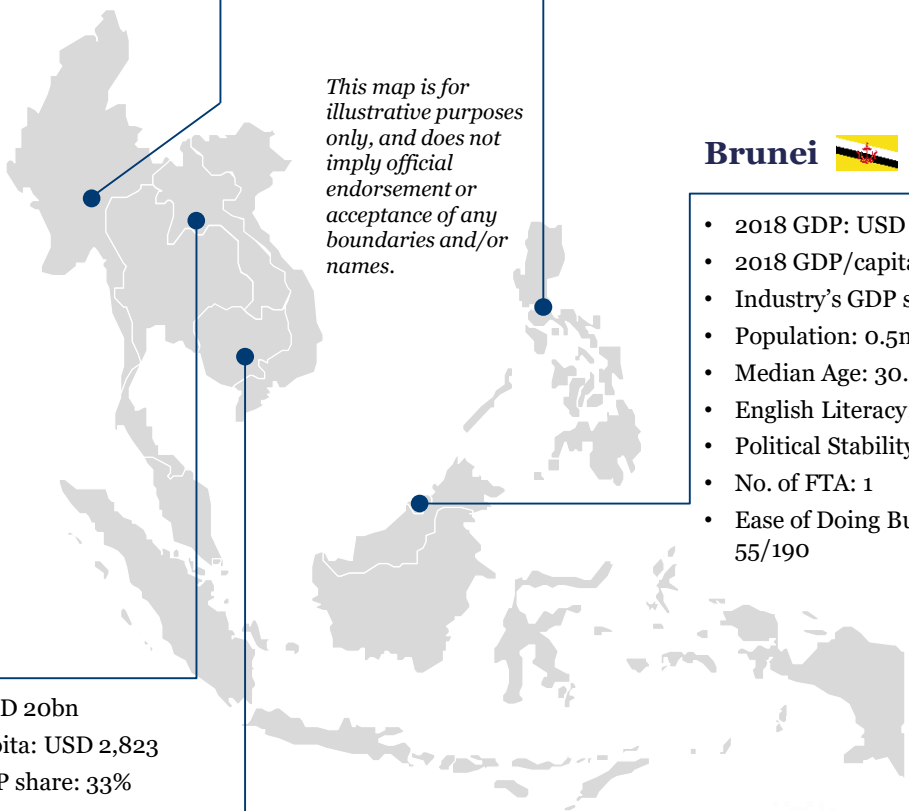
- 2019 GDP: USD 1,130bn
- 2019 GDP/capita: USD 4,193
- Industry's GDP share: 41%
- Population: 270mn
- Median Age: 30.5
- English Literacy: Low
- Political Stability: 135/195
- No. of FTA: 2
- Ease of Doing Business ranking: 73/190

Myanmar

- 2019 GDP: USD 71bn
- 2019 GDP/capita: USD 1,305
- Industry's GDP share: 36%
- Population: 54mn
- Median Age: 28.5
- English Literacy: Very Low
- Political Stability: 168/195
- No. of BIT: 12
- Ease of Doing Business ranking: 171/190

Philippines

- 2019 GDP: USD 370bn
- 2019 GDP/capita: USD 3,417
- Industry's GDP share: 31%
- Population: 108mn
- Median Age: 23.7
- English Literacy: High
- Political Stability: 173/195
- No. of FTA: 2
- Ease of Doing Business ranking: 124/190



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Brunei

- 2018 GDP: USD 14bn
- 2018 GDP/capita: USD 31,627
- Industry's GDP share: 57%
- Population: 0.5mn
- Median Age: 30.5
- English Literacy: N/a
- Political Stability: 15/195
- No. of FTA: 1
- Ease of Doing Business ranking: 55/190

Laos

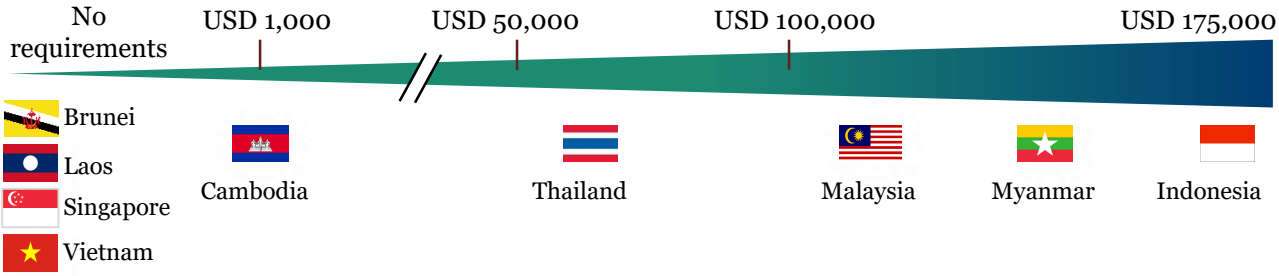
- 2019 GDP: USD 20bn
- 2019 GDP/capita: USD 2,823
- Industry's GDP share: 33%
- Population: 7mn
- Median Age: 23.4
- English Literacy: Very Low
- Political Stability: 67/195
- No. of FTA: 4
- Ease of Doing Business ranking: 154/190

Cambodia

- 2019 GDP: USD 26bn
- 2019 GDP/capita: USD 1,594
- Industry's GDP share: 33%
- Population: 16mn
- Median Age: 25.7
- English Literacy: Very Low
- Political Stability: 87/195
- No. of FTA: 1
- Ease of Doing Business ranking: 138/190

II. Legal Environment and Competition Law[10-20]

Minimum Capital Required to set up a Limited Liability Company (LLC) (*in USD*)



Note: In Philippines is not possible to set up an LLC, however there are no capital requirements to set up a Domestic Corporation in the country

III. Taxation, Transfer Pricing, Banking and Currency Control

Standard Corporate Income Tax Rate *(in %)*[21-30]

17%	Singapore
18.5%	Brunei
20%	Cambodia, Thailand, Vietnam
24%	Malaysia, Laos
25%	Indonesia, Myanmar
30%	Philippines

Standard Value Added Tax Rate *(in %)*[21-30]

7%	10%	12%
Thailand, Singapore	Cambodia, Indonesia, Laos, Vietnam	Philippines

Note: Brunei, Malaysia and Myanmar do not have a formal VAT tax

Double Taxation Agreement (DTA) with Hong Kong[31]

No DTA signed with HK

Laos *Myanmar* *Philippines* *Singapore*

DTA signed with HK (*signing year*)

Thailand	*Vietnam*	*Brunei*	*Indonesia*	*Malaysia*	*Cambodia*
(2005)	*(2009)*	*(2010)*	*(2012)*	*(2012)*	*(2019)*

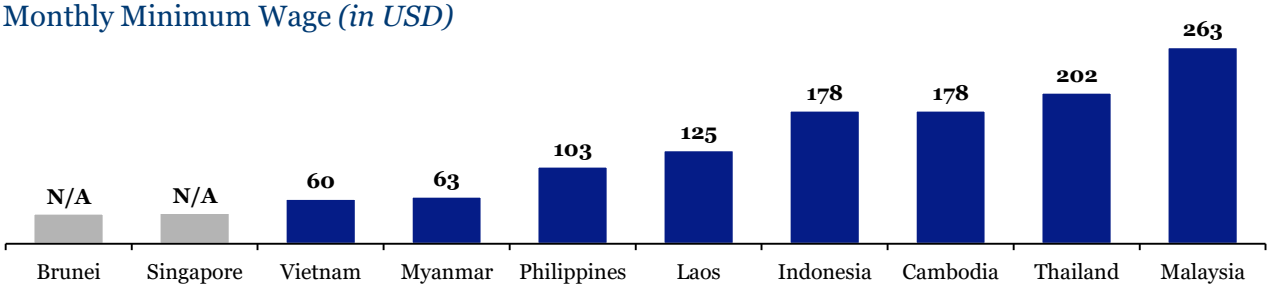
Main Laws Regulating Foreign Direct Investment in the Country[95-112]

	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Thailand	Vietnam
Main Law	Law on Investment	Investment Law	Law on Investment Promotion	Multiple	Myanmar Investment Law	Foreign Investment Act	Foreign Business Act	Law on Investment
Restrictive List	Negative List	Negative Investment List	Controlled Business List	N/A	Myanmar Investment Commission Notification	Foreign Investment Negative List	Appendix of Law above	N/A

Note: Brunei and Singapore do not have specific regulations regarding FDI and restricted industries.

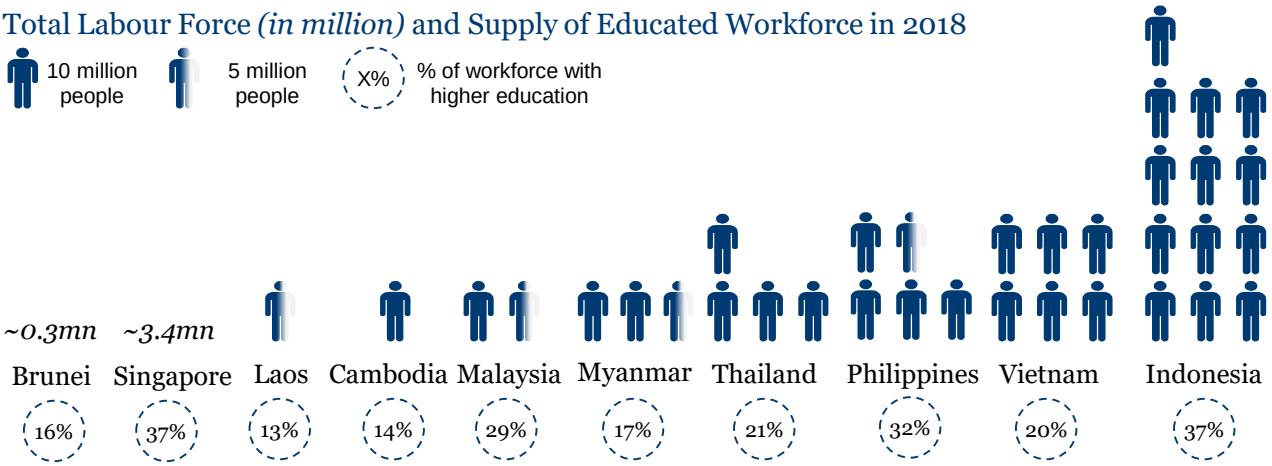
IV. Labour, Compensation Rule and Labour Supply Situation[32-54]

Monthly Minimum Wage *(in USD)*



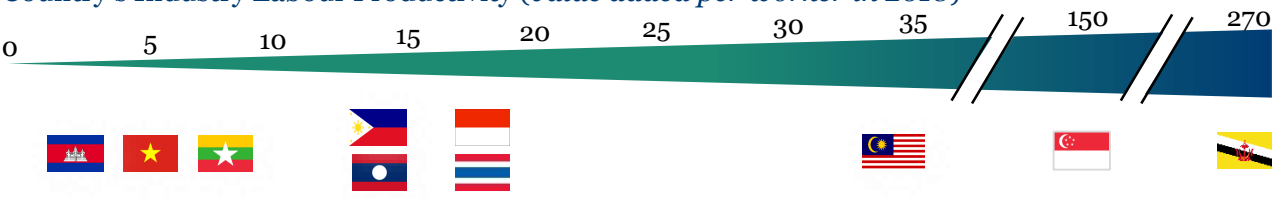
Note: 1. Brunei and Singapore do not have a monthly minimum wage; 2. These figures are an approximation of the minimum wage as in some countries it varies according to the town, region or province in which a company operates. In addition, the figures have been converted from local currency to USD.

Total Labour Force *(in million)* and Supply of Educated Workforce in 2018



Note: Total workforce numbers are rounded up. The definition of higher education can vary across countries and affect the ratio.

Country's Industry Labour Productivity (*value added per worker in 2018*)



Most Common Work Permits and Visas Required to Legally Employ Foreigners in the Country

Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
Foreign Worker Licence	EB Visa	Limited Stay Permit	Labour Visa	Employment Pass	Stay Permit / Foreign Registration Certificate	9G Visa	Employment Pass	Immigrant Visa Cat. B	Investment Visa

V. Research and Development Environment[55-57]

Innovation Capability Ranking *(Global Competitiveness Report 2018)*

1. Singapore (14th)
2. Malaysia (30th)
3. Thailand (51st)
4. Philippines (67th)
5. Indonesia (68th)
6. Brunei (79th)
7. Vietnam (82nd)
8. Cambodia (96th)
9. Laos (117th)
10. Myanmar (N/A)

Availability of Researchers Ranking *(Global Innovation Index 2019)*

1. Singapore (5th)
2. Malaysia (36th)
3. Thailand (48th)
4. Vietnam (58th)
5. Philippines (78th)
6. Indonesia (86th)
7. Cambodia (100th)
8. Brunei (N/A)
9. Laos (N/A)
10. Myanmar (N/A)

Intellectual Property Protection Ranking *(Global Innovation Policy Centre 2019)*

1. Singapore (10th)
2. Malaysia (24th)
3. Brunei (34th)
4. Philippines (37th)
5. Thailand (42nd)
6. Vietnam (43rd)
7. Indonesia (45th)
8. Cambodia (N/A)
9. Laos (N/A)
10. Myanmar (N/A)

VI. Supply Chain Environment[58-70]

Country *(LPI Ranking)*	Int. Airports *(number)*	Major Ports *(number)*	Road System *(thousand km)*	Rail System *(thousand km)*
Singapore (7th)	1	1	4	0.2
Thailand (32nd)	8	8	390	N/A
Vietnam (39th)	11	5	233	2.6
Malaysia (41st)	5	7	237	2.0
Indonesia (46th)	28	97 (total ports)	524	5.0
Philippines (60th)	11	5	217	0.1
Brunei (80th)	1	1	3	N/A
Laos (82nd)	5	0	60	N/A
Cambodia (98th)	3	2	61	0.6
Myanmar (137th)	3	9 (total ports)	152	6.0

Note: LPI ranking refers to the 2018 World Bank's Logistic Performance Index

Country's Total Exports in 2018 *(in USD billion)* and Share of Top Three Exported Products[71]

	Singapore	Vietnam	Thailand	Malaysia	Indonesia
Total Exports	USD 412 bn	USD 290 bn	USD 250 bn	USD 247 bn	USD 180 bn
Share of Top 3	58%	59%	43%	60%	39%
Top 3 Exported Products	Electrical Machinery and Equipment *(31%)*	Electrical Machinery and Equipment *(40%)*	Machinery and Appliances *(17%)*	Electrical Machinery and Equipment *(34%)*	Mineral Fuels *(23%)*
	Machinery and Appliances *(14%)*	Apparel and Clothing *(11%)*	Electrical Machinery and Equipment *(14%)*	Mineral Fuels *(16%)*	Animal or Vegetable Fats and Oils *(11%)*
	Mineral Fuels *(13%)*	Footwear *(8%)*	Vehicles *(12%)*	Machinery and Appliances *(10%)*	Electrical Machinery and Equipment *(5%)*

	Philippines	Cambodia	Myanmar	Brunei	Laos
Total Exports	USD 68 bn	USD 19 bn	USD 15 bn	USD 7 bn	USD 6 bn
Share of Top 3	66%	80%	60%	97%	51%
Top 3 Exported Products	Electrical Machinery and Equipment *(49%)*	Apparel and Clothing *(65%)*	Apparel and Clothing *(30%)*	Mineral Fuels *(91%)*	Mineral Fuels *(26%)*
	Machinery and Appliances *(14%)*	Footwear *(10%)*	Mineral Fuels *(23%)*	Chemicals *(4%)*	Electrical Machinery and Equipment *(14%)*
	Optical and Medical Equipment *(3%)*	Leather and Related Products *(5%)*	Other Commodities *(7%)*	Machinery and Appliances *(2%)*	Ores, Slag and Ash *(11%)*

VII. Infrastructure

Number of Operational Industrial Parks and Special Economic Zones per Country[72,74,76,78,80,82,83,85,87,89,91]

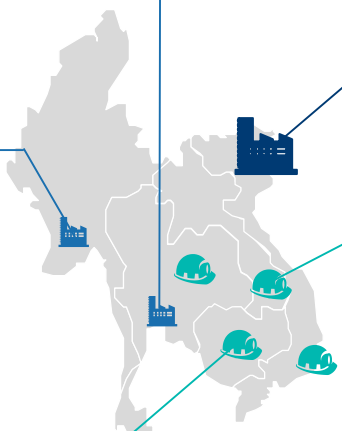
Countries with >100 Industrial Parks

Countries with >50 Industrial Parks

Countries with >100 SEZs

Countries with >10 SEZs

Countries with <50 Industrial Parks & <10 SEZs



Thailand

- No. of Industrial Parks: 74
- No. of SEZs: 10

Vietnam

- No. of Industrial Parks: 249
- No. of SEZs: 18

Laos

- No. of Industrial Parks: 5
- No. of SEZs: 11

Philippines

- No. of Industrial Parks: 74
- No. of SEZs: 379

Myanmar

- No. of Industrial Parks: 69
- No. of SEZs: 1

Brunei

- No. of Industrial Parks: 30
- No. of SEZs: 2

Cambodia

- No. of Industrial Parks: 3
- No. of SEZs: 11

Singapore

- No. of Industrial Parks: 13
- No. of SEZs: N/A

Malaysia

- No. of Industrial Parks: 500
- No. of SEZs: 5

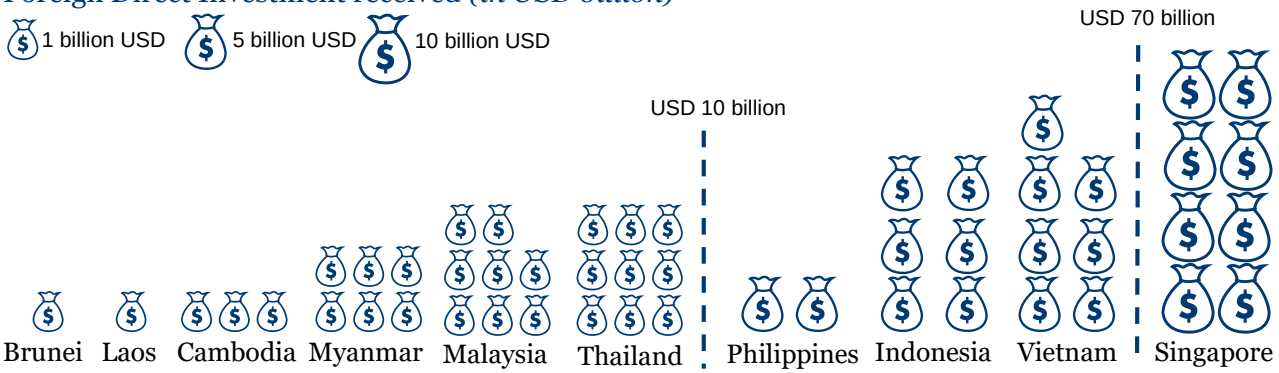
Indonesia

- No. of Industrial Parks: 89
- No. of SEZs: 6

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Note: For some countries the number of SEZ reflects the number of Economic Zones, Economic Corridors or Free Trade Zones

Foreign Direct Investment received *(in USD billion)*[73,75,77,79,81,84,86,88,90,92]



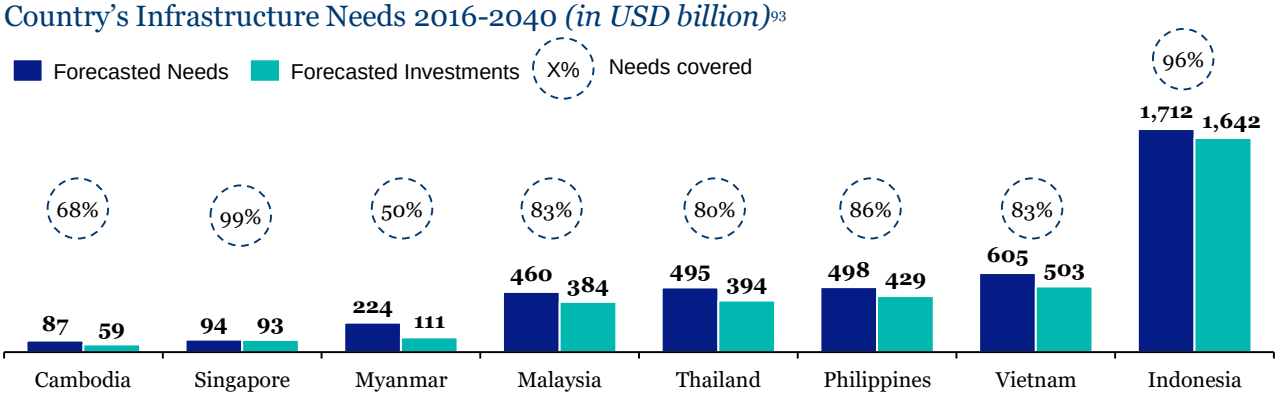
Note: For some countries the figure reflects the FDI received by industrial parks. Figures have been rounded up.

Leading Investor(s) in the Country

	Brunei	Laos	Cambodia	Myanmar	Malaysia
Leading Investor(s)	Malaysia	Mainland China Vietnam Thailand	Mainland China	Mainland China Singapore	Hong Kong

	Thailand	Philippines	Indonesia	Vietnam	Singapore
Leading Investor(s)	Japan	Singapore Hong Kong	N/A	Japan Korea	United States BVI Cayman Islands

Country's Infrastructure Needs 2016-2040 *(in USD billion)*[93]



Note: Brunei and Laos infrastructure needs are unavailable

VIII. Types of Industries Encouraged by the Local Government[94-113]

	Indonesia	Malaysia	Singapore	Thailand	Vietnam
Programme / Status	• Masterplan for Acceleration and Expansion of Indonesia Economic Development • Pioneer Industries	• Malaysian Investment Development Authority List • Economic Transformation Programme • National Policy on Industry 4.0	Economic Development Board programmes for: • Growing Industries • Innovation, R&D and Capability Development • Productivity	• Board of Investment Projects • Eastern Economic Corridor Development Plan • Thailand Plus	• Law on Investment • Law of Enterprises
Selected Supported Industries	Agriculture Information and Communications Technology Light Industry	Electronics Hi-Tech Machinery	Creative Industries Electronics Engineering	Automotive Electronics Light Industry	Hi-Tech Information and Communications Technology Renewable Energy

	Brunei	Cambodia	Laos	Myanmar	Philippines
Programme / Status	• Investment Incentives Order • Investment Priority Clusters	• Qualified Investment Projects	• Promoted Sectors under the Law on Investment Promotion	• Myanmar Investment Law	• The 2017 Investment Priorities Plan • Pioneer Industries
Selected Supported Industries	Information and Communications Technology Electronics Downstream Oil and Gas	Automotive Electronics Garment	Agriculture Hi-Tech Agro-processing (e.g. handicrafts)	Information and Communications Technology Renewable Energy Manufacturing	Agriculture Engineering Manufacturing

IX. Key Government Incentives[114-124]

Selected Incentives Available in the Country with Government Programmes or Investments in SEZ/Industrial Parks

	Indonesia	Malaysia	Singapore	Thailand	Vietnam
Fiscal Incentives	• 100% CIT exemption for up to 25 years • Customs tax exemptions • Tax-loss can be carried forward up to 10 years	• Exemption from CIT on 100% of a company's statutory income • Tax relief period for up to 10 years • Investment Tax Allowance on 100% of Qualifying Capital Expenditure	• Corporate tax exemption or reduced corporate tax rate (e.g. to 5%) • Withholding tax exemption on interest payments	• 50% reduction of CIT • Exemption/ reduction of import duties on machinery and raw materials • Double deduction for the costs of transportation, electricity and water supply	• 4 years of CIT exemption; and 50% reduction for the subsequent 9 years • Import duty exemption for fixed assets • Exemption of land rental fee
Non fiscal Incentives	• Acceleration and simplification of investment licensing services • Exemption of environmental analysis of factories	• Removal of restrictive immigration policy • Simplified and expedited work permits application processes • Funding availability	• Facilitated obtaining of Employment Pass for foreigners • Funding to cover some cost or expenditures	• Allowed 100% foreign ownership for certain businesses • Permission to own land • Permission to bring in skilled workers and experts	• Companies benefit from authorities assistance to carry out administrative procedures

	Brunei	Cambodia	Laos	Myanmar	Philippines
Fiscal Incentives	• Tax holiday (i.e. income tax exemption) for up to 20 years • Elimination of duties taxes on some imports • Losses and allowances can be carried forward	• Profit tax exemption for 3 to 9 years • 100% exemption on export tax • Customs duty exemption on import of production equipment	• Profit tax exemption for up to 10 years • Import duty exemption on equipment • 0% value added tax	• 7 years tax holiday • Exemption of custom duty for imports of machinery and raw materials • Import tax refund for finished goods that are exported	• Income tax holiday for up to 6 years • Duty tax exemption on imported equipment • Tax credits available for raw material or semi-manufactured products
Non fiscal Incentives	• Subsidies warehousing and land • Reduction of utilities' cost	• Ability to enter into land leases for unlimited terns • Preferential treatment when hiring foreign employees	• Simplified and facilitated processes to obtain residence permits • Access to one-stop-service offices • Facilitated process to enter and exit Laos	• Permission to lease land for up to 75 years	• Permission to employ foreign nationals • Simplified customs procedures for importation of equipment or spare parts • Permission to import consigned equipment

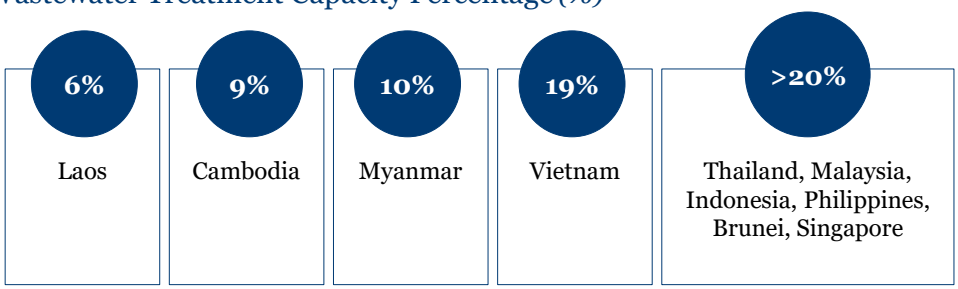
X. *Environmental Requirements*[125-167]

Government Environmental Administrations in the Country

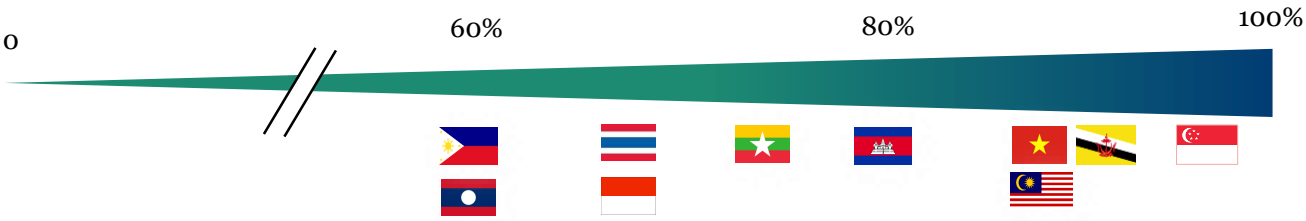
	Thailand	Vietnam	Malaysia	Indonesia	Philippines
Environmental Agency	Ministry of Natural Resources and Environment	Ministry of Natural Resources and Environment	Ministry of Energy, Science, Technology, Environment and Climate Change	Ministry of the Environment and Forestry	Environmental Management Bureau
Industrial Zone Authority	Industrial Estate Authority of Thailand	Provincial & municipal governments	Ministry of International Trade and Industry	Ministry of Industry	Philippine Economic Zone Authority

	Laos	Cambodia	Myanmar	Brunei	Singapore
Environmental Agency	Ministry of Natural Resources and Environment	Ministry of Environment	Ministry of Natural Resources and Environmental Conservation	Department of Environment, Parks and Recreation	Ministry of the Environment and Water Resources
Industrial Zone Authority	Ministry of Commerce	Cambodian Special Economic Zone Board	Ministry of Industry	The Brunei Economic Development Board	Ministry of Trade and Industry

Country's Wastewater Treatment Capacity Percentage *(%)*



Municipal Solid Waste Collection Rate *(in urban areas)*



Wastewater Discharge Permit Requirement

No official requirements

Myanmar *Brunei*

Requirements with certain conditions

Laos *Philippines* *Thailand* *Vietnam* *Indonesia* *Singapore* *Malaysia* *Cambodia*

Hazardous Wastes Permit Requirement

No official requirements

Myanmar *Singapore* *Brunei* *Laos* *Philippines* *Malaysia* *Cambodia* *Indonesia*

Requirements with certain conditions

Thailand *Vietnam*

Qualified Treatment Requirement for Hazardous Waste

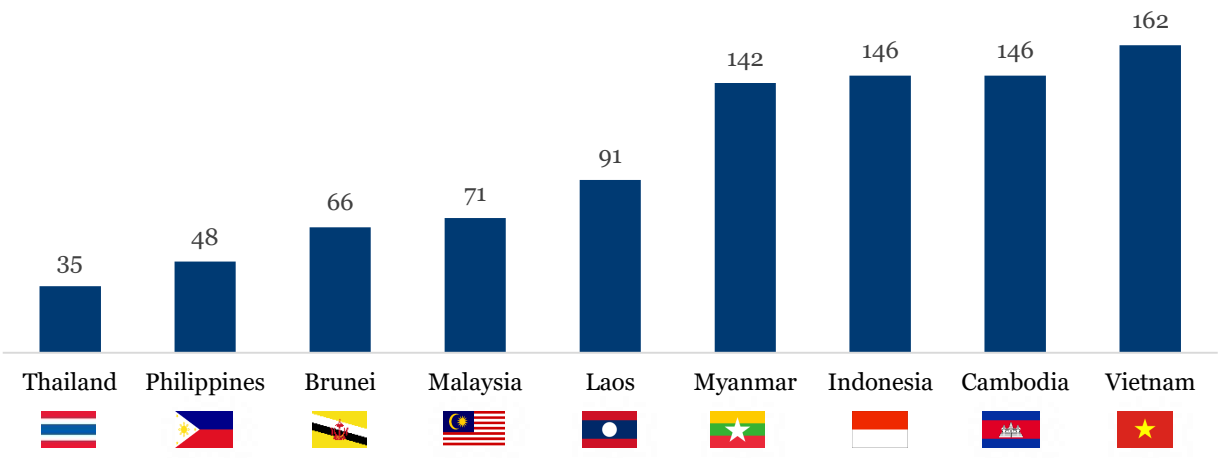
No official requirement

Myanmar *Brunei* *Laos* *Cambodia*

Treatment required

Thailand *Vietnam* *Indonesia* *Singapore* *Malaysia* *Philippines*

Number of Prescribed Activities with EIA Requirement in the Country



Note: In Singapore, any activities that may cause substantial pollution of the environment are required with a Pollution Control Study (PCS) rather than EIA.

Entities Permitted to Conduct EIAs

Country	Qualified Organisations	Registered Individuals	Project Owners
Brunei	✓	✓	✓
Cambodia	✓	×	✓
Indonesia	×	✓	×
Laos	✓	×	✓
Malaysia	×	✓	×
Myanmar	✓	×	×
Philippines	✓	×	✓
Thailand	✓	×	×
Vietnam	✓	×	✓

Note: In Singapore, any activities that may cause substantial pollution of the environment are required with a Pollution Control Study (PCS) rather than EIA.

Special Industrial Standards in Key Manufacturing Industries *(Note)*

Country	Effluent	Emission	Noise
Brunei	×	✓	✓
Cambodia	×	×	✓
Indonesia	✓	✓	✓
Laos	×	✓	✓
Malaysia	✓	✓	✓
Myanmar	✓	✓	✓
Philippines	×	✓	✓
Singapore	×	✓	✓
Thailand	×	✓	×
Vietnam	✓	✓	✓

Note: The key manufacturing industries refers to the electronics, garment & clothing, watches & jewellery, toys & games and hi-tech industries.

Source:

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[2] *10-Year Forecasts, Fitch Solutions, 2019*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

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Source:

[32] *New Minimum Daily Wage, Mazars, Apr 2018*

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[43] *Total labour force, The World Bank*

[44] *Industry (including construction), value added per worker (constant 2010 US$), The World Bank*

[45] *Work Permit and Visa Application Process in Thailand, Mazars*

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3.3 Guide to Brunei

Opportunities and Limitations in Manufacturing

Contents

Published in February 2020

1. Overview of Brunei

Executive Summary

Brunei is a small territory located on the island of Borneo and surrounded by East Malaysia. The country's past economic growth has mostly been fueled by the exploitation of its oil and gas resources. However, the country's reserves are expected to run out, therefore Brunei is now trying to diversify its economy.

Brunei has two signed and effective bilateral free trade agreement (FTA), with Japan and the Trans-Pacific Strategic Economic Partnership. As a member of the Association of Southeast Asian Nations (ASEAN), Brunei also benefits from nine other regional FTAs.

Brunei is an absolute monarchy country. The Sultan of Brunei has supreme power in the country and acts as the Head of State and Head of Government. Given this system, Brunei is seen as one of the most politically stable countries in the world. However, foreign investors should consider that the country is now implementing a strict Syariah Law which applies to both Muslim and non-Muslim residents.

1. Overview of Brunei

I. Country Profile[1,2,3,4,5,6]

Brunei (officially Brunei Darussalam) is located on the island of Borneo and is surrounded by East Malaysia. Brunei can be considered as a relatively young country as it only gained independence from the United Kingdom in 1984.

Brunei's economy is highly dependent on its oil and gas resources. Indeed, the sector accounts for two-thirds of the nation's gross domestic product (GDP). However, the country's resources are slimming and are expected to run out within two decades. The government is therefore implementing a long-term strategy (Wawasan Brunei 2035) in order to accelerate the diversification of the country's economy.

GDP *(in USD)*
13.6 billion (2018)

GDP Per Capita *(in USD)*
31,627 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 1.2%
Industry: 56.6%
Services: 42.3%

External Trade *(% of GDP)*
Import: 42.0% (2018)
Export: 51.9% (2018)

Population
0.43 million (2019)
World ranking: 175/191

Median Age
30.5 (2018)
World ranking: 115/228 (from oldest to youngest)

Language
Bahasa Malaysia (official)
English

English Literacy
N/A

Government Structure
Monarchy

Land Area
5,270 sq. km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[7,8,9]

International trade agreements provide various benefits for the participating countries. It allows companies of two or more countries to trade goods with eliminated or decreased tariffs, therefore enhancing economic growth on both sides. Brunei is a full member of ASEAN and the World Trade Organization (WTO), which gives the country preferential access to the Southeast Asian markets and international trade.

Currently, Brunei has 10 signed and effective trade agreements, including one bilateral and nine collective trade agreements. Brunei signed its first and only bilateral trade agreement with Japan in 2007. Brunei has also signed a plurilateral agreement with Chile, New Zealand, and Singapore known as the Trans-Pacific Strategic Economic Partnership (TPSEP). Nevertheless, the country is currently studying the possibility of signing FTAs with two other countries (the United States and Pakistan) and participates in the negotiation regarding the Regional Comprehensive Economic Partnership (RCEP). In addition, the country also benefits from nine regional trade agreements, including the ASEAN Free Trade Area (AFTA), all the FTAs signed by the ASEAN (including the recent ASEAN – Hong Kong FTA), and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

Signed and Effective Bilateral and Plurilateral Trade Agreements

	Affected Industry	Agreement (effective date)
	• All	**Trans–Pacific Strategic Economic Partnership (TPSEP) (2006)** • Eliminated all tariffs for goods that Brunei exports to other TPSEP countries. • Promoted cross-border economic cooperation.
	• All	**Brunei – Japan Economic Partnership Agreement (2008)** • Brunei's first bilateral free trade agreement; • Eliminated almost all tariffs on Brunei export to Japan; • Reduced import duties for Japanese goods and services; • Promoted a more open investment environment and encouraged foreign direct investments (FDI); and • Increased investment opportunities and enhanced investment protection in both countries.

Signed and Effective Regional Trade Agreements as Member of the ASEAN

As a member of the ASEAN, Brunei benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

In addition to these bilateral and multilateral agreements, another recent key FTA for Brunei, which opened up an important trading bloc, is the CPTPP.

The Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)

Originally an American initiative, the Trans-Pacific Partnership (TPP) has been amended since the withdrawal of the USA. The remaining 11 countries therefore decided to sign a new FTA called the CPTPP or TPP11. This agreement is set between Canada and 10 other countries in Latin America and Asia-Pacific: Chile, Peru, Mexico, Australia, New-Zealand, Singapore, Brunei, Malaysia, Vietnam and Japan. The CPTPP fully entered into force in January 2019 creating a trading bloc of 495 million consumers representing an estimated 13.5% of global GDP with reduced tariffs for agriculture, metals, wood and fishery products.

The Association of Southeast Asian Nations (ASEAN)

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

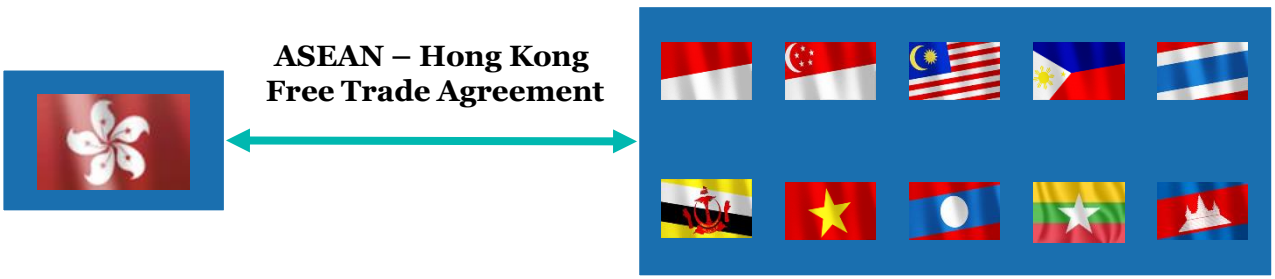
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate customs duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement Effective Date:

- 11 June 2019 – Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

Investment Agreement Effective Date:

- 17 June 2019 – Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

The dates of entry for the remaining four countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11,12,13]

Brunei's government is an absolute monarchy, where the Sultan is both the Head of State and the Head of Government. The supreme power of the Sultan is protected by the Constitution. The current Sultan is Hassanal Bolkiah, who became the 29th Sultan of Brunei in 1967 and has been ruling the country since then. Currently, the Sultan is also Brunei's Prime Minister, Defence Minister and Finance Minister.

In the country, the three different powers are divided as such:

- The Sultan holds the executive power. He is assisted and advised by five councils: the Council of Ministers, the Privy Council, the Council of Succession, the Religious Council, and the Legislative Council.
- The legislative branch of the government is held by the unicameral Legislative Council. The council is composed of 36 members: 20 appointed members (appointed for five years by the Sultan), 14 cabinet ministers, the Sultan and the Prince of Brunei.
- The judicial branch of the government includes the Supreme Court and the Sharia Court. The judge of the Supreme Court is appointed by the Sultan and stays in position until he turns 65 years old (unless an extension is approved by the Sultan). The judge of the Sharia Court is also appointed by the Sultan, and the tenure is lifetime.

The legal system in Brunei is based on the British common law and the Islamic Law (i.e. Syariah Law). In 2014, the Brunei government announced that the country would start strictly adopting the Syariah Law that includes harsh penalties such as caning, stoning and hands amputation. The law applies to all people in Brunei, whether Muslims or non-Muslims.

C. Political Uncertainties[14]

As Brunei is an absolute monarchy, the country is considered as politically stable. Brunei ranked 15th out of 194 countries in the World Bank's Political Stability Index (with an above average value of 1.19 in 2017). No major political uncertainties can be identified since Sultan Hassanal Bolkiah inherited the throne.

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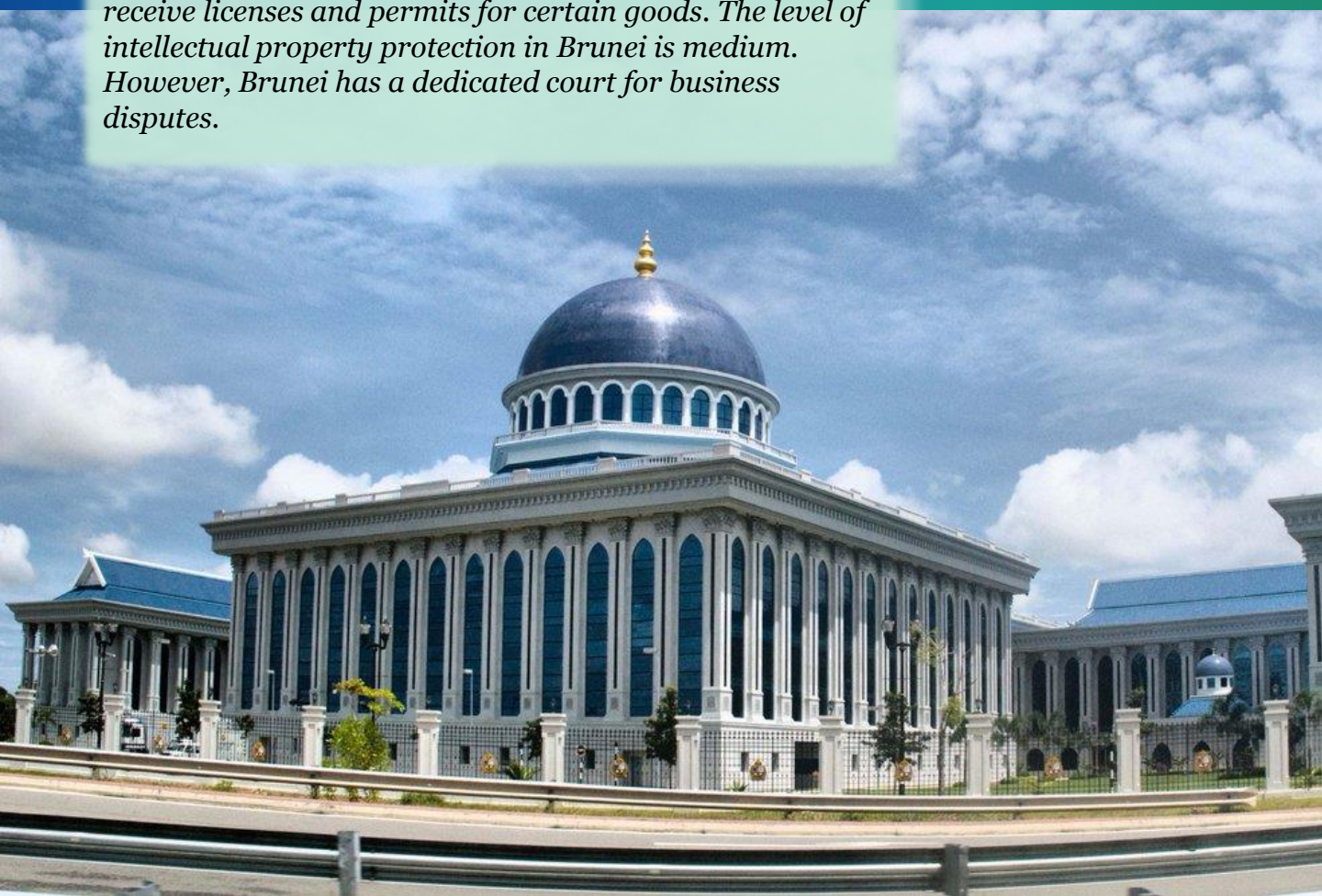
2. Legal Environment and Competition Law

Executive Summary

Brunei is an open economy which is eager to attract foreign direct investment (FDI). For most industries, 100% foreign ownership is allowed. However, for some sectors, foreign investments are restricted (i.e. foreign ownership is limited/capped).

Mainland China and Hong Kong investors can choose to set up different types of business entities in Brunei. It is possible to set up a 100% foreign-owned enterprise such as a Limited Liability Company (SDN BHD), among other types. In addition, foreign investors can choose to set up a Brunei Free Zone Company in order to enjoy financial incentives such as tax holiday.

To import and export goods to and from Brunei, companies need to register with the appropriate entities in order to receive licenses and permits for certain goods. The level of intellectual property protection in Brunei is medium. However, Brunei has a dedicated court for business disputes.



2. Legal Environment and Competition Law

Brunei is trying to diversify its economy away from the oil and gas sector. The country is therefore eager to attract foreign direct investment (FDI) in various industries. Some of Brunei's main assets helping the country attract foreign investors are: a favourable tax regime, allowed 100% foreign-ownership and support measures provided by some government agencies. Indeed, in Brunei, there are two main entities encouraging and supporting FDI in the country: the Brunei Economic Development Board (BEDB) which role is to grow and diversify the country's economy, and the FDI Action and Support Centre (FAST) which helps investors obtain financial support and meet their projects requirements.

Even though Brunei welcomes foreign investments, some industries are still restricted. These industries are generally the ones where the government is the major service provider. Nevertheless, for the industries listed below foreign ownership is restricted to different extents (i.e. in some cases full or majority foreign ownership is allowed, whereas for other industries, only minority foreign ownership is allowed).

Main Restricted Activities in Brunei[1]

- Mass Media;
- Telecommunications;
- Posts;
- Energy and Utilities;
- Banking;
- Retail Business; or
- Petrol Stations.

For further information, please refer to section 8 of this report.

I. Types of Legal Business Entities Available for Foreign Investment[2,3]

There are several different entities types available for investors seeking to expand their manufacturing footprint or business from Mainland China or Hong Kong to Brunei. Brunei can be considered as an attractive destination for foreign investors as 100% foreign-ownership is allowed and requirements on minimum paid-in capital are very minimal.

Some main forms of doing business or expanding the manufacturing footprint in Brunei include:

1. Limited Liability Company
2. Public Limited Company
3. Free Zone Company
4. Branch

Limited Liability Company (SDN BHD)

This is the most common company type in Brunei as it only requires two shareholders at the moment of incorporation and a USD 1 minimum paid-in capital. Also known as a Private Limited Company, it requires at least two shareholders and allows a maximum of 50 shareholders. However, this type of entity does require that half of its directors must be Bruneians or Brunei permanent residents. Foreign companies can elect to hire third-party nominee resident directors to fulfil this requirement. Generally, it will take three months to set up this kind of entity.

Public Limited Company (BHD)

This type of entity only requires a USD 1 paid-in capital. However, all its shareholders and half of its directors must be Bruneians or Brunei permanent residents. In addition, a Public Company needs to have at least seven shareholders/members at the moment of incorporation. Therefore, it is in foreign investors' best interest not to consider setting up a BHD. Generally, it will take three months to set up this kind of entity.

Free Zone Company

Foreign investors can choose to locate their SDN BHD in one of Brunei's free trade zones (see section 7 and 9 of this report for additional details), thus registering a Brunei Free Zone Company. Such company can benefit from tax incentives such as a 15-year tax holiday. Generally, it will take five months to set up this kind of entity.

Branch

Brunei's laws allow companies to open a 100% foreign-owned branch office. However, the scope of operations of this branch can be limited and will usually be defined by the parent company. Generally, it will take three months to set up this kind of entity.

This section only describes the various forms of companies (i.e. a legal entity is distinct and separate from its shareholders and directors) that can be set up in Brunei. Nevertheless, investors can also choose to create a sole-proprietorship (i.e. business owned by one person) or a partnership (i.e a business organisation with two or more business partners). For additional details, please visit the Ministry of Finance and Economy of Brunei official homepage (www.mofe.gov.bn/Divisions/types-of-business.aspx).

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[4,5]

In Brunei, competition regulation was introduced in 2015 with the Competition Order. The Order is designed to create a better business environment in order to attract foreign investors (e.g. by lowering cost of doing business) and also to protect consumers against harmful business practices (e.g. fixing prices or limiting supply). Currently, the Competition Order has not been fully enforced.

Once fully implemented, the Order will tackle three main issues: anti-competitive agreements, abuse of dominant position and anti-competitive mergers.

Anti-competitive Agreements and Practices

The following agreements and practices which may prevent, restrict or distort competition in Brunei are prohibited:

- Directly or indirectly fixing prices;
- Limiting or controlling production;
- Fixing market shares;
- Controlling supply; or
- Rigging bids.

Abuse of Dominant Position

When a company uses its position as market leader to exclude competitors, or obtain favourable outcomes which would not have been possible in an open market, the company is abusing its dominant position. The Competition Order therefore restricts:

- “Predatory” behaviours towards competitions;
- Actions that cause prejudice to consumers (e.g. limit the production or technical development);
- Actions placing a company in a competitive disadvantage (e.g. applying different conditions to similar transactions); or
- Imposing unfair contract conditions (e.g. tied selling).

Anti-competitive Mergers

Mergers leading to anti-competitive behaviours are prohibited. Such actions are mergers that:

- Lead to a direct price increase;
- Result in lower quality products; or
- Restrict the number of options for consumers.

B. Intellectual Property Protection Law on Trademarks[6,7]

A trademark is defined as a device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination thereof, which indicates that a certain good or service belongs to the owner of the trademark. Brunei's overarching Intellectual Property (IP) regulations, including those related to trademarks, are rated as medium-low (ranked 34th out of 50 countries).

In order to register their trademark in Brunei, Mainland China and Hong Kong companies can apply with the Brunei Darussalam Intellectual Property Office (BruIPO). In the country, a trademark is protected for a period of 10 years starting from the application filing date. This protection may be renewed indefinitely as long as the owner pays the renewal fee (BND 200). Trademarks registered with the BruIPO are only protected in Brunei. Nevertheless, as the country signed the Madrid Protocol, any company can protect its trademark overseas by applying through the Registrar for international registration. Generally, a payment (i.e. a fee) of BND 250 is required for this procedure.

For additional information, please visit the BruIPO official homepage (www.bruipo.gov.bn/SitePages/Trademark%20Forms.aspx).

C. Import/Export Regulations and Licences[8]

Any company wishing to import and export products to and from Brunei must follow five specific steps.

First, companies must register with the Royal Customs and Excise Department (RCED) or appoint a Customs Agent (forwarder) which has already registered with the RCED. Companies will be required to submit a copy of three official documents (i.e. Certificate of Incorporation, Business Owner's Smart Identity Card, Company Partnership's Smart Identity Card) through the online portal of the Brunei Darussalam National Single Window (BDNSW).

Secondly, companies need to apply for licences and permits for controlled items. The list of prohibited and restricted goods is specified in Section 31 of the Customs Order, 2006 (refer to section 6 of this report for examples). Restricted and controlled goods require necessary licences or permits before importation or exportation. These products are generally controlled by different government agencies. Therefore, to obtain the permits, companies need to: register as a declarant and apply for a BDNSW user ID, and manually apply for a certain permits with the various responsible agencies.

Then, importers and exporters are required to obtain a Customs Import Declaration. The declaration must then be submitted online through the BDNSW portal. The main documents to be included in the declaration are the commercial invoice and the Air Waybill or Bill of Landing.

Following the submission of the Customs Import Declaration, companies will be asked to pay the customs import duties and excise duties. In Brunei, duty rates apply on the CIF value (i.e. cost, insurance and freight), and include the cost of sale and delivery of goods in the country. The list of dutiable goods is available under the Brunei Darussalam Tariff and Trade Classification 2017 derived from ASEAN Harmonised Tariff Nomenclature (AHTN 2017).

Finally, before importation and exportation, most goods will be inspected and cleared (all restricted goods have to undergo this process). To facilitate this process, the importer or exporter is required to provide: the approved Customs Import Declaration, and supporting documents (e.g. invoice, bill of lading/air waybill and licences and permits from responsible agencies). Lastly, companies should keep hard or soft copies of such documents for a period of seven years in case the RCED requires them at any time.

For additional information, please visit the Ministry of Finance official homepage (www.mofe.gov.bn/Customs/Import-and-Export-Procedures.aspx).

D. Jurisdiction System on Business Related Matters[9]

Brunei has a dedicated court in charge of business related matters - the Commercial Court. Operational since 2016, the Commercial Court aims to improve Brunei's business environment by accelerating business dispute resolutions, and creating a reliable and robust legal system for both local and foreign companies. With the establishment of this Court, Brunei hopes to attract more foreign direct investment.

In order to accelerate the resolution of commercial disputes, the Court has introduced several new processes, among which is the Case Management Conference (CMC). Under the CMC, the Commercial Court will set clear timelines, try to narrow the issues, facilitate discussions, and aim to reach amicable settlements. Among the new settlement options, mediation is the most important one. Court officials have been trained to become accredited mediators, and therefore, mediation will be one of the preferred dispute resolution methods.

Among all the cases handled by the Commercial Court, around 70% are related to the banking and financial services industry. The rest are disputes related to sales and goods delivery, sales and purchase of commodities or issues related to project developments.

For additional information, please visit Brunei Judiciary's official homepage (judiciary.gov.bn/SJD%20Site%20Pages/About%20Commercial%20Court.aspx).

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3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main form of taxation in Brunei is corporate income tax (CIT). Brunei does not have any personal income tax or value added tax (VAT).

Brunei welcomes Foreign Direct Investment (FDI) and needs it to diversify the country's economy away from the oil and gas industry. Most sectors are open for investment, but there are restrictions for certain sectors.

The Brunei dollar (BND) is the official currency in Brunei, and is interchangeable with the Singapore dollar at par. There are no foreign exchange controls in Brunei. There are also various foreign banks that foreign businesses can choose from.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

The principal tax laws in Brunei are the Income Tax Act Cap. 35, Income Tax Act (Petroleum) Cap. 119, and the Stamp Act Cap. 34. Companies are considered resident in Brunei if they are managed and controlled in Brunei (e.g. directors' meetings are held in Brunei). Resident companies must pay tax on any income derived from Brunei, or received in Brunei from outside Brunei. Non-resident companies must pay tax only on income sourced in Brunei, or on profits of businesses in Brunei from branch offices or permanent establishments.

Brunei does not have any personal income tax, nor does it tax capital gains.

A. Corporate Income Tax (CIT)[1,2]

Tax Calculation

Taxable income is all income from trade or business, including dividends, interest, and royalty income. Companies that have a revenue of less than BND 1 million are exempt from CIT. Certain incomes such as dividends from companies subject to tax in Brunei, and income of certain government and non-profit groups are exempt from taxation.

Applicable Tax Rate

The standard CIT rate in Brunei is 18.5%. In Brunei, assessable income is taxed at 18.5% based on different thresholds, as shown below.

Amount of Assessable Income	Amount of Assessable Income Taxed
First BND 100,000	25% of income taxed at 18.5%
Next BND 150,000	50% of income taxed at 18.5%
Remaining Income	100% of income taxed at 18.5%

Income of petroleum operations of oil and gas companies are subject to an income tax rate of 55%, and is not subject to the system (i.e. different thresholds) shown in the table above.

Withholding Tax

Withholding tax is paid by income payer instead of the income recipient, hence the tax is "withheld" from the recipient's income. Withholding tax in Brunei is only taxed on income paid to non-residents. Withholding taxes in Brunei include interest, royalties, and technical service fees, and are taxed at the following rates.

Type of Withholding Tax	Tax Rate
Interest	2.5%
Royalties	10.0%
Technical Service Fees	10.0%

Losses and Consolidation

In Brunei, any business losses can be set off against future income for six years. Carry back of losses is not permitted. There is no requirement on the continuity of ownership of companies.

There are no consolidated filing provisions in Brunei, meaning each company must file a separate return.

Tax Return and Payment

The tax year in Brunei is the calendar year. Tax returns must be filed by 30 June of the year following the end of the tax year, using the e-filing system "The System for Tax Administration and Revenue Services" (STARS), which was introduced in 2012.

Advance CIT must be paid within three months after a company's financial year-end, and advance rulings on tax are not granted.

Tax Governance

In Brunei, the Revenue Division of the Ministry of Finance and Economy is responsible for formulating and implementing the tax law, and collecting tax. For more information on the Revenue Division and its responsibilities, please refer to the official website (www.mofe.gov.bn/divisions/revenue-about-us.aspx).

Double Tax Agreement (DTA) with Hong Kong[3]

Brunei has entered into DTAs with 19 countries. Hong Kong and Brunei signed a DTA on 20 March 2010, which came into effect on 19 December 2012.

DTAs aim to eliminate double taxation. The table below illustrates the tax rates applied on various sources of income stipulated in the DTA between Brunei and Hong Kong:

Category	Rate
Interest Received by Banks or Financial Institutions	5% *(Note)*
Interest Received by any Other Party	10% *(Note)*
Royalties	5%
Technical Fees	15%

Note: Interest derived from certain government bodies are exempt from taxation.

Tax Incentives

Pioneer industry companies may be eligible for tax incentives in Brunei. Certain salary and training expenditures will also be eligible for tax credits. Exporting companies can also choose to pay a tax of 1% on approved exports, instead of CIT. For more information regarding tax incentives, please refer to section 9 of this report.

B. Value Added Tax (VAT)[1]

There is no VAT or any other related sales tax in Brunei.

C. Transfer Pricing Provisions[4]

Brunei does not currently have legislation in place for transfer pricing documentation. However, the country is a member of the Organisation for Economic Co-operation and Development (OECD)'s Inclusive Framework on Base Erosion and Profit Shifting (BEPS) Implementation, meaning that Brunei is committed to implementing transfer pricing provisions.

D. Statutory Auditing Requirements and Accounting Standards[1,2,5]

Audit Requirements

The Companies Act requires all public interest entities (PIEs) to be audited. However, there are no specified audit standards in Brunei. The Brunei Darussalam Institute of Certified Public Accountants issued a recommendation in December 2009 for auditors in the country to adopt the International Standards on Auditing (ISA).

Non-PIEs should still appoint an auditor and have their accounts audited, but there is no requirement for them to submit their audited accounts to the Registrar of Companies. Audited accounts must be submitted along with Income Tax Returns.

All companies are also required to file annual returns.

Financial Reporting Framework

In Brunei, all PIEs, including but not limited to banks, financial institutions, and insurance companies, among others, are required to prepare financial statements according to the International Financial Reporting Standards (IFRS). Non-PIEs are required to comply with Brunei Darussalam Accounting Standards for Non-PIEs (BDAS).

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restriction for Foreign Direct Investment (FDI)[6]

Bank Account Setup Requirements

In Brunei, the requirements for setting up bank accounts are generally the same for residents and foreigners. While each bank has different specific requirements, generally, banks will require information such as company name, date of registration, address, names and identification numbers of users, and authorisation from the company's signatories. Businesses are advised to contact the individual bank for specific requirements.

FDI Restrictions

Brunei government has been actively attracting FDI to help diversify the country's economy. However, there are certain industries that are restricted for FDI, mainly consisting of industries that the government has a monopoly in or affect national security, including but not limited to media, energy, utilities, as well as arms and ammunition.

For further information regarding FDI restrictions, please refer to section 8 of this report.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[7,8]

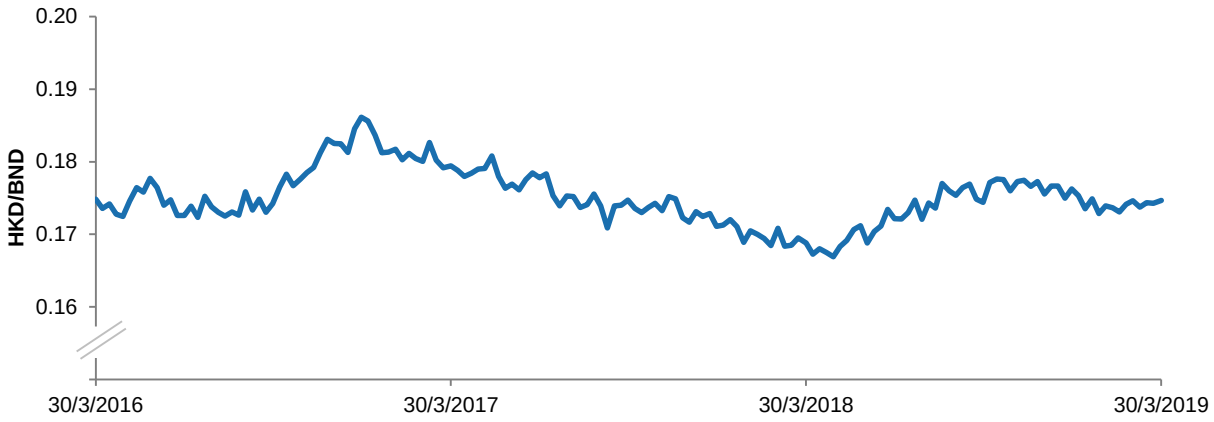
There are no restrictions on foreign currency exchange in Brunei. Banks in Brunei permit non-resident accounts, with no restrictions on borrowing by non-residents. Remittance or repatriation of capital or profits outside Brunei is also allowed.

However, the Autoriti Monetari Brunei Darussalam (AMBD), also known as Monetary Authority of Brunei, requires individuals carrying local or foreign currency into or out of Brunei to declare. All individuals carrying BND 15,000 or more, or the equivalent in foreign currency, must complete a Currency and Bearer Negotiable Instruments (CBNI) form, and submit it to the Customs or Immigration Officer. Sending or receiving CBNI through any other means, including cargo, courier, or post, will also require the submission of a CBNI form to the Financial Intelligence Unit of the AMBD.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

Brunei's official currency is the Brunei Dollar (BND), which has been the country's official currency since 1967. The BND is issued and monitored by the AMBD. Due to a Currency Interchangeability Agreement signed in 1967, the BND is exchanged with the Singapore dollar (SGD) at par. Therefore, SGD is accepted for regular payments in Brunei, and BND is accepted for payments in Singapore, even though they are not considered legal tender in the other country.

Three-year Exchange Rate Trend for HKD to BND[9]



Date	HKD/BND Rate
30/03/2016	0.1765
30/03/2017	0.1800
30/03/2018	0.1686
30/03/2019	0.1727

D. List of Banks from Foreign Investments[10]

All banks in Brunei must be licensed with the AMBD. According to the AMBD, as of May 2019, there are five foreign banks in Brunei.

Foreign Commercial Banks in Brunei

#	Bank
1	Bank of China (Hong Kong) Limited
2	Malayan Banking Berhad (Maybank)
3	RHB Bank Berhad
4	Standard Chartered Bank
5	United Overseas Bank (UOB) Limited

Hongkong and Shanghai Banking Corporation (HSBC) and Citibank used to have operations in Brunei, but both have closed down their operations in recent years. HSBC pulled out of Brunei in 2017 after 70 years of operations, and Citibank quitted in 2014 after 41 years of operations.

Source:

[1] *Brunei Darussalam Highlights 2019, Deloitte, Jan 2019*

[2] *Brunei Darussalam Tax Profile, KPMG, May 2016*

[3] *Comprehensive Double Taxation Agreements concluded, Inland Revenue Department*

[4] *BEPS Central: Brunei Darussalam, Duff & Phelps*

[5] *Brunei, International Federation of Accountants*

[6] *Trade and investment regimes - Brunei, World Trade Organization*

[7] *Brunei – Foreign Exchange Controls, Export.gov*

[8] *Cross Border Movement of Physical Currency and Bearer Negotiable Instruments (CBNI) Declaration Report, Autoriti Monetari Brunei Darussalam*

[9] *Bloomberg*

[10] *List of Banks and Financial Institutions supervised by Banking Unit, Atoriti Monetari Brunei Darussalam*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

The Employment Order 2009 is the main labour law in Brunei. It provides guidance on matters such as minimum working age, contract of service, retirement age, maximum working hours and welfare to protect employers and employees.

The labour supply in Brunei has been growing at a stable rate in the past few years. The education attainment of the workforce has been rising in the country, due to the government's efforts to strengthen the educational system.

Foreign workers, except Malaysian and Singaporean workers, are required to obtain a valid Employment Visa for legal employment in Brunei. In addition, employers are also required to hold a Foreign Worker Licence before they can hire foreign employees.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2]

The Employment Order 2009 is the main labour law in Brunei that governs and stipulates minimum conditions and terms related to employment. Most employees are covered by the Order. Employees are defined as workers who have a service contract with their employers. However, the Order does not cover seafarers, domestic workers and statutory board employees or civil servants.

Minimum Legal Working Age and Retirement Age

The minimum legal working age in Brunei is 16 years old.

Young persons aged 16 to 18 are only allowed to perform work approved by the Commissioner. The occupation should not hurt the young persons' moral and physical well-being.

Labour Contract

A labour contract is an agreement that employees agree with their employers, and can be either written or implied. The contract of service must include terms and conditions that are covered and stipulated under the Employment Order 2009.

Under the Order, if employers fail to provide a contract of service to their employees, they will face penalties, including a fine no more than BND 3,000, imprisonment no more than one year, or both.

Termination of Employment

Terms and conditions for termination of employment are covered by the Order. The termination of employment may occur in the following three situations:

- The employment period specified or the work required in the contract of service is completed;
- Either party intends to terminate the employment, and the notification to terminate the contract of service is given; or
- Either party breaches the terms and conditions specified in the labour contract.

Both employees and employers can notify the other party of his or her intention to terminate the contract of service. The longer an employee has been working for the employer, the longer the notification period should be, as shown below:

Period of Employment	Minimum Notification Period
Less than 26 weeks	1 day
More than 26 weeks but less than 2 years	1 week
More than 2 years but less than 5 years	2 weeks
More than 5 years	4 weeks

B. Minimum Wage Level[1]

Brunei does not have a specified minimum wage level. Wage is negotiated and agreed between employers and employees.

Employers are required to pay salary at least once a month. Wage and other relevant payments except overtime payment must be paid to employees no later than seven days after the salary period ends. Overtime payment must be paid no later than 14 days after the salary period ends.

C. Maximum Working Hours and Days[1,2]

The maximum number of working hours for non-shift worker is eight hours per day, or 44 hours per week.

The maximum number of working hours for shift worker is 12 hours per day and average 44 hours per week for three consecutive weeks.

Overtime

For work performed in excess of the maximum number of working hours, fixed either by regulations or by specific agreement (whichever is lower), employees must be compensated with overtime pay not less than 1.5 times their normal wage rate. Maximum working hours per day, except for certain extreme conditions, should be no more than 12 hours, including normal working hours and overtime hours. The maximum number of overtime hours is 72 hours per month.

D. Contracts of Apprenticeship[2]

Children and young persons under 16 years old can be apprenticed to an employer with the consent of their parent or guardian. For children and young persons without a parent or guardian, they can also accept apprenticeship with the authorisation of the Commissioner. Young persons and adults aged 16 or above can enter into a contract of apprenticeship on their own. The apprenticeship period should not be more than five years.

For detailed information about the contract of apprenticeship, please refer to the original document of the Employment Order 2009 (www.agc.gov.bn/AGC%20Images/LAWS/Gazette_PDF/2009/EN/s037.pdf).

E. Mandatory Welfare[1,3,4]

Tabung Amanah Pekerja (TAP)

TAP is the Employees' Trust Fund, which is set up by the Brunei government to provide employees with monthly benefits after retirement. However, this programme is only available to Brunei citizens and permanent residents under 55 years old who are employed in the public or private sectors.

The contribution rate of the TAP is comprised of two parts. Employees are required to contribute 5% of their monthly salary to the programme, while their employers are required to contribute another 5% of the employees' monthly salary to the programme.

Generally, members under the TAP can withdraw their savings from the TAP when they attain 55 years old. However, under certain circumstances, they may withdraw the savings early:

- Members can withdraw 25% of their TAP savings when they are 50 years old and withdraw the rest after the age of 55;
- Members who have been actively making TAP contributions for 60 months and whose saving accounts have at least BND 40,000 can withdraw 45% of their TAP savings for housing purpose;
- Members can withdraw all of their TAP savings if they decide to move to other countries permanently;
- Members can withdraw all of their TAP savings if they cannot participate in any future employment due to physical or mental disability. A certificate from a qualified medical agency is required for members to withdraw their TAP savings; and
- Members' close relatives can withdraw all of the Members' TAP savings if they die before withdrawing the TAP savings.

Supplemental Contributory Pensions (SCP)

The SCP is another employment benefit programme similar to TAP. Members who have been contributing 7% of their monthly salary for 420 months will receive a monthly benefit (minimum BND 150) upon attaining the age of 60 for a period of 20 years.

For more detailed information about the TAP and SCP, please visit the website (www.tap.com.bn/Pages/EN/Members-Schemes.aspx).

Public Holidays

All employees working in Brunei are entitled to have 11 days of public holidays. Public holidays in Brunei include New Year (1 January), First Day of Hijrah, Chinese New Year, Brunei National Day (23 February), Maulud Prophet Muhammad's Birthday, His Majesty's Sultan and Yang Di – Pertuan's Birthday (15 July), First Day of Ramdhan, Anniversary of the revelation of Quran, Hari Raya Aidilfitri, Hari Raya Aidiladha and Christmas Day (25 December).

Annual Leave

Employees who have worked continuously for one full year are entitled to at least seven days of annual leave. The number of days should increase with the employees' years of service, as shown below.

Years of Employment	Days of Annual Leave
1	7
2	8
3	9
4	10
5	11
6	12
7	13
8 or more	14

Sick Leave

Employees whose employment period are over six months are entitled to 14 days of sick leave per year if no hospitalisation is required. If hospitalisation is required, employees will be entitled to 60 days of hospitalisation leave (including the 14 days of outpatient leave).

Maternity Leave

Female employees working in Brunei are entitled to maternity leave under the Employment Order 2009. Employers who fail to pay salary when their employees are on their maternity leave can face penalties including fines of no more than BND 1,000, imprisonment of no more than six months, or both. In Brunei, foreign and local female employees have different maternity leave schemes as shown below.

Local Female Employees	Foreign Female Employees
Local female employees who are citizens or permanent residents, lawfully married, and have been working with their employers for more than 180 days are entitled to 15 weeks of maternity leave: • 2 weeks leave immediately before giving birth to a baby; • 13 weeks leave immediately after giving birth to a baby.	Foreign female employees who have been working with their employers for more than 180 days are entitled to 9 weeks of maternity leave: • 4 weeks leave immediately before giving birth to a baby; • 5 weeks leave immediately after giving birth to a baby.
Salary Arrangement during Maternity Leave	
• Employers are required to pay the employees' basic salary for their first 8 weeks of maternity leave. • The Brunei government will pay the employees' salary for the next 5 weeks of maternity leave. • The final 2 weeks of maternity leave is unpaid.	• Only 8 weeks of the maternity leave are paid. • The final week is unpaid.

Other Rights

Apart from the above mentioned legal provisions, employers in Brunei are required by law to provide safe working conditions and acceptable accommodation for employees, and that they are also responsible for the cost of medical treatment in case of accidents. The extent of such required facilities depends on the nature of the business and the number of employees.

F. Labour Law Governing Authorities, Enforcements, and Restrictions

Governing Authorities[5]

The Department of Labour is the government agency in Brunei that governs the Employment Order 2009, the major labour law, and any employment-related affairs. Its functions include (but are not limited to): supervising the enforcement of the labour law, solving disputes between employers and employees, or promoting a safe working environment.

Employment Agencies Order 2004[6]

The Employment Agencies Order 2004, which was fully enforced in 2012, regulates employment agency related affairs in Brunei, such as registration and issuance of licence for employment agency. It intends to protect both employers and employees.

Summary of Offence and Penalties Stipulated in the Employment Agencies Order 2004

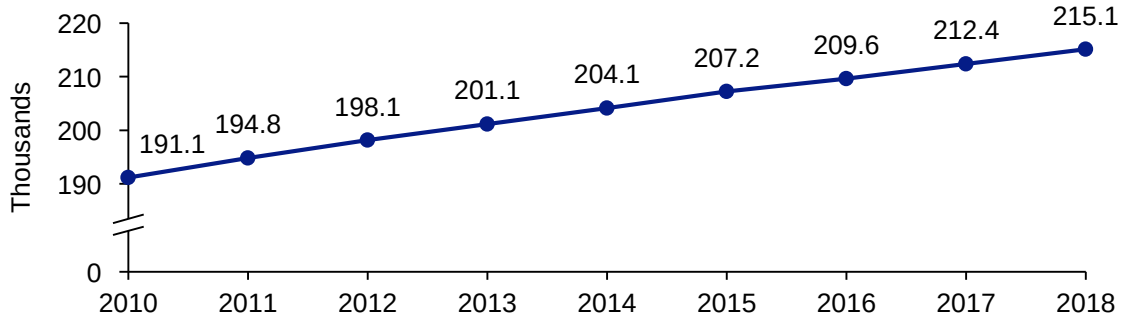
Offence	Penalty
Operating an employment agency without a valid licence	Fine of no more than BND 5,000 and imprisonment of no more than 1 year
Operating a business in a place other than the one stated in the licence	The Commissioner may combine the offences and fine no more than BND 600 in total.
Failure to display the licence in a conspicuous place when operating	
Failure to notify the Commissioner as required within 14 days after the operator or partnership is changed	
Failure to notify the Commissioner and return the licence to the Commissioner when the operation of business is ended	
Sharing fee charged to the licencee with contractors or contractor's agents	
Failure to keep the following records: • Registration • Vacancies and related information • Other records required	

For more offences and related penalties, please refer to the Employment Agencies Order 2004.

II. Local Labour Supply Market Condition

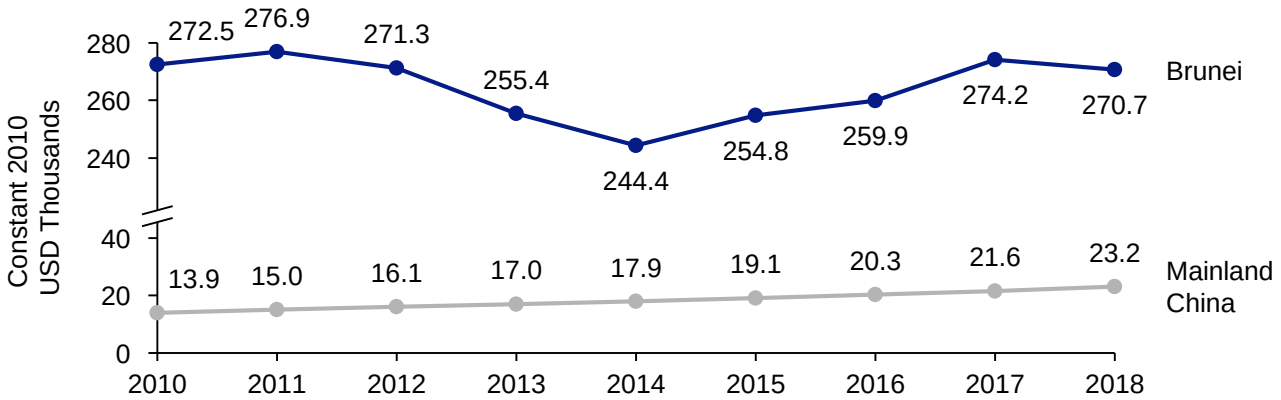
Supply Situation for Total Labour Force[7,8,]

Brunei's Total Labour Force (2010 – 2018)



The estimated total labour force in Brunei was around 215,000 in 2018. The supply of labour has been growing at a stable rate in the past five years.

Brunei's Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)

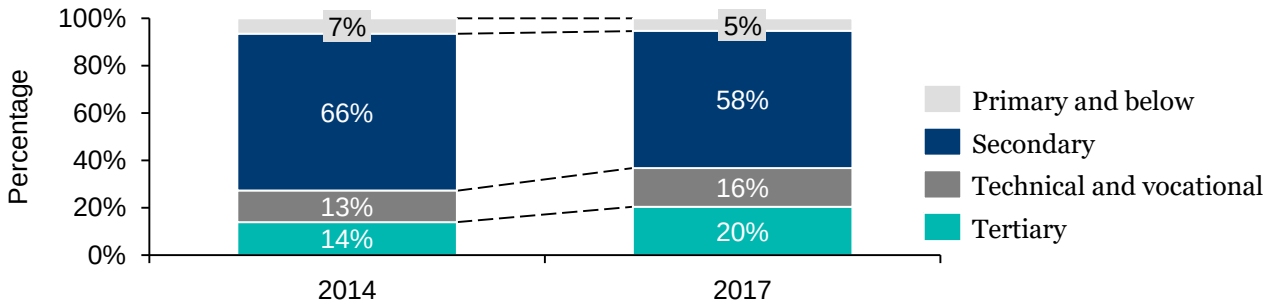


Brunei's labour productivity declined from 2010 to 2014. However, it has been growing in the past five years. Brunei has the highest labour productivity among the ASEAN countries, and the labour productivity was 11 times greater than Mainland China's in 2018.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply on Educated Employees

Brunei's Labour Force Educational Attainment[9]



The educational attainment of Brunei's labour force is concentrated at the secondary school level. From 2014 to 2017, the percentage of the labour force with a technical and vocational degree or above has grown from 27% to 36%.

C. Government Support on Employee Training[10,11,12]

The Brunei government provides several training programmes for employers and employees to improve the competitiveness of Brunei's workforce.

The Ministry of Education Strategic Plan 2018 - 2022

The Ministry of Education Strategic Plan 2018 – 2022 provides an overview of the Ministry's strategic objectives over the five-year period. It intends to improve the country's education system by enhancing the human resource system, strengthening the access to educational resources across Bruneians' lifetimes, and improving the collaboration with education-related stakeholders.

Key Developments for Three Strategic Objectives:

Strategic Objective	Key Developments
Strategic Objective 1: Transformation of the human resource system to be more performance-driven	• Develop a comprehensive and data-driven human resource plan that provides a framework about the implementation of the strategic plan • Develop learning and training programmes that intend to cultivate professionals with competency • Periodically review and assess the organisation's human resource system to ensure efficiency and competency by establishing an evaluation system
Strategic Objective 2: Equal access to learning and training resources for all people	• Enhance the quality of Brunei's pre-primary, primary and secondary education by providing better trainings, improving school system, and strengthening assessment • Improve the quality and coverage of post-secondary education by modifying school admission process, providing more scholarships, and enhancing teaching quality. • Establish a comprehensive training system for people to improve their professional skills throughout their lifetime.
Strategic Objective 3: Improvement of collaboration and implementation of educational incentives to provide a better teaching and learning environment	• Improve collaboration among internal educational resources by enhancing the governance structure of the country's education resources. • Promote more frequent collaboration with external educational resources

For detailed information related to the Ministry of Education Strategic Plan 2018 – 2022, please refer to the original document (www.moe.gov.bn/DocumentDownloads/Strategic%20Plan%20Book%202018-2022/Strategic%20plan%202018-2022.pdf).

The CAE Brunei Multi-Purpose Training Center (MPTC)

The MPTC, established in 2012 by the Brunei government and CAE Inc., aims to cultivate civil aviation professionals by providing training and simulating facilities and courses related to business aviation, helicopter, maintenance and aircraft. The MPTC is also planning to offer more training courses across different industries, such as energy, technology, and aerospace.

For more information related to the MPTC, please visit its official website (trainwithcae.com).

Technical and Vocational Education and Training (TVET)

The TVET in Brunei is governed directly by the Ministry of Education, which aims to enhance the country's workforce by cultivating skilled professionals.

The formal TVET system in Brunei is comprised of the following courses:

Certificates or Programmes	Pre-requirement	Duration	Venue
Pre-vocational Courses and Industrial Skills Qualifications	Primary Education	1 – 2 years	Lower Secondary Institutions
National Technical Education Certificate	Lower Secondary Education	2 years	Upper Secondary Technical Institutions
Higher National Technical Education Certificate	National Technical Education Certificate	2 years	Upper-Secondary Non-Tertiary Technical Institutions
Higher National Diploma and Advanced Diploma programmes	"A" Levels or National Diploma	2.5 years	Polytechnics

For non-formal TVET systems and relevant educational programmes, please refer to the Brunei TVET Country Profile (unevoc.unesco.org/wtdb/worldtvetdatabase_brn_en.pdf).

D. Labour Unionisation and Related Government Regulations[13]

Trade unions in Brunei are registered and regulated under the Department of Labour. The Trade Unions Act 1961 (Chapter 128), revised in 1984, is the main legislation that regulates trade unions. A trade union must be registered before it becomes legal. The registrar can refuse the registration of a trade union if he or she determines that the applicant or the organisation fails to fulfil the relevant requirements as specified in the Act. In addition, trade union cannot organise any activities, such as strikes or protests, without the pre-approval of the government. Therefore, trade union activities are very limited in Brunei.

For more information related to the Trade Union Act, please refer to the original law document (www.agc.gov.bn/AGC%20Images/LAWS/ACT_PDF/cap128.pdf).

E. Work Permits[14,15,16]

All foreigners, except Malaysian and Singaporean workers, must hold a valid employment visa before they start employment in Brunei. In addition, the employers must hold a valid Foreign Worker Licence from the Department of Labour before they can hire foreign employees.

Application for a Foreign Worker Licence requires the following documents:

Standard Required Documents	Other Required Documents
Foreign Workers Licence Application Form	Copy of Foreign Worker Recruitment Licence
Copy of the Identity Card or Passport of all company owners	Copy of valid and latest BUR 500/BUR 555 for all foreign workers
Copy of Passport for all applicants	Copy of latest receipt of Employer and Employee Census
Copy of Company Registration	Address Declaration Form
Copy of relevant supporting documents from government agencies	Cancellation Form (only for replacement of employee)
Copy of Clearance Letter from JobCentre Brunei	
If the job requires qualifications, copy of qualified certificates is required	

For construction and maintenance or cleaning activities, additional documents may be required. For more information related to Foreign Worker Licence application, please visit the website of Brunei Department of Labour (www.labour.gov.bn/SitePages/Services%20-%20LPA%20Checklist.aspx).

Application for Employment Visa requires the following documents:

- Foreign Worker Licence from the employer issued by the Department of Labour;
- Approval letter of the Employment Pass from the Department Immigration and National Registration;
- A valid passport with expiration date no less than six months; and
- Application fee of BND 20.

Travelling to Brunei

Hong Kong SAR passport holders are permitted to stay up to 14 days in Brunei without a visa. However, visa application is required for the following circumstances:

- Stay period in Brunei is over 14 days;
- Visiting Brunei for business purpose; and
- Visiting Brunei for professional purpose.

F. Religious Concerns or Considerations[17]

Religion

Islam is Brunei's official religion, and 78.8% of Bruneians are affiliated to Islam. Starting from April 2019, Brunei adopted the Syariah law, which includes harsh punishments such as canning and stoning. The new law covers all people in Brunei, regardless of whether they are locals or foreigners, Muslims or non-Muslims.

Source:

[1] *Guide to Brunei Employment Laws, Brunei Darussalam Department of Labour*

[2] *Employment Order, 2009*

[3] *TAP Scheme, Tabung Amanah Pekerja*

[4] *SCP Scheme, Tabung Amanah Pekerja*

[5] *About Us, Brunei Darussalam Department of Labour*

[6] *Employment Agencies Order, 2004*

[7] *Total labour force, The World Bank*

[8] *Industry (including construction), value added per worker (constant 2010 US$), The World Bank*

[9] *Labour Force Survey 2017, Brunei Darussalam Department of Statistics*

[10] *Strategic Plan 2018 – 2022, Brunei Darussalam Ministry of Education*

[11] *CAE Brunei Multi-Purpose Training Center (MPTC) Training Center, CAE Corporation*

[12] *TVET Country Profile – Brunei Darussalam, UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training published in November 2018*

[13] *Brunei Trade Union Act (Revised Edition 1984)*

[14] *PLA Checklist, Brunei Darussalam Department Labour*

[15] *Work in Brunei, Embassy of Brunei Darussalam to the United States of America*

[16] *Visa Information, Brunei Darussalam Ministry of Foreign Affairs*

[17] *The World Factbook, Central Intelligence Agency*

5. Research and Development Environment

Executive Summary

Brunei's research and development (R&D) environment reaches a standard level when compared with the worldwide average but is one of the least developed in the Southeast Asia region. As of 2019, the country has yet to formulate clear government policies and strategies to increase science and technology (S&T) sector's competitiveness. R&D and S&T are only considered by the nation as ways to achieve the economic goals set in the long term strategy of Wawasan Brunei 2035, but not as main drivers of economic growth.

Brunei's main asset to become a strong R&D focused country is the Brunei Research Council (BRC) which oversees, manages and funds most of the country's R&D projects. Nevertheless, the lack of adequate infrastructure, unskilled manpower and poor intellectual property (IP) protection prevent Brunei from being an option for foreign companies to set up R&D centres.

5. Research and Development Environment

I. The Science and Technology (S&T) in Brunei

Brunei does not have major policies for the development of science, technology and innovation (STI) ecosystem. However, the government has developed a long-term national vision, the Wawasan Brunei 2035, backed by the five-year National Development Plans, setting a strategic direction for the country's economic growth. STI is usually mentioned in these plans as a way to achieve different objectives.

A. Policies and Trends in S&T[1,2,3,4]

Wawasan Brunei 2035

This long-term plan was developed in order to reduce the country's dependency on hydrocarbons resources (oil and natural gas), which are supposed to be running out within two decades. Therefore, by 2035, the Brunei government aims to transform the country into a nation recognised for:

- Its well educated and highly skilled workforce;
- Its high quality of life (e.g measured by the Human Development Index ranking); and
- Its dynamic and sustainable economy (e.g measured by high income per capita).

To accomplish some of these goals, Brunei will focus on the S&T sector: 1) S&T teaching to prepare the youth for an increasingly knowledge-based economy, 2) commercialise S&T research outputs that create business opportunities, 3) develop infrastructures that help enhance local businesses' economic competitiveness; and 4) sustainably manage resources.

11th National Development Plan

This five-year plan, enacted over the 2018-2023 period, is designed to improve living quality in Brunei and boost the nation's sustainable and prosperous development. To achieve this vision, the government has defined multiple focus areas and goals, some of which are linked to STI:

- Quality living: use S&T to develop high quality and reliable infrastructure;
- Sustainable development: leverage technology to optimise resources and asset utilisation; and
- Prosperous nation: attract foreign investors engaged in high value added activities.

Outlook

Brunei's STI ecosystem development is below the world average. The country ranked 79th out of 140 countries in the "Innovation Capability" criteria of the 2018 Global Competitiveness Index and ranked sixth among the ASEAN countries (i.e. better than Vietnam, Cambodia and Laos and non-ranked Myanmar). The country ranked quite low in multiple criteria: scientific publications (121st), buyer sophistication (108th) and quality of research institutions (99th). However, Brunei ranked high (comparatively to its overall ranking) in diversity of workforce (51st), international co-inventions (52nd), and trademark applications (70th).

Nevertheless, a lack of transparency in research and development (R&D) expenditure data can be highlighted. Indeed, the country does not disclose figures regarding its R&D expenditure (as % of GDP), which makes the assessment of the nation's overall S&T capabilities difficult.

B. S&T Related Organisations[5,6,7]

In Brunei, there are three main public institutions managing every aspect of the country's STI ecosystem. The different bodies are described below.

Ministry of Development (MOD)

The MOD is one of the most economically important entities for Brunei. In fact, the Ministry is in charge of setting the future strategic direction of the country's economy and therefore developed the Wawasan Brunei 2035 (which is currently being implemented). Some of MOD's main missions are:

- Formulate economic guidelines in line with the country's main policies;
- Lead Brunei's economic planning;
- Keep track of the country's development against the key performance index (KPI) of the 2035 plan; and
- Identify national and international issues affecting the economic growth.

The MOD's missions are therefore not directly related to S&T or R&D, however, the policies formulated by the Ministry greatly influence the future development of the country's STI ecosystem.

Brunei Research Council (BRC)

The BRC's vision is to achieve research excellence and innovation in order to support the goals of the Wawasan Brunei 2035. To this end, the Council carries out five main missions:

- Set the strategic direction for Brunei's R&D policies;
- Ensure that the BRC projects support Brunei's economic growth;
- Evaluate new and ongoing research and innovation projects;
- Promote R&D collaboration between public and private entities; and
- Support R&D results' commercialisation in Brunei's economy.

The BRC therefore oversees and supports multiple R&D projects related to STI. In particular, the Council identifies four main research fields which have high commercial value and high chances of being converted into commercial outputs:

Food Sciences and Technology

ICT & Digital Economy

Health and Biotechnology

Energy

Brunei Economic Development Board (BEDB)

The BEDB's mission is to grow and diversify the country's economy in order to achieve the Wawasan Brunei 2035 objectives. The Board focuses on strategic initiatives such as developing export-oriented industries, attracting foreign investors and creating opportunities for local businesses. In order to identify valuable economic opportunities, the BEDB conducts high quality research in multiple sectors and makes strategic recommendations to the government.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[8,9]

Brunei's STI ecosystem is still nascent and lacks world-class infrastructure. Apart from the BRC, which is the country's main R&D institute and funding agency, research activities are mainly carried out in the nation's top universities: the Universiti Brunei Darussalam and Universiti Teknologi Brunei. Other than these, Brunei has only two technology parks implicated in R&D activities.

Anggerek Desa Technology Park (ADTP)

Operational since 2015, the ADTP was a USD 19 million project carried out by the BEDB. The ADTP now serves as a centre of innovation and entrepreneurship focusing on high-growth industries. Composed of an iCentre, a Knowledge Hub and a "green-office building", it mainly hosts SMEs and foreign businesses engaged in sectors such as multimedia, healthcare, food security and material science.

Brunei Agro Technology Park (ATP)

Expected to be fully operational in 2020, the ATP is envisioned to be a hi-tech business-oriented park catering to innovative companies in the field of agro-economy. The research being carried out in the park should lead to new industry technologies (e.g. production methods, packaging improvements) which could eventually boost Brunei's GDP growth.

B. University-based R&D Institutes[10,11]

Apart from the government, universities are also important players in the R&D field. According to the 2019 QS Asia University Rankings, Brunei has only two universities ranked in the top 300. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). Out of the two ranked universities, only one appears in the top 100. This ranking, to a certain extent, indicates Brunei's low research and teaching quality, also implying that the nation has a very limited impact on the S&T international scene.

University (ranking)	Description and Research Focus
Universiti Brunei Darussalam (100th)	Opened in 1985, UBD was the first university of the country. It currently hosts 7 different research institutions, 5 of which are related to STI: • Centre for Advanced Material and Energy Sciences; • Centre for Advanced Research; • Innovation Lab; • Institute for Biodiversity and Environmental Research; and • Institute for Leadership, Innovation and Advancement.
Universiti Teknologi Brunei (181st)	UTB is Brunei's most important engineering and technology university. The university houses 3 STI research centres: • Centre for Transport and Research; • Centre for Innovative Engineering; and • Centre for Research on Agro-Food Science and Technology.

C. Private Business Firms (Research Centres)

Brunei is not among the investors' favoured destinations in Southeast Asia for setting up R&D centres. Indeed, multiple other Southeast Asian countries such as Singapore, Malaysia, Thailand or Vietnam offer foreign companies attractive investment opportunities and incentives (e.g financial incentives or world-class infrastructures). Therefore, except for local businesses, other enterprises usually prefer setting up their research centres in neighbouring countries.

D. Infrastructure Availability for Foreign Investments

As Brunei's R&D infrastructure is very scarce, foreign investors have limited investment opportunities. The most suitable destinations for companies wishing to invest in the country are the two technology parks: ADTP and ATP. The former is already operational and welcomes foreign businesses involved in value-adding activities, whereas the later seeks investors engaged in agro-technology. Apart from these two parks, foreign companies are encouraged to partner with the country's top two universities as they are among the most important research institutions of Brunei.

III. Priority Areas in Brunei (major exports)[12,13]

Brunei's economy is highly concentrated. The nation is heavily reliant on raw materials, especially mineral fuels and oils. In 2018, Brunei's top five exports were:

Top Five Exports	% of Total Exports (in 2018)
Mineral Fuels and Oils	91.0%
Organic Chemicals	3.6%
Machinery and Mechanical Appliances	1.5%
Iron or Steels Products	0.7%
Optical, Technical, Medical Apparatus	0.7%

As Brunei's exports are largely (nearly 100%) dominated by raw materials, the country's does not focus on exporting high value added products. In 2018, the country's manufactured exports labelled as hi-tech products (e.g. products with high R&D intensity, such as in the computers, aerospace, pharmaceuticals industries) were virtually null.

IV. Funding for S&T and R&D[14]

The BRC is the main funding agency for STI related projects in Brunei. The Council offers three different funding schemes which are described below:

Main Funding Schemes Offered by the BRC

Fund	Description	Requirements	Conditions
Applied Research Fund	• Funding for research that aims to develop new products and services with high potential return on investment	• Open to all researchers employed by Brunei-based Institutes of Higher Learning (IHLs) or Research Institutes (RIs), government agencies, and non-profit organisations (NGOs)	• Maximum funding of BND 300,000 (USD 220,000) per project • Project supported for a maximum duration of 2 years
Industrial Research Fund	• A 50:50 cost sharing grant funding R&D projects that aim to produce or improve products or services in industrial sectors for commercialisation	• Open to locally registered Private Limited Companies (local or foreign) • Open to all IHLs, RIs, government agencies, cooperatives, and NGOs	• Maximum funding of BND 2 million (USD 1.5 million) per project • Project supported for a maximum duration of 2 years
R&D Commercialisation Support Programme	• Monetary support to assist R&D output commercialisation and revenue generating activities related to this output • Programme receiver will also benefit from services such as entrepreneurship advice or access to venture capital networks	• Open to all IHLs, RIs and government agencies • Open to Brunei registered corporations, cooperatives, micro/ small and medium sized enterprises, and NGOs	• Maximum funding of BND 10,000 (USD 7,300) per project • Project supported for a maximum duration of 2 years

For additional information, please visit the BRC official homepage (www.brc.gov.bn/SitePages/brc-funding.aspx).

V. Human Resources for S&T[15]

Evaluating Brunei's S&T workforce is challenging as the government does not release any data concerning this segment of the population. In the 2019 Global Innovation Index, Brunei was not ranked for the criteria "Researchers, FTE/million population" due to the lack of information.

However, Brunei can leverage a healthy pool of S&T educated people. The country ranked 11th worldwide in the criteria "% of graduates in science and engineering", with around 31% of the total number of tertiary graduates graduated in science and engineering *(Note)*.

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Supports in Testing and Verification

As the most important R&D entity in Brunei, the BRC should provide testing and verification support. However, the entity claims that its role is to ensure the smooth implementation of R&D projects, identify new project opportunities and provide financial support to various institutions, giving little mention of testing and verification support. Notwithstanding this, foreign investors wishing to carry out R&D activities in the country should contact the BRC as its overall mission is to encourage R&D and innovation in Brunei.

VII. Intellectual Property (IP) Policy[16]

IP rights are an important factor to consider when entering a country. Some nations have trouble implementing a strong framework to protect IP rights which can lead to serious damages to the companies. Each year the Global Innovation Policy Center (GIPC) publishes a worldwide ranking which analyses eight IP protection related categories: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, as well as membership and ratification of international treaties. According to the 2019 IP Index published by the GIPC, Brunei's IP Protection is lower than average. Globally, the country is ranked 34th out of 50 analysed countries. Regionally its performance is below Asian countries' average. Overall, Brunei scored 38% compared with 52% for the Asian average (as a reference the top five world economies averaged 92% in the index).

The report underlines areas where Brunei's IP protection is strong:

- The country enacted multiple IP related reforms and established a centralised IP office;
- In 2017, the country accessed the World Intellectual Property Organization (WIPO) Internet Treaties; and
- No identified barriers (e.g. administrative or regulatory) that prevent the country from having a strong IP framework.

However, some areas of improvements are underlined**:**

- Broad and complex licence framework with limited incentives for the use of IP assets;
- Absence of data protection regulation;
- Poor life science IP rights; and
- Limited actions against online piracy leading to high software piracy rates (64%).

Source:

[1] *Brunei Vision 2035 – Wawasan 2035, Brunei Embassy*

[2] *Strategic Plan 2018-2023, Ministry of Development*

[3] *The Global Competitiveness Report 2019, World Economic Forum*

[4] *Research and development expenditure (% of GDP), The World Bank*

[5] *Ministry of Development homepage*

[6] *Brunei Research Council homepage*

[7] *Brunei Economic Development Board homepage*

[8] *Agro-Tech Park to reopen by 2020, The Brunei Time, 2016*

[9] *High-tech park to be ready in Oct, The BT Archive, 2014*

[10] *QS Asia University Rankings 2019, QS World University Rankings*

[11] *Universities official homepages*

[12] *Trade Map, International Trade Centre*

[13] *High-technology exports (%of manufactured exports), The World Bank*

[14] *Funding Opportunities, BRC*

[15] *Global Innovation Index 2019, INSEAD*

[16] *GIPC IP Index, Global IP centre, 2019*

6. Supply Chain Environment

Executive Summary

Brunei's economy is heavily dependent on the oil and gas industry, which accounts for over 90% of the country's exports. In recent years, the Brunei government has been trying to diversify the economy by promoting other industries, such as downstream oil and gas refining activities, and information and communications technology (ICT).

Brunei provides strong telecommunications infrastructure and regional airport and seaport connectivity, but future infrastructure investments will be needed as foreign oil companies gradually reduce their investments due to the dwindling oil and gas reserves of the country. Through the Wawasan 2035 plan, the government aims to improve and modernise the country's logistics infrastructure to promote trade and connectivity within the region.

6. Supply Chain Environment

I. Industry Profiles in Brunei

Breakdown of 2018's Top 10 Exports[1,2,3]

Brunei's major sectors by gross domestic product (GDP) in 2017 were services (75.2%), industry (24.8%) and agriculture (1.2%).

In Brunei, the service sector mainly includes construction and transportation. The major industry in Brunei is oil and petroleum, which is also the largest contributor to Brunei's GDP. There is minimal agricultural activity in Brunei, mainly consisting of rice, vegetables, livestock and poultry.

In 2018, Brunei's total global shipments amounted to USD 6.5 billion, of which around 99% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Mineral fuels including oil	USD 5.9 billion	91.0%
2. Organic chemicals	USD 237.3 million	3.6%
3. Machinery	USD 96.6 million	1.5%
4. Iron or steel products	USD 46.3 million	0.7%
5. Optical, technical, medical apparatus	USD 42.4 million	0.7%
6. Electrical machinery and equipment	USD 35.8 million	0.6%
7. Aircraft and aircraft parts	USD 30.7 million	0.5%
8. Iron and steel	USD 10.8 million	0.2%
9. Other commodities	USD 9.0 million	0.1%
10. Fish and crustaceans	USD 7.8 million	0.1%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp.

Brunei's exports are highly concentrated in oil and gas, while other exports are minimal. However, Brunei is not a major contributor to global exports. Crude petroleum and petroleum gas make up over 90% of Brunei's exports, but Brunei is not among the top five exporters of either product in Asia.

In 2017, Brunei was only the ninth largest exporter of petroleum gas in Asia, contributing to 1.1% of global exports, and the 12th largest exporter of crude petroleum in Asia, contributing 0.29% of global exports.

II. The Key Supported Industries in Brunei

Brunei has one of the highest GDP in Asia, mainly due to the oil and gas reserves. With its low taxes and stable political situation, Brunei offers a welcoming investment climate to foreign businesses. Foreign investments into Brunei has traditionally been focused on the oil and gas industry. In recent years, the Brunei government has tried to diversify the country's economy through promoting other industries. One of which is the information and communications technology (ICT) sector.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations[4,5,6,7,8]

Oil and Gas

Oil and gas has long been an important pillar of Brunei's economy. Traditionally, the oil and gas industry has focused only on extracting the country's fossil fuel reserves, which is shown by the country's main exports being crude petroleum and petroleum gas. One of Brunei government's main strategies is to promote the downstream industries.

Hengyi Industries, a Mainland Chinese company, is leading the way through the construction of an integrated refinery complex that cost over USD 3 billion. The refinery entered into trial operations in May 2019, and will focus on manufacturing downstream products such as aromatics and industrial chemicals, which are used to make clothing and plastics. The refinery has already signed an agreement with Brunei Shell Petroleum to supply crude oil, and will greatly extend the value chain in Brunei. The Brunei government also expects that the refinery will attract other companies to establish downstream manufacturing activities in the area, which could become potential suppliers for the local chemicals and petrochemicals industries.

ICT

The Brunei government has identified ICT as a major potential industry in diversifying Brunei's economy, hoping to turn Brunei into a digital leader in Southeast Asia and regional hub for ICT. Brunei faces no risk of natural disasters. Its central location in Southeast Asia and well-established existing telecommunications infrastructure make the country an ideal destination for ICT investments.

Brunei also has abundant bandwidth capacity for future utilisation, with the existing international submarine cables and telecommunications network. The Brunei government has also invested heavily in the Asia America Gateway (AAG) Submarine Cable System, with Brunei being a major landing station for the network, providing connectivity with the United States and other major Asian countries.

As part of the process in promoting ICT, the Brunei government has consolidated the country's telecommunications infrastructure under the government-owned Unified National Networks Sdn Bhd (UNN). UNN's aim is to provide better service quality by combining networks, and steer the country towards the development of a nationwide 5G network.

III. Key Raw Materials Sourcing Platforms/Channels[9,10]

In line with the Wawasan Brunei 2035 , the Ministry of Foreign Affairs established the Trade Promotion Unit to promote trade in Brunei, and enhance export opportunities for Brunei's businesses and products. The Trade Promotion Unit cooperates with other countries and territories to promote Brunei products overseas, such as taking part in the Hong Kong Trade Development Council Food Expo, SME Expo and ICT Expo, in addition to other exhibitions around Southeast Asia and Mainland China.

Brunei itself also hosts the Brunei International Trade Expo annually at the International Convention Centre in Bandar Seri Begawan to promote Brunei products and businesses.

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered[5]

In the past, the growth of Brunei and its infrastructure have been closely tied to the oil and gas industry. However, with the oil and gas reserves expected to be running out in the next two decades, oil firms seem to place less investment in the existing facilities, leading to further decrease in output. The Brunei government has been trying to divert the country's economy away from its reliance on oil and gas, though with little progress so far.

Mainland Chinese companies are starting to invest into the country, with over USD 4 billion having already been invested into the country so far. As Brunei is an important country along the Belt and Road Initiative (BRI), Mainland Chinese investments in Brunei are expected to continue to rise.

According to the 2019 report by the World Bank, Brunei ranked 55th in the world in terms of ease of doing business, and ranked fourth out of the ASEAN countries (Hong Kong ranked fourth globally in the same report). Brunei ranks well in the Getting Credit (first), Starting a Business (16th), and Getting Electricity (31st) criteria, but relatively worse in the Registering Property (142nd) and Trading Across Borders (149th) criteria.

B. Efficiency of Customs and Clearance Process[11,12,13]

Brunei applies two systems of tariff classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Brunei and the other ASEAN countries. The AHTN is based on the 6-digit Harmonized Commodity Description and Coding System (commonly called the HS Code), which applies to trade with non-ASEAN countries. For more information regarding tariff classification in Brunei, please refer to the Brunei Darussalam Tariff and Trade Classification 2017 (www.tradingacrossborders.gov.bn/Downloadable/BDTTC%202017.pdf).

Imports and exports are overseen by the Royal Customs and Excise Department (RCED), and mainly governed under the Customs Order and Excise Duties Order. Businesses that wish to import or export must register with the RCED. The Brunei government has created the Brunei Darussalam National Single Window (BDNSW) online platform for customs issues.

All imports are subject to customs duties, but businesses can apply for duty exemptions from the Ministry of Foreign Affairs. Certain goods, such as drugs, firecrackers, and certain livestock, among others are prohibited from importing and exporting to or from Brunei. For a specific list of prohibited and restricted goods, please refer to the BDNSW website (bdnsw.gov.bn/Pages/ImpExpProh-RestictionGoods.aspx).

For more information on customs in Brunei, please refer to the BDNSW website (www.bdnsw.gov.bn/Pages/Home.aspx).

Customs Clearance Process

Customs Import Declaration

Step 1:

Prior to arrival of imported goods, importers must obtain a Customs Import Declaration. The declaration can be submitted via BDNSW. For certain goods, (such as personal and household effects), submission of Customs Import Declaration is not required.

Payment of Duties/ Taxes

Step 2:

All goods imported must be classified based on the Brunei Darussalam Tariff and Trade Classification 2017. The payment of duties will be based on this classification.

Duties should be paid on submission of the Customs Import Declaration.

Inspection

Step 3:

All restricted and controlled goods being imported into Brunei are subject to customs inspection. In certain situations, standard goods will also be subject to inspection.

Certain goods, such as firearms, explosives, and timber, will be subject to pre-scheduled inspection.

Clearance

Step 4:

All supporting documents relating to the purchase, import, sale, or export of goods should be retained for 7 years. The documents may be stored as physical copies, softcopies, or as images. The RCED may request a business to produce these supporting documents at any time.

The following table shows the documents needed for customs declaration:

#	Import and Export Goods
1	Commercial invoice
2	Bill of lading or air waybill
3	Packing list
4	Three copies of the Customs Declaration Form
5	Description of goods, including gross and net weights or quantities, and value
6	Country of origin and place of shipment
7	Any other specific licences or permits for prohibited and controlled commodities

For more information regarding the customs clearance process, please refer to the Ministry of Finance and Economy website on the matter (www.mofe.gov.bn/Customs/Import-and-Export-Procedures.aspx).

For more information regarding commodities that may require permits and the relevant government department/agency that issues the permits, please refer to the BDNSW website (www.bdnsw.gov.bn/Pages/ImpExpLicenceorPermit.aspx).

V. Logistic Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[14,15,16]

Brunei benefits from being centrally located in Southeast Asia, with good telecommunications infrastructure and airline connections. However, most of the existing infrastructure are results of past investments from foreign oil firms, and are located around the capital of Bandar Seri Begawan and the city of Muara, which houses the country's only seaport.

Airports

Brunei only has one main commercial airport: the Brunei International Airport (BWN) in the capital of Bandar Seri Begawan.

Civil aviation in Brunei is monitored by the Department of Civil Aviation, which also manages the Brunei International Airport. Brunei is considered as one of the smallest tourism markets in Southeast Asia, catering to around 2 million passengers annually only. Air transport in Brunei is mainly dominated by the government-owned Royal Brunei Airlines. The airline also provides the main air cargo services in Brunei.

Seaports

Brunei only has one major seaport: the Port of Muara, which was opened in 1973. The port is currently operated by Muara Port Company Sdn Bhd, and has shipping routes connecting Brunei to other Southeast Asian countries, as well as Hong Kong and Mainland China.

Highways

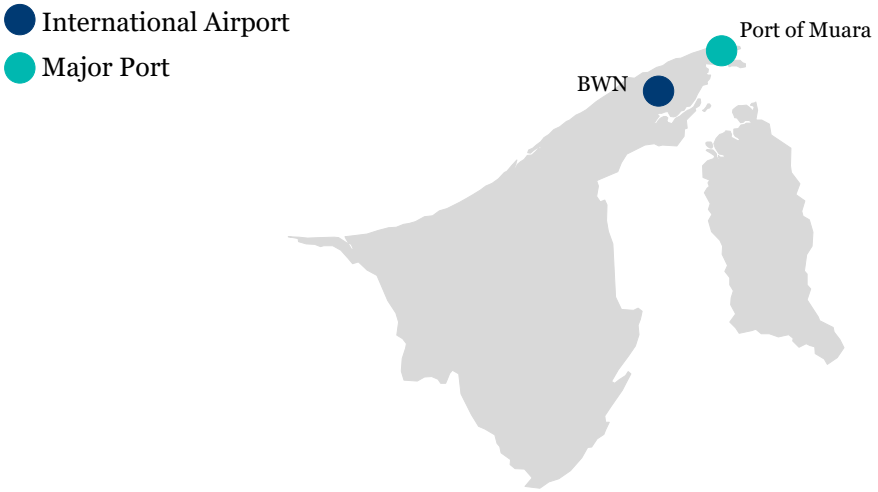
The road network in Brunei is around 3,000 km long, with over 90% (around 2,800 km) being paved roads. The road system in Brunei is managed by the Public Works Department, which is also responsible for the planning and construction of roads.

There are currently plans to connect Brunei with the possible new Indonesian capital in Kalimantan with a 4,000 km Trans-Borneo Highway.

Railways

There are currently no active railways in Brunei. Under the Land Transport Master Plan, a metro system had once been put into consideration, but was not adopted eventually.

Location of Major Airports and Seaports in Brunei



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

B. Key Logistics Hubs[17]

The Brunei government conducted a study in 2014, creating a Land Transport Master Plan (LTMP) to support the overall national Wawasan 2035 goals. The vast majority of transportation in Brunei is currently done by car, with Brunei being one of the most car-reliant countries in the world with a ratio of nearly 400 cars per 1,000 people.

The LTMP included three programmes: the Short-Term Programme (to 2018), the Medium-Term Programme (to 2025), and the Long-Term Programme (to 2035). Among the goals of the LTMP include:

- Develop the road network, reduce traffic jams and provide additional forms of public transport;
- Develop the Brunei Bus Rapid Transit (BRT) system for mass transit;
- Improve integration with other transportation of the ASEAN countries; and
- Develop decarbonised vehicle technology.

The LTMP is expected to greatly improve land transport efficiency, providing multimodal transportation, and reducing Brunei's dependence on private cars, thus improving logistics in the country.

C. Logistics Information Tractability and Transparency[28]

Brunei has a relatively poor logistics performance as compared to the other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Brunei was ranked 80th out of 160 countries for the overall LPI, a slight drop from the 2016 result (ranked 70th out of 160). Brunei ranked seventh among the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing, and (6) Timeliness. Brunei ranked relatively better in Customs (73rd), but scored relatively poorly in International shipments (113th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Brunei, Central Intelligence Agency*

[3] *Brunei, Observatory of Economic Complexity*

[4] *Brunei's Investment Outlook for 2019, Dezan Shira & Associates, Feb 2019*

[5] *Why China is coming to Brunei's aid as its oil slowly runs out, South China Morning Post, Mar 2018*

[6] *Business in Brunei, Consulate General of Brunei Darussalam in Hong Kong*

[7] *BSP inks deal to supply crude to new Hengyi refinery, The Scoop, Sep 2019*

[8] *Brunei's ICT geared for faster, reliable future, Darussalam Assets, Jul 2019*

[9] *Trade Fairs & Exhibition, Ministry of Foreign Affairs*

[10] *Brunei International Trade Expo, Brunei Tourism*

[11] *Brunei – Customs Regulations, export.gov, Jul 2019*

[12] *Import and Export Procedures, Ministry of Finance and Economy*

[13] *Brunei Darussalam National Single Window official website*

[14] *Brunei: SE Asia's smallest market, and its national airline, poised for rapid growth in 2018, CAPA*

[15] *Marine and Port Authority of Brunei Darussalam official website*

[16] *Ambitious plan in the making, The Star, Oct 2019*

[17] *Review to Formulate a Roadmap and Draft National Masterplan for a Sustainable Land Transportation System for Brunei Darussalam, Centre for Strategic and Policy Studies, 2014*

[18] *Logistics Performance Index (LPI), The World Bank, 2018*

7. Infrastructure

Executive Summary

Brunei has a relatively great number of industrial parks given its territory size and above-average transportation infrastructure.

Mainland China and Hong Kong companies wishing to set up their manufacturing operations in Brunei can choose to locate their activities in one of the country's 30 industrial sites. In Brunei, most of the industrial parks cater to a specific type of manufacturing industry e.g oil and gas, pharmaceutical or food-related.

The country's transportation infrastructure quality is considered above the global average. Nevertheless, the government strives to push for further developments in order to make Brunei an attractive destination for foreign investors. Future investments are mainly expected to come from joint ventures between companies from Brunei and Mainland China.

7. Infrastructure

I. List of Major Industrial Parks or Zones and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Parks or Zones[1,2,3]

As Brunei's hydrocarbons resources are expected to run out within two decades, the development of other industries driving the country's economy is of vital importance for the Sultanate. To facilitate the necessary shift towards more value-added manufacturing and industrial activities, the government developed multiple industrial parks and zones catered to specific industries. In 2019, there were around 30 operational industrial sites in Brunei, which are all managed by the Darussalam Entreprise (DARE).

Support and Incentives

Most industrial estates in Brunei are equipped with relatively established infrastructure, and offer tax and non-financial incentives. Thus foreign investors can consider industrial estates as a priority destination to set up manufacturing operations in Brunei.

Utilities

Utilities development status can greatly vary across different industrial estates: some sites offer partially developed utilities and road connections, whereas others are labelled as "readily prepared". Nevertheless, most parks provide: electricity, telecom, water connection, waste water management, drainage system, fire fighting facilities, etc.

Transportation

Utilities and transportation development statuses are strongly inter-linked. Generally, parks with partially developed utilities will have lower road connections than the "readily prepared" estates. The most advanced industrial parks are most of the time very well-connected to the country's main airport and seaport.

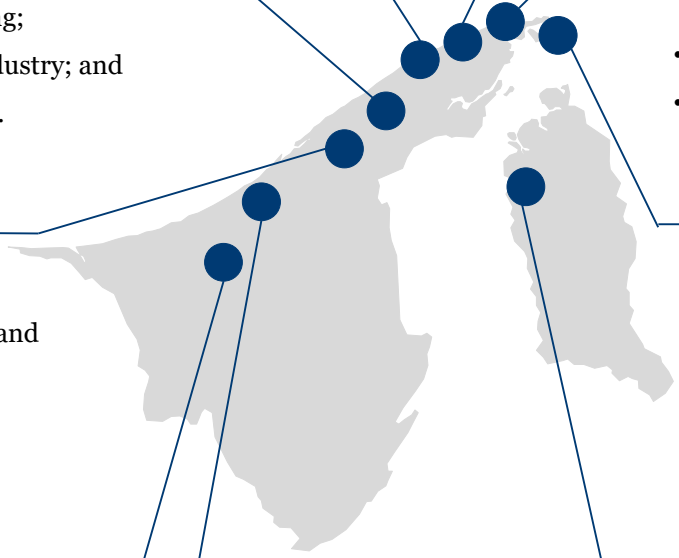
Government Incentives

Mainland China or Hong Kong companies considering to set up their manufacturing operations in Brunei's industrial estates can enjoy multiple benefits. The main benefit is a facilitated process to obtain the pioneer status, which mainly allows companies to obtain financial incentives such as: tax relief for five or eight years according to capital expenditures, income tax exemption, eliminated imported duties or dividend tax exemptions.

These benefits can also be coupled with non-financial incentives provided by the industrial estates: e.g. less expensive land or infrastructure, and cheaper utilities.

For further details on incentives regarding industrial estates, please refer to section 9 of this report.

Location of Main Industrial Estates



Digital Junction

Total area: 15 ha catered for:

- Light and medium industry;
- Information and communications technologies; and
- Hi-tech manufacturing.

Bio-Innovation Corridor

Total area of 194 ha targeted at:

- Light and heavy industry;
- Food manufacturing;
- Pharmaceutical industry; and
- Hi-tech companies.

Bukit Panggal

Total area of 50 ha catered for:

- Medium industry; and
- Energy intensive manufacturing.

Anggerek Desa

Total area: 16 ha focused on:

- Light industry; and
- Hi-tech manufacturing.

Salambigar

Total area of 121 ha targeted at:

- Light and medium industry;
- Food manufacturing; and
- Pharmaceuticals and cosmetics industry.

Pulau Muara Besar

Total area of 1,057 ha focused on:

- Special industry;
- Petrochemical and supporting activities (e.g. ship building, marine supply base).

Telisai

Total area of 2,808 ha targeted at:

- Light and heavy industry, and
- Food related manufacturing (e.g aquaculture, agriculture, horticulture).

Sungai Bera

Total area of 72 ha focused on:

- Heavy and specialised industry; and
- Related services.

Batu Apoi

Total area of 5 ha catered for:

- Light industry; and
- Related services.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

For additional information, please visit DARE official homepage (www.dare.gov.bn/en/Land.html).

Foreign Direct Investment (FDI)[4]

Even though Brunei offers multiple incentives, especially for non-oil investments (e.g. tax incentives, customs duty exemptions, freedom of investment), the country's FDI inflow is limited. In 2018, the nation recorded net inflows of around USD 504 million, a 8.0% decrease from USD 548 million in 2017. Nearly all of Brunei's FDI originated from Malaysia, which represented more than 90% of total investments. Malaysia's investments were mainly directed at the manufacturing industry, especially hydrocarbons extraction, mining and quarrying.

Cost of Usage[5]

The price of land (for both rent and sale) in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links as well as proximity and access to raw materials. For more details on the cost of industrial land, please refer to Appendix 1.

As most of Brunei's industrial parks are industry-specific, companies need to consider the best fit before investing in the country. For example, parks such as the Pulau Muara Besar or Batu Apoi offer facilities and equipment tailored for the petrochemical industry and light manufacturing. These parks are therefore likely to charge a premium compared to non-specialised parks, for the availability of specific equipment.

In addition to the land cost and facilities rent cost, industrial parks generally charge various fees. Investors can expect to pay domestic waste fees, maintenance fees and general fees.

Outlook

Diversifying Brunei's economy away from hydrocarbon is now critical for the country. The government is aware of this necessity and therefore charges DARE to develop new industrial estates which can help the country engage in more value-adding activities.

Out of the multiple on-going projects (i.e. greenfield development, upgrade or modernisation of industrial estates), the most ambitious is the Pulau Muara Besar artificial island. Located near the country's main port, the 955 ha artificial island is designed to be a prosperous site for chemical and petrochemical manufacturing, and for marine related industry and services (e.g. ship maintenance, repair and overhaul or marine supplies). This new island is expected to be a thriving hub for these industries, therefore supporting the country's objective of economic diversification.

B. Land or Building for the Major Industrial Parks or Zones[5]

All industrial estates in Brunei are managed by DARE. Foreign ownership of these lands is allowed up to 100%, therefore, foreign investors should apply directly on DARE's homepage (www.dare.gov.bn/en/Space-Apply.html).

Application Process for Industrial Land with DARE

1) Application Submission	2) Screening	3) Assessment and Allocation	4) Approval
2 – 4 weeks (upon complete submission)			2 – 4 weeks (if no queries raised)
• *Check completeness of application* • *Conduct company background check*	• *Assessment based on market viability, financial capabilities, economic benefits, etc.* • *Visit applicant's current operations* • *Recommendation by assessment team*		

II. Potential Infrastructure Shortfall[6]

Overall, Brunei has moderately established infrastructure. In the World Economic Forum's 2018 Global Competitiveness Report, Brunei ranked 54th out of 140 countries, and third among Southeast Asian countries (after Singapore and Malaysia). The country has therefore relatively established infrastructure compared to its neighbouring countries. However, on some criteria, Brunei had low scores, indicating the existence of some persisting issues, especially with regard to transport infrastructure:

- Liner shipping connectivity is poor (ranked 102nd) and seaport services are not efficient (67th);
- Airport connectivity is low (ranked 91st), and air transport services have a poor efficiency (66th); and
- Train services efficiency is average (56th), and railroad density information is not available.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending[7,8,9,10,11,12]

In order to become an attractive investment destination, and boost the country's economy, the Brunei government is committed to upgrading the existing infrastructure and developing new ones. The government does not have a clear infrastructure development plan, however it is leveraging its renewed relationship with Mainland China to carry out new projects. In an effort to diversify its economy, and as a part of the Belt and Road initiative, Brunei welcomes more investments from Mainland China. A few undergoing projects in Brunei have already been involving Mainland Chinese companies:

- Port: a joint venture company formed by Mainland China's Guangxi Beibu Gulf Port Group and Brunei's Darussalam Asset is now operating Brunei's main container terminal. The new operator declared that it is committed to improving operational efficiency and reducing logistics costs.
- Road: a USD 168 million new highway opened in 2016. The Telisai-Lumut Highway, co-developed by Brunei's Surati Construction Sdn Bhd in partnership with China Communication Construction Company, facilitates travel between the country's capital and the Belait Districti, as well as reduces overall congestion.
- Industry: a USD 15 billion joint venture that plans to create and manage a refinery and petrochemical plant in order to boost Brunei's exports.
- Others: the Temburong Bridge, which is now the longest bridge in Southeast Asia, started operation in 2019. The Ulu Tutong Dam, an USD 85 million dam which can supply water to 250,000 people started operation in 2017. Both projects were jointly developed by Brunei and Mainland China companies.

In addition to these projects, the country modernised its main airport in 2014. The BND 130 million (USD 96 million) project carried out by the Brunei Economic Development Board (BEDB), improved the existing environment, appearance and quality of services in the airport (e.g. upgraded arrival and departure hall, and check-in counters). As a result, Brunei international airport was ranked among the top 25 best airports in Asia in 2018.

IV. Availability of Natural Resources[13,14,15,16,17,18,19,20]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• Brunei's vegetation is described as tropical evergreen rainforest; • Forest covers 81% of the total land area of the country; and • Brunei's primary forest is composed of: dipterocarp, peat swamp, montane and mangroves.
Agriculture	• Agriculture makes up only 1% of Brunei's GDP; • The primary agricultural products include: rice, vegetables, fruits; and • In 2018, the government pledged to open up more farmland in order to support the industry development.
Fishing/ Aquaculture	• Fisheries industry in Brunei was estimated at USD 112 million in 2017; • The main activities composing the industry are: fishing (65%), seafood processing (20%), and aquaculture (15%); and • In the future, Brunei is planning to increase production through advanced aquaculture methods and by encouraging the participation of foreign investors.
Livestock	• Livestock industry was estimated at USD 200 million in 2017; • Livestock is the main contributor (in terms of value) to the agriculture industry; and • Main livestock in Brunei include cattle, buffalo, hogs, goats, and fowl.
Water Resources	• Surface water supply mainly comes from the three river basins of Brunei: Daerah Tutong, Kuala Belait and Temburong. The Brunei River's upper reaches are a major source of freshwater; • Imported water from Johor River supplies 60% of the country's needs; and • Water supply is under pressure as water demand is increasing (due to industry and economic development) and so are concerns over water quality.
Minerals	• Mineral industry in Brunei is limited; and • Main products mined in the country are: carbonate rocks, coal, sand, gravel and silica sands.
Coal, Oil and Fossil Fuels	• Oil and gas industry dominates Brunei's economy and energy production; • Brunei's oil fields produce around 127,000 barrels of oil per day, and gas fields produce 243,000 barrels of oil equivalent of natural gas per day; and • Resources are expected to be running out within 20 years.
Renewable Energy	• By 2035, Brunei aims to have 10% of its total power generation produced by renewable energy (up from 0.05% in 2018); and • Currently, solar energy is the most well-developed renewable energy in the country.

Source:

[1] Industrial Land in Brunei, Darussalam Enterprise

[2] Brunei Darussalam Investment Opportunities 2019, Brunei Economic Development Board

[3] New strategies in Brunei Darussalam's industrial sector to expand opportunities, Oxford Business Group

[4] Brunei FDI, Santander

[5] How to apply, Darussalam Enterprise

[6] 2019 Competitiveness Report, World Economic Forum

[7] Brunei, China pledge to ramp up infrastructure development, The Scoop, 2018

[8] Brunei Airport commences operation of new baggage handling systems, Airport Technology 2014

[9] China-Brunei joint venture starts operating Brunei's container terminal, Xinhuanet, 2017

[10] $168 Million Telisai-Lumut Highway to Be Opened to Public Today, Brudirect, 2016

[11] Ulu Tutong Golden Jubilee Dam to supply water for 250K people, The Scoop, 2018

[12] Cross-sea Temburong bridge to help develop tourism in Brunei, Xinhuanet, 2019

[13] Brunei UN Convention on Biological Diversity, CBD

[14] Agriculture expertise in Brunei, Comonwealth Network

[15] Country's Fisheries Industry Records Increase In 2017, Brudirect, 2019

[16] The Output in Livestock Industry Increases, Rtb News, 2018

[17] Plans to prevent the degradation of water quality in Brunei, The Borgen Project,

[18] Find Mining expertise in Brunei, Commonwealth Network

[19] Brunei Energy, Export.gov

[20] Brunei's shift towards renewables, The ASEAN Post, 2018

8. Types of Industries Encouraged by the Local Government

Executive Summary

In order to transform Brunei from an oil and gas dependent country into a diversified economy, the government grants investment incentives in various industries.

The Investment Incentives Order 2001 is the main legislation in Brunei supporting the government's ambition to diversify the economy. The Order defined various statuses (e.g pioneer industries, pioneer products) which enable companies to be eligible for different incentives.

Additionally, Brunei welcomes foreign investments as in most industries, 100% foreign ownership is allowed.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1]

Brunei's economy is highly dependent on the oil and gas industry. In fact, in 2018, the sector represented around two third of the country's gross domestic production (GDP). This dependence exposes Brunei's economy to some industry-specific risks such as global oil price fluctuation. In addition, since the petroleum and nature gas resources are expected to be running out, the country needs to diversify its economy. Therefore, to enhance economic stability and sustainability, the Brunei government has launched a series of incentive programmes to encourage the development of other industries.

The Investment Incentives Order, 2001

The Investment Incentives Order, 2001 (the Order), is the major legislation in Brunei that promotes the country's industrial development and supports companies engaging in the manufacturing of multiple products. The Order offers various investment incentives (usually in the form of tax exemptions) under different statuses. Some of the main statuses are described below.

Pioneer Industries and Pioneer Products

In the Order, the Brunei government, especially the Ministry of Primary Resources and Tourism, identified more than 25 industries as Pioneer Industries. Any company engaged in one of these Pioneer Industries or manufacturing the Pioneer Products is eligible for financial incentives (please refer to section 9 of this report for additional details). Below are some of the main Pioneer Industries and Pioneer Products (non-exhaustive).

Pioneer Industries	Pioneer Products
Industrial Products and Materials	• Construction elements, such as cement or wooden materials; • Industrial chemicals used as raw materials for different industries; • Non-metallic mineral products; • Paper and paperboard products; and • Other industrial materials and products.
Communications Machinery and Equipment	• Central office switching equipment; • Cordless telephones; • Data communications equipment; • Sound reproducing and recording equipment; • Radar equipment; and • Other communications-related products.

Pioneer Industries	Pioneer Products
Electronics	• Electrical industrial machines, such as generators, electrical motors and transformers.
Consumer Products	• Electronic appliance; • Household products; • Clothing and apparel; • Canned, Bottled and Packaged food sold to commercial companies and individuals; • Other consumer products.

For the full list of Pioneer Industries, please refer to the Ministry official homepage (www.mprt.gov.bn/SitePages/Pioneer%20Industries.aspx).

Pioneer Service Companies

In addition, enterprises can also be eligible for incentives if they are classified as Pioneer Service Companies. To obtain this status, companies need to engage in one of the following activities (non-exhaustive):

- Engineering or technical services;
- Computer-based services;
- Production of industrial design;
- Warehousing-related services; or
- Services related to agricultural technology.

For the full list of Pioneer Industries, please refer to the Ministry official homepage (www.mprt.gov.bn/SitePages/Pioneer%20Service%20Companies.aspx).

Others

In addition to the Pioneer Industries, Pioneer Products and Pioneer Service Companies, the Order defines multiple other statuses that can be granted to various companies. This status will generally enable an enterprise to obtain financial incentives (e.g. tax reliefs). Some of these statuses are (non-exhaustive):

- Post Pioneer Companies;
- Expansion of Established Companies;
- Investment allowances;
- Warehousing and Servicing Incentives; or
- Investment in New Technology Companies.

Investment Priority Clusters[2,3]

In addition to the various statuses mentioned, the Brunei government also defined a list of five priority clusters which should help the country's economy move towards the development of more value-added activities. The Ministry of Finance and Economy (MOFE) is in charge of facilitating pre-investment and post approved FDI in these sectors, and also coordinates with relevant stakeholder to ensure success of the investor's projects. Overall, the MOFE is responsible for attracting FDI in Brunei, supporting projects and facilitating exports in the following five industries:

Technology and Creative Industry

(e.g. internet of things, digital media)

Downstream Oil and Gas

(e.g. petrochemicals)

Food

(e.g. agriculture, food processing and manufacturing)

Tourism

(e.g. eco-tourism, medical tourism)

Business Services

(e.g. financial services, transportation and logistics)

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[4]

In order to diversify its economy, Brunei needs to attract FDI in multiple industries. The country therefore welcomes foreign investors and provides them with financial and non-financial investment incentives such as the allowed 100% foreign-ownership, or the possibility to repatriate financial assets out of Brunei without restrictions. However, some industries in the country are labelled as restricted (these are sectors where the government usually plays an important role or has a dominant position). In Brunei, restricted indicates that foreign-ownership can be limited in these sectors, i.e. only a minority investment from a foreign company is allowed. Nevertheless, in some cases, even if the industry is restricted, a majority foreign ownership (i.e. more than 50%) is still permitted.

Main Restricted Industries in Brunei

Tele-communications

Energy and Utilities

Manufacture of liquor

Petrol Stations

Banking

Retail Businesses

Postal Services

Mass Media

Source:

[1] *The Investment Incentives Order, 2001, Ministry of Primary Resources and Tourism*

[2] *Brunei Darussalam Investment Opportunities 2019, Brunei Development Economic Board*

[3] *FDI Action and Support Centre (FAST), ASEAN*

[4] *Trade and Investment Regimes Brunei, World Trade Organization*

9. Key Government Incentives

Executive Summary

Brunei's investment incentives are mainly specified under the Investment Incentives Order, 2001. For example, companies that operate in Pioneer Industries (defined by the Ministry of Industry and Primary Resources) benefit from various tax exemptions based on their fixed capital investments and location.

As part of its long-term strategy, the Brunei government established several free trade zones (FTZs) to attract local and foreign investments. Companies operating in theses zones can benefit from various investment incentives, including tax exemptions or subsidised warehousing.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments[1,2]

The Investment Incentives Order, 2001

In Brunei, investment incentives are mainly provided under the Investment Incentives Order, 2001 (the Order). Companies that fulfil the relevant requirements will be granted one of the statuses described in section 8 of this report and therefore benefit from various tax exemptions.

Pioneer Industries and Pioneer Products

To be eligible for incentives the company must meet the following requirements:

- The minister believes that the company will have a positive impact on the economy and society;
- There is a mismatch between industry's current scale and Brunei's economic needs; and
- The industry or company has a favourable development prospect.

Companies which meet the requirements and are engaged in Pioneer Industries or manufacture Pioneer Products, can benefit from the following incentives:

- Income tax exemption;
- Elimination of duties taxes on imported machinery, equipment, accessories or raw materials; and
- Losses and allowances can be carried forward.

The tax relief period awarded to companies will depend on their capital expenditure or their location:

Fixed Capital Expenditure	Tax Exemption Period	Extension
Between BND 500,000 and BND 2.5 million	5 years	3 years for each extension, not exceeding 11 years in total
From BND 2.5 million and over	8 years	

Location	Tax Exemption Period	Extension
Company located in an Hi-Tech Park	11 years	5 years for each extension, not exceeding 20 years in total

Pioneer Service Companies

If the Minister considers that it is of public interest to grant the company this status, and if the enterprise is engaged in the activities described in section 8, then it will be eligible for the following investment incentives:

- Income tax exemption; and
- Carry forward of losses and allowances allowed.

The tax relief period varies according to the activities that the company is engaged in:

Qualifying Activity	Tax Exemption Period	Extension
Financial services	5 years	Not exceeding 10 years in total
Other qualifying activities	8 years	Not exceeding 11 years in total

Others

- Post pioneer companies: companies which were awarded the status of pioneer enterprise previously can benefit from an additional income tax relief for a period up to 11 years. They are also allowed to deduct their losses and adjust their capital allowances;
- Expansion of established enterprises: companies incurring new capital expenditures in order to expand their production capacity are eligible for income tax exemption for a period of 15 years;
- Investment allowances: companies incurring new capital expenditures in order to expand their production capacity can receive investment allowances of up to 100% of their total expenditure. The government will provide support for a maximum period of five years;
- Warehousing and servicing incentives: companies incurring capital expenditure of BND 2 million or more, to establish or improve warehousing facilities, can be eligible for income tax exemption for a maximum period of 20 years; or
- Investment in new technology companies: companies using technologies that can promote the development of Brunei's hi-tech industry are eligible for investment incentives. Generally, companies will be allowed to deducted their losses from their taxable income.

For additional information on investment incentives in Brunei, please visit the Ministry homepage (www.mprt.gov.bn/SitePages/Investing%20in%20Brunei%20Darussalam.aspx).

II. Other Government Support Funding Schemes, Including Both Local and Foreign Investments[3]

Other than the incentives granted under the Investment Incentives Order, 2001, the Brunei government also provides support to foreign investors via two organisations: the FDI Action and Support Centre (FAST) and the Brunei Economic Development Board (BEDB).

The FDI Action and Support Centre (FAST)

The FAST helps foreign investors at every stage of their investment cycle. The centre can support investment planning by advising on required documentation (i.e. help prepare relevant documents for the application). FAST is also responsible for monitoring the evolution of FDI projects and looking for cooperation opportunities between foreign and local companies. Last, FAST also offers export facilitation by supporting companies wishing to obtain export licences.

Brunei Economic Development Board (BEDB)

Please refer to section 5 of this report for a description of BEDB's missions.

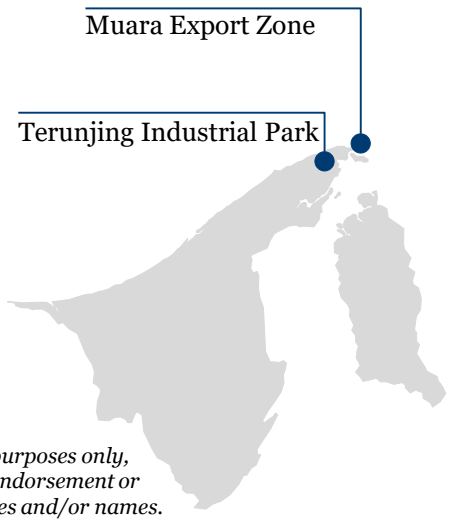
III. Scope of Special Economic Zone Scheme and Geographical Location[4,5]

As part of its strategic plan to diversify Brunei's economy away from oil and gas industry, the government established several free trade zones (FTZs) to attract local and foreign investments. The FTZ location usually matches with one of the established industrial parks. Companies in the zones can enjoy convenient transportation and logistics infrastructure, and more importantly they can benefit from various financial and non-financial incentives.

Location of Two of Brunei's Main FTZs and Available Incentives

Two of the main FTZs in Brunei are the Terunjing Industrial Park and the Muara Export Zone. Companies operating within one of these parks/zones can benefit from:

- Corporate tax exemption for a period up to 15 years;
- 100% import duties exemption;
- Consumption tax only charged on the products sold to the local market; and
- Withholding Tax only charged on foreign loan interest.
- Subsidised warehousing.



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Source:

[1] *Investing in Brunei Darussalam, Ministry of Primary Resources and Tourism*

[2] *Investment Incentives Order, 2001, The Ministry of Primary Resources and Tourism*

[3] *FDI action and support centre (fast), ASEAN*

[4] *Brunei: Market Profile, Hong Kong Trade Development Council Research, 2019*

[5] *Industrial Sites in Brunei, Darussalam Enterprise*

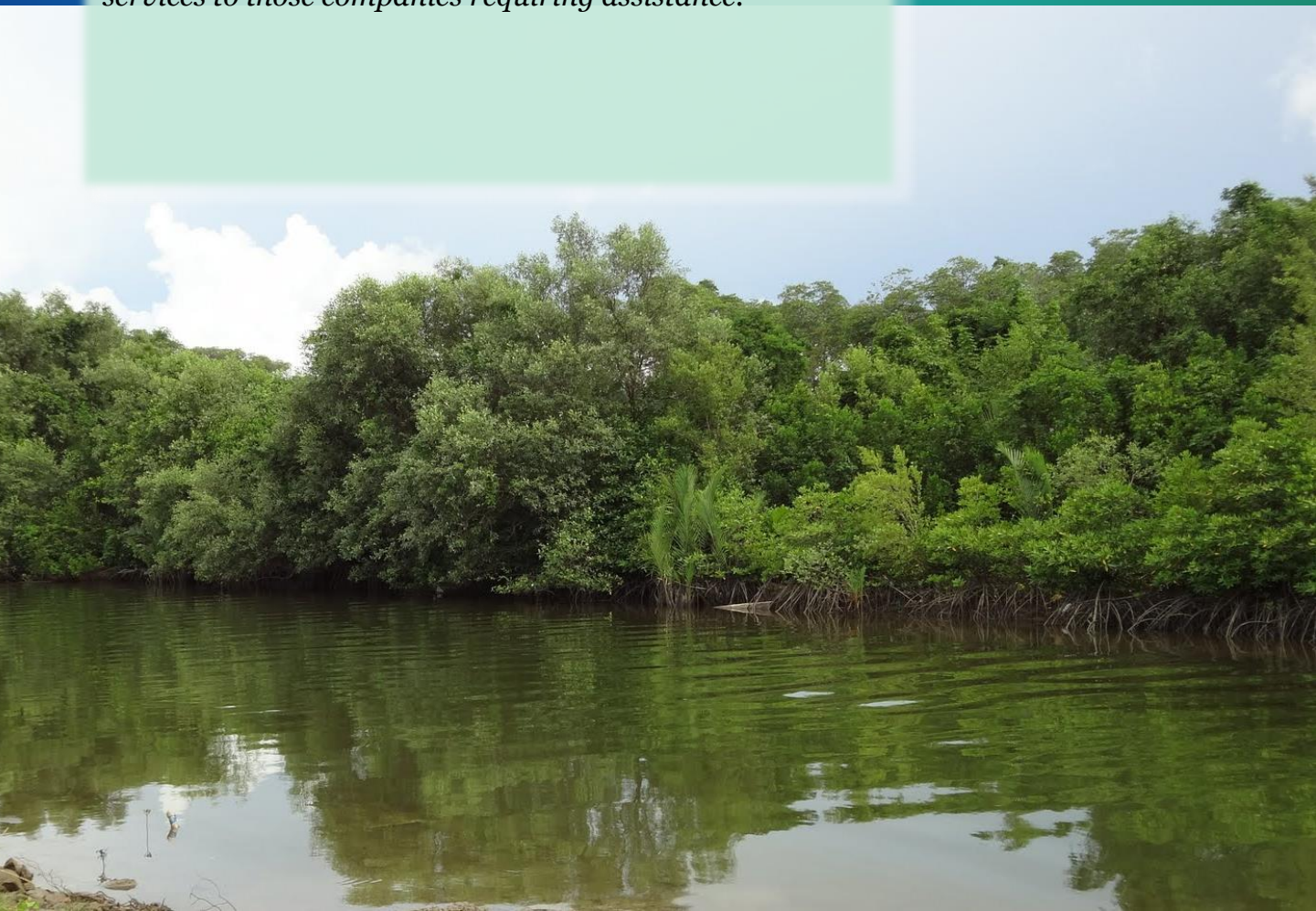
10. Environmental Requirements

Executive Summary

In Brunei, the Department of Environment, Parks and Recreation is the primary regulatory body responsible for administration of environmental policy and standards, as well as the management of environmental issues. Environmental Protection and Management Order (2016) is the fundamental law regarding environmental management in Brunei. Any foreign businesses wishing to invest or do business in Brunei must abide by the Law.

Factories in Brunei may encounter environmental hurdles or problems, such as historical pollution and license requirements.

There are environmental organisations and agencies in Brunei that can provide relevant environmental supporting services to those companies requiring assistance.



10. Environmental Requirements

I. Environmental Laws and Regulations in Brunei[1,2]

The Department of Environment, Parks and Recreation (DEPR) of Brunei is committed to handling matters pertaining to waste management, environmental conservation and management, landscape and recreational areas management, as well as environmental cooperation at national, bilateral and international level.

The Environmental Protection and Management Order (EPMO) issued in 2016 is the main environmental law in Brunei. The EPMO defines administration, powers, offences and penalties regarding to the environmental management, monitoring, protection, control and rehabilitation.

A. The Main Environmental Protection Administrations in Brunei

Department of Environment, Parks and Recreation (DEPR)[1]

The DEPR is the primary regulatory body responsible for environmental permit approval, environmental cooperation, environmental guidelines, maintenance, etc. The mission of the DEPR is to protect and conserve the environment.

The DEPR is under the Ministry of Development. The four operating divisions of the DEPR are the Environmental Planning and Management Division, Pollution Control Division, Landscape Division and Park and Recreation Division.

The DEPR has three local branches in Belait, Tutong and Temburong. These branches are responsible for monitoring and managing the local environment.

B. The Main Environmental Legislation in Brunei

Environmental Protection and Management Order (EPMO)[2]

The EPMO is the main environmental legislation, and was issued in 2016. The EPMO is for the protection and management of the environment and other related purposes.

The EPMO defines the powers of the DEPR, including environmental protection, inspecting environmental pollution, issuing remedial order or stop-work orders, remediating the land, and investigating environmental incidents. According to the EPMO, the DEPR has the authority to impose requirements for environmental impact assessments, pollution control, as well as prescribing the types of equipment for air pollution control and other related activities.

Penalties

According to the EPMO, any person who obstructs the DEPR in their duties is guilty of an offence and liable for a fine not exceeding BND 20,000, imprisonment for a term not exceeding three months, or both. In the case of a subsequent conviction, offenders are liable for a fine not exceeding BND 50,000, imprisonment for a term not exceeding six months, or both.

Any person carrying out any prescribed activities in key industry areas found guilty of an offence is liable to a fine not exceeding BND 1 million, imprisonment for a term not exceeding three years, or both.

Any person who is found guilty of an offence against the EPMO, for which no penalty is expressly provided, is liable to:

- On the first conviction, to a fine not exceeding BND 20,000 and, in the case of a continuing offence, to a further fine not exceeding BND 1,000 for every day or part thereof during which the offence continues after conviction; and
- On the second or subsequent conviction, to a fine not exceeding BND 50,000 and, in the case of a continuing offence, to a further fine not exceeding BND 2,000 for every day or part thereof during which the offence continues after conviction.

Hazardous Waste (Control of Export, Import and Transit) Order[3]

Hazardous Waste (Control of Export, Import and Transit) Order has been in effect since 2013. The Order regulates transboundary movement of hazardous wastes or other wastes.

The Order defines categories of wastes to be controlled, categories of wastes requiring special consideration, list of hazardous characteristics, disposal operations, and information to be provided for notification of transboundary movement of hazardous wastes or other wastes.

Environmental Impact Assessment (EIA) Guidelines[4]

The Environmental Impact Assessment Guidelines for Brunei Darussalam serve as guidelines for project proponents to survey, predict and assess environmental impacts, and study possible environmental protection measures relating to prescribed activities in the following areas: agriculture, airport, drainage and construction, land reclamation, fisheries, forestry, housing, industrial, infrastructure, ports, mining, petroleum, power generation and transmission, quarries, railways, transportation, resort and recreational development, waste treatment and disposal, and water supply.

Pollution Control Guidelines[5]

The Pollution Control Guidelines for the industrial development in Brunei Darussalam are adopted for the control of emissions, effluents and discharge from various development and construction activities. The purpose of the guidelines is to serve as quick reference on pollution control requirements of the Department of Environment, Parks and Recreation for industrial development projects being proposed or submitted through the industry/land development authority. The requirements of guidelines are based on the proposed EPMO for Brunei and complement other pollution control related requirements that may be set by the industry, land and/or building development control authorities.

Other Environmental Laws and Regulations (air, water, wastes, etc.)

Government agencies of Brunei have issued laws which are adopted by the DEPR, such as the Municipal Board Act, Water Supply Act, etc. Consumption of water, disposal of sanitary wastes, etc. are regulated by the relevant laws, regulations, and standards. Any violation of such laws and regulations could be punished.

A detailed list of environmental laws and regulations in Brunei can be found in Appendix 2.

C. Main Environmental Related Joint Announcements and Statements Which HK and Mainland China Have Issued with Brunei

In 2018, a joint statement between the People's Republic of China and Brunei Darussalam was issued to further strengthen Mainland China and Brunei's comprehensive strategic partnership. The statement states that Mainland China will further support the sustainable development of Brunei's economy.

In addition, there are also a series of statements and plans to further enhance the environmental cooperation between Mainland China and the ASEAN that will affect Brunei.

Main Environmental-related Joint Announcements and Statements[6,7,8]

Statements	Impact	Clause
Joint Statement Between the People's Republic of China and Brunei Darussalam	China will further support the sustainable development of Brunei Darussalam's economy and its diversification endeavours. A Joint Steering Committee will be established to place a mechanism for regular consultations at the Ministerial level to further promote cooperation and exchanges in various fields including maritime, economic, commercial and technical areas, bilateral trade and investment and energy between both sides.	Clauses 8 & 9
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Brunei[2]

As per stipulated in the EPMO, it shall be the duty of every person, who intends to carry out the prescribed activities to submit a Written Notification to the DEPR before undertaking such activity. The Written Notification shall be accompanied with the details such as Environmental Impact Assessment (EIA) and an Environmental Management and Monitoring Plan (EMMP), together with a completed Notification Matrix which can be downloaded from the DEPR's official website.

Environmental Impact Assessment (EIA)

According to the EPMO, EIA means the process of surveying, predicting and assessing environmental impact; studying the possible environmental protection measures relating to the prescribed activity; and assessing the likely overall environmental impact of such measures.

The EIA Guidelines stipulate the contents required in an EIA report, including the project description, environmental assessment for the current environment, and the impacts and mitigation measures for air, water, and noise pollution, hazardous substance control, as well as socio-economic impacts.

For the list of prescribed activities in key industry areas, please refer to Appendix 3.

II. Environmental Situations in Brunei

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period	Operation Period
Historical Pollution Issues	**Permit Requirements**	**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	EIA	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as below:

- Supporting agency selection: There are no licence requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify significant potential environmental risks in a report.

Pre-construction Period: Environmental Impact Assessment (EIA)[2]

The local environmental laws have stipulated that every person who intends to carry out the prescribed activities is required to conduct an EIA.

Resolutions

EIA

In Brunei, there is no official requirement on the qualifications of EIA preparer.

EIA Processes:

- Supporting agency selection: Hiring an environmental consulting company to prepare EIA report or conduct it by the project owners themselves;
- Report: The body of EIA report should include project title, project stakeholders, project statement, project description, project alternatives, environmental assessment for existing environment, impacts and mitigation measures, environmental management and monitoring plan and conclusion;
- Submission and approval: Submitting the EIA report to the EIA division of DEPR for review and approval, and the time frame depends on the complexity of each project.

EIA Case

Department of Agriculture and Agrifood in Brunei hired HYDECBRU Construction to carry out an environmental impact assessment study for a rice cultivation project. According to the study, it was viewed that the impacts were manageable and might not pose serious threat if proper mitigation measures were in place. The findings disclosed that the proposed project areas could be used for commercial cultivation with no serious consequences from the environmental perspective. The project was considered feasible.

For the list of organisations/agencies providing EIA services and other related services in Brunei, please refer to Section 10.III.B.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The DEPR is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous wastes;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For the list of organisations/agencies providing waste disposal services and other related services in Brunei, please refer to Section 10.III.B.

B. Study on Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Brunei

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standard between Brunei and Mainland China

To facilitate factory operations and government management, The Brunei government has established specialised “industrial parks” *(Note 1)* to facilitate businesses’ factory operations and government management. “Industrial parks” are industrial land areas well equipped with established infrastructure, such as sewage treatment systems to treat effluent discharge from factories. If factories discharge effluent directly into the environment, approval must be obtained from the local environmental regulatory authority, and the Recommended Effluent Standards for Direct Discharge to the Environment must be followed.

The government of Mainland China also advises enterprises to build and operate factories in industrial parks in Brunei *(Note 2)*. Unlike in Brunei where factories tend to be operated in industrial parks, factories in Mainland China will build their own sewage treatment stations for sewage treatment. When specified discharge standards are met, factories are allowed to discharge directly into the environment.

Therefore, the comparison values for Brunei refer to the limits on effluent discharged into sewers attached to sewage treatment systems. Except for the electronic and textile industry comparisons, the values for Mainland China in brackets refer to the limits on effluent discharged into water supply resources and fishery water areas, while the values outside the brackets refer to the limit of effluent discharged into non-water supply resources. For the electronic and textile industry comparisons, the values for Mainland China are the limits on effluent discharged into the environment directly.

Notes:

1. Country Report of Brunei (open_jicareport.jica.go.jp/pdf/1000023399.pdf)

2. Development of Brunei Industrial Zone Published by Mainland China Government (bn.mofcom.gov.cn/article/ztdy/200606/20060602521073.shtml)

Please refer to the below legend for the symbols used in the comparison tables within this section.

"↓" indicates the requirement of Mainland China is stricter than Brunei.

"↑" indicates the requirement of Brunei is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Brunei.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

Electronics (Part 1/6)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	pH		6.0-9.0	6.0-9.0	=
		Suspended solids		1000	50	↓
		Total dissolved solids		3000	-	N/A
		COD		4000	80	↓
		BOD_5		2000	-	N/A
		Mercury		0.1	-	N/A
		NH_3-N	Special electronic materials	50	10/20[c]	↓/↓[c]
			Electrical units		5	↓
			Printed circuit boards		20	↓
			Semiconductor devices		10	↓
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓

Electronics (Part 2/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorous	Special electronic materials	10	0.5/1.0[c]	↓/↓[c]
			Electrical units		0.5	↓
			Printed circuit boards		1.0	↓
			Semiconductor devices		1.0	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		0.5	↓
		Sulphate		1000	-	N/A
		Sulphide	Special electronic materials	5.0	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	↓
			Semiconductor devices		1.0	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	5.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	10	1.5	↓
			Electrical units		-	N/A

Electronics (Part 3/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Zinc	Printed circuit boards	10	-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron component		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	1.0	0.2	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		2.0	-	N/A
		Arsenic	Special electronic materials	1.0	0.3	↓
			Electrical units		0.3	↓

Electronics (Part 4/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Arsenic	Printed circuit boards	1.0	-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Lead	Special electronic materials	5.0	0.2	↓
			Electrical units		0.1	↓
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	5.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	2.0	0.2	↓
			Electrical units		0.2	↓
			Printed circuit boards		0.2	↓
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Silver	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A

Electronics (Part 5/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Silver	Printed circuit boards	-	0.3	N/A
			Semiconductor devices		0.3	N/A
			Display device and photoelectron components		0.3	N/A
			Electron terminals products		-	N/A
		Manganese		10	-	N/A
		Fluoride	Special electronic materials	10	10	=
			Electrical units		10	=
			Printed circuit boards		10	=
			Semiconductor devices		10	=
			Display device and photoelectron components		10	=
			Electron terminals products		-	N/A
		Oil and grease		50	-	N/A
		Petroleum		-	3.0	N/A
		Hydrocarbons		20	-	N/A
		Selenium		2.0	-	N/A
		Boron		5.0	-	N/A
		Iron		20	-	N/A
		Barium		10	-	N/A
		Tin		10	-	N/A
		Aluminium		2.0	-	N/A
		Phenols		20	-	N/A
		Anionic surfactant (LAS)		-	3.0	N/A
		Synthetic detergents		20	-	N/A
		Chlorine (free)		0.5	-	N/A
		Chloride		1000	-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)		Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Electronics (Part 6/6)

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*
b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[9], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*
c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Garment & Clothing (Part 1/2)

Water pollutants and air pollutants are the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, temperature and colour)	pH	6.0-9.0	6.0-9.0	=
		Suspended solids	1000	100	↓
		Total dissolved solids	3000	-	N/A
		COD	4000	200	↓
		BOD_5	2000	50	↓
		Colour	Not objectionable	80	N/A
		Temperature[c]	45	-	N/A
		NH_3-N	50	20	↓
		Total nitrogen	-	30	N/A
		Total phosphorus	10	1.5	↓
		Chlorine dioxide	-	0.5	N/A
		Chloride	1000	-	N/A
		Chlorine (free)	0.5	-	N/A
		AOX	-	12	N/A
		Sulphide	5.0	0.5	↓
		Sulphate	1000	-	N/A
		Aniline	-	Not detectable	N/A
		Hexavalent chromium	1.0	Not detectable	↓
		Trivalent chromium	2.0	-	N/A
		Phenols	20	-	N/A
		Oil and grease	50	-	N/A
		Hydrocarbons	20	-	N/A
		Cyanide	2.0	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A

Garment & Clothing (Part 2/2)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
Garment & Clothing	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)	Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*

b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[11], Integrated Emission Standard of Air Pollutants[12], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*

c. *The unit of temperature is ℃.*

Watches & Jewellery

Water pollutants from washing process and air pollutants from polishing process are the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH)	pH	6.0-9.0	6.0-9.0 (6.0-9.0)	=(=)
		Suspended solids	1000	150 (70)	↓ (↓)
		Total dissolved solids	3000	-	N/A
		COD	4000	150 (100)	↓ (↓)
		BOD_5	2000	30 (20)	↓ (↓)
		NH_3-N	50	25 (15)	↓ (↓)
		Cyanide	2.0	0.5 (0.5)	↓ (↓)
		Total chromium	-	1.5	N/A
		Hexavalent chromium	1.0	0.5	↓
		Trivalent chromium	2.0	-	N/A
		Petroleum	-	10 (5)	N/A
		Oil and grease	50	15 (10)	↓ (↓)
		Hydrocarbons	20	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)	Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[13], Integrated Emission Standard of Air Pollutants[12], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*

Toys & Games

Water pollutants from washing process, air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH)	pH	6.0-9.0	6.0-9.0 (6.0-9.0)	=(=)
		Suspended solids	1000	150 (70)	↓ (↓)
		Total dissolved solids	3000	-	N/A
		COD	4000	150 (100)	↓ (↓)
		BOD_5	2000	30 (20)	↓ (↓)
		NH_3-N	50	25 (15)	↓ (↓)
		Sulphide	5.0	1.0 (1.0)	↓ (↓)
		Sulphate	1000	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
		Phenols	20	1.0	↓
		Petroleum	-	10 (5)	N/A
		Oil and grease	50	15 (10)	↓ (↓)
		Cyanide	2.0	0.5 (0.5)	↓ (↓)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)	Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[13], Integrated Emission Standard of Air Pollutants[12], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*

Hi-tech (Part 1/5)

Water and air pollutants from chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	pH		6.0-9.0	6.0-9.0	=
		Suspended solids		1000	50	↓
		Total dissolved solids		3000	-	N/A
		COD		4000	80	↓
		BOD_5		2000	-	N/A
		Mercury		0.1	-	N/A
		NH_3-N	Special electronic materials	50	10/20[c]	↓/↓[c]
			Electrical units		5	↓
			Printed circuit boards		20	↓
			Semiconductor devices		10	↓
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorous	Special electronic materials	10	0.5/1.0[c]	↓/↓[c]
			Electrical units		0.5	↓
			Printed circuit boards		1.0	↓
			Semiconductor devices		1.0	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		0.5	↓
		Sulphate		1000	-	N/A
		Sulphide	Special electronic materials	5.0	-	N/A
			Electrical units		-	N/A

Hi-tech (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Sulphide	Printed circuit boards	5.0	1.0	↓
			Semiconductor devices		1.0	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	5.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	10	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron component		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A

Hi-tech (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Total chromium	Display device and photoelectron components	-	-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	1.0	0.2	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		2.0	-	N/A
		Arsenic	Special electronic materials	1.0	0.3	↓
			Electrical units		0.3	↓
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Lead	Special electronic materials	5.0	0.2	↓
			Electrical units		0.1	↓
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	5.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓

Hi-tech (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Brunei[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Nickel	Electron terminals products	5.0	-	N/A
		Cyanide	Special electronic materials	2.0	0.2	↓
			Electrical units		0.2	↓
			Printed circuit boards		0.2	↓
			Semiconductor devices		0.2	↓
			Display device and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
		Silver	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A
			Printed circuit boards		0.3	N/A
			Semiconductor devices		0.3	N/A
			Display device and photoelectron components		0.3	N/A
			Electron terminals products		-	N/A
		Manganese		10	-	N/A
		Fluoride	Special electronic materials	10	10	=
			Electrical units		10	=
			Printed circuit boards		10	=
			Semiconductor devices		10	=
			Display device and photoelectron components		10	=
			Electron terminals products		-	N/A
		Oil and grease		50	-	N/A
		Hydrocarbons		20	-	N/A
		Selenium		2.0	-	N/A
		Boron		5.0	-	N/A
		Iron		20	-	N/A
		Barium		10	-	N/A

Hi-tech (Part 5/5)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Tin	10	-	N/A
		Aluminium	2.0	-	N/A
		Phenols	20	-	N/A
		Anionic surfactant (LAS)	-	3.0	N/A
		Synthetic detergents	20	-	N/A
		Chlorine (free)	0.5	-	N/A
		Chloride	1000	-	N/A
	Air Pollutants mg/m^3	TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)	Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*
b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[9], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*
c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc. In Brunei, the relevant standards for pollutants are general effluent standards.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Brunei, the chemicals & plastics industry should be in compliance with the general effluent standards.

General Industries (Part 1/2)

General industries refer to those industries which do not produce massive or characteristic pollutants (such as the logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general effluent standards available in both countries.

The following table compares the general effluent/emission standards of Brunei and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	6.0-9.0	6.0-9.0 (6.0-9.0)	=(=)
		Suspended solids	1000	150 (70)	↓ (↓)
		Total dissolved solids	3000	-	N/A
		COD	4000	150 (100)	↓ (↓)
		BOD_5	2000	30 (20)	↓ (↓)
		NH_3-N	50	25 (15)	↓ (↓)
		Sulphide	5.0	1.0 (1.0)	↓/↓
		Sulphate	1000	-	N/A
		Copper	5.0	1.0 (0.5)	↓ (↓)
		Iron	20	-	N/A
		Chlorine (free)	0.5	-	N/A
		Petroleum	-	10 (5)	N/A
		Oil and grease	50	15 (10)	↓ (↓)
		Phenols	20	1.0	↓ (↓)
		Cyanide	2.0	0.5 (0.5)	↓ (↓)
		Total phosphorous	10	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A

General Industries (Part 2/2)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Brunei[a]	Mainland China[b]	
General Industries	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Maximum permitted boundary noise level for factory permits (reckoned as the equivalent continuous noise level over 5 minutes)	Day (7 am-7 pm) 75 Evening (7 pm-11 pm) 70 Night (11 pm-7 am) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Brunei Standards: Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants[5], Recommended Standards for Air Emissions[5], and Recommend Boundary Noise Levels[5].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[13], Integrated Emission Standard of Air Pollutants[12], and Emission Standard for Industrial Enterprises Noise at Boundary[10].*

III. The Main Local Supporting Organisations/Agencies in Brunei

Brunei has abundant forestry resources, and requirements for forestry protection and supervision are stricter when compared with other ASEAN countries. Penalties could be serious once the investor failed to comply with the environmental laws and regulations in Brunei.

To ensure environmental compliance and to maintain a good relationship with the public, the investors should pay attention to the environmental impact assessment, licence application and to meet the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environment-related supporting services.

A. EDD Services in Brunei

Agency/Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Impact Assessment; • Sustainability Policy, Strategy and Risk Management; • Supply Chain Environment and Health & Safety (EHS) Audits; and • Sustainability Report Assurance, etc.	+603 2173 0348 (in Malaysia)
ERM	• Environmental Due Diligence; • Independent 3rd Party Conformance Audits; • Lifecycle Assessment; and • ISO Certification, etc.	+603 2080 9600 (in Malaysia)
AGV Environment	• Environmental Due Diligence; • Environmental and Social Impact Assessment and Planning; and • Environmental Permitting Services, etc.	+603 7931 1455 (in Malaysia)

B. EIA Supporting and Environmental Monitoring Services in Brunei

Agency/Organisation	Service Coverage	Contact
Integrated Environmental Consultant	• Project Impact Assessment; • Environment Monitoring Plans; • Solid Waste and Sewerage Infrastructure; and • Site Rehabilitation Schemes, etc.	enquiries@iec-brunei.com
Chemsain Konsultant	• Environmental Impact Assessment; • Water Infrastructure; • On-site Testing and Sampling; and • Occupational Safety and Health Consultant, etc.	+673 265 6896
GEOCON	• Environmental Impact and Site Assessments; • Environmental Monitoring and Management Plan; • Vibration Monitoring and Assessment;	geoconbrunei.com/contact-us--career.html

C. Wastes Management Services in Brunei

Agency/Organisation	Service Coverage	Contact
M.K.Johan Contractor	• Waste Collection; • Logistic Support; and • Technical Resources, etc.	+673 334 7006
Mashor Waste Management	• Waste Disposal; • Specialised Transportation; • Ultra/High Pressure Cleaning Services; and • Cleaning of Oil Separator Components, etc.	+673 322 8155
CIC Environmental Services	• Waste Collection and Transportation; • Lab Services; • Tank Cleaning; and • Oil Recovery Plant, etc.	+673 333 0266
More information about Wastes Management Services in Brunei, please refer to the official webpage: (www.env.gov.bn/SitePages/Recycling%20Services.aspx), and (www.env.gov.bn/SitePages/Waste%20Collection%20Services.aspx).		

Source:

[1] *Department of Environment, Parks and Recreation (DEPR)*

[2] *Environmental Protection and Management Order, 2016*

[3] *Hazardous Waste (Control of Export, Import And Transit Order, 2013*

[4] *Environmental Impact Assessment Guidelines , DEPR, 2016*

[5] *Pollution Control Guidelines, DEPR, 2002*

[6] *Joint Statement Between the People's Republic of China and Brunei Darussalam, 2018*

[7] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[8] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[9] *Emission standard of pollutants for electrical industry, 2nd edition*

[10] *Emission standard for industrial enterprises noise at boundary, 2008*

[11] *Discharge standards of water pollutants for dyeing and finishing of textile industry, GB 4287-2012*

[12] *Integrated emission standard of air pollutants, GB 16297-1996*

[13] *Integrated wastewater discharge standard, GB 8978-1996*

[14] *Water Supply Act, 1984*

[15] *Municipal Board Act, 1984*

Appendix

Appendix 1

Land Rental Cost in Brunei's Major Industrial Parks (Part 1/2)

Location	Annual Rental Fee *(BND per sq.m.)*	Maintenance Fee *(BND per sq.m.)*	Total area
Telisai	7.0	0.52	2,808
Pulau Muara Besar	7.0	0.52	1,057
Sungai Lian (SPARK)	7.0	0.52	271
Bio-Innovation Corridor	7.0	0.52	194
Kuala Lurah	7.0	0.52	147
Salambigar	7.0	0.52	121
Terunjing	7.0	0.52	95
Sungai Bera	7.0	0.52	72
Serasa	7.0	0.52	66
Bukit Panggal	7.0	0.52	50
Lambak Kanan West	7.0	0.52	44
Beribi	7.0	0.52	42
Salar	7.0	0.52	40
Pekan Belait	7.0	0.52	33
Serambangun	7.0	0.52	30
Anggerek Desa Tech Park	7.0	0.52	16
Digital Junction	7.0	0.52	15
Batu Apoi	7.0	0.52	5

Appendix 1

Land Rental Cost in Brunei's Major Industrial Parks (Part 2/2)

Location	Annual Rental Fee *(BND per sq.m.)*	Maintenance Fee *(BND per sq.m.)*	Total area
Mumong	3.5	N/a	138
Tanjong Kajar	3.5	N/a	138
Sungai Duhon	3.5	N/a	107
Lumapas	3.5	N/a	66
Mulaut	3.5	N/a	37
Lambak	3.5	N/a	15
Bengkurong	3.5	N/a	14

Appendix 2

The Main Environmental Laws/Regulations in Brunei

Department of Environment, Parks and Recreation	Department of Water Services	Industrial Development Authority
Environmental Protection and Management Order, 2016	Water Supply Act, 1984	Municipal Board Act, 1984
Pollution Control Guidelines, 2002		
Hazardous Waste (Control of Export, Import And Transit Order, 2013)		

The Main Environmental Effluent Standards in Brunei

Effluent Standards	1	Recommended Standards for Industrial Effluent to Sewers that Discharge to Sewage Treatment Plants *(Note)*
	2	Recommended Effluent Standards for Direct Discharge to the Environment
	3	Recommended Standards for Air Emissions *(Note)*
	4	Recommend Boundary Noise Levels *(Note)*

Note: Corresponding effluent/emission standards are the main standards utilised in Section 10.II.C.

Appendix 3

List of Prescribed Activities in Key Industry Areas (Issued within EPMO (2016))

Industry	Activity	Detailed Criteria
Food & Beverage	Food preparation	Slaughtering
		Preparing and preserving meat
		Manufacturing of dairy products
		Canning and preserving of fruits and vegetables
		Canning, preserving and processing of fish, crustaceans and similar food
		Manufacture of vegetable and animals oils and fats
		Grain mill products
		Sugar factories and refineries
		Manufacture of prepared animal feeds
Chemicals & Plastics	Chemical works	-
	Petrochemicals	-

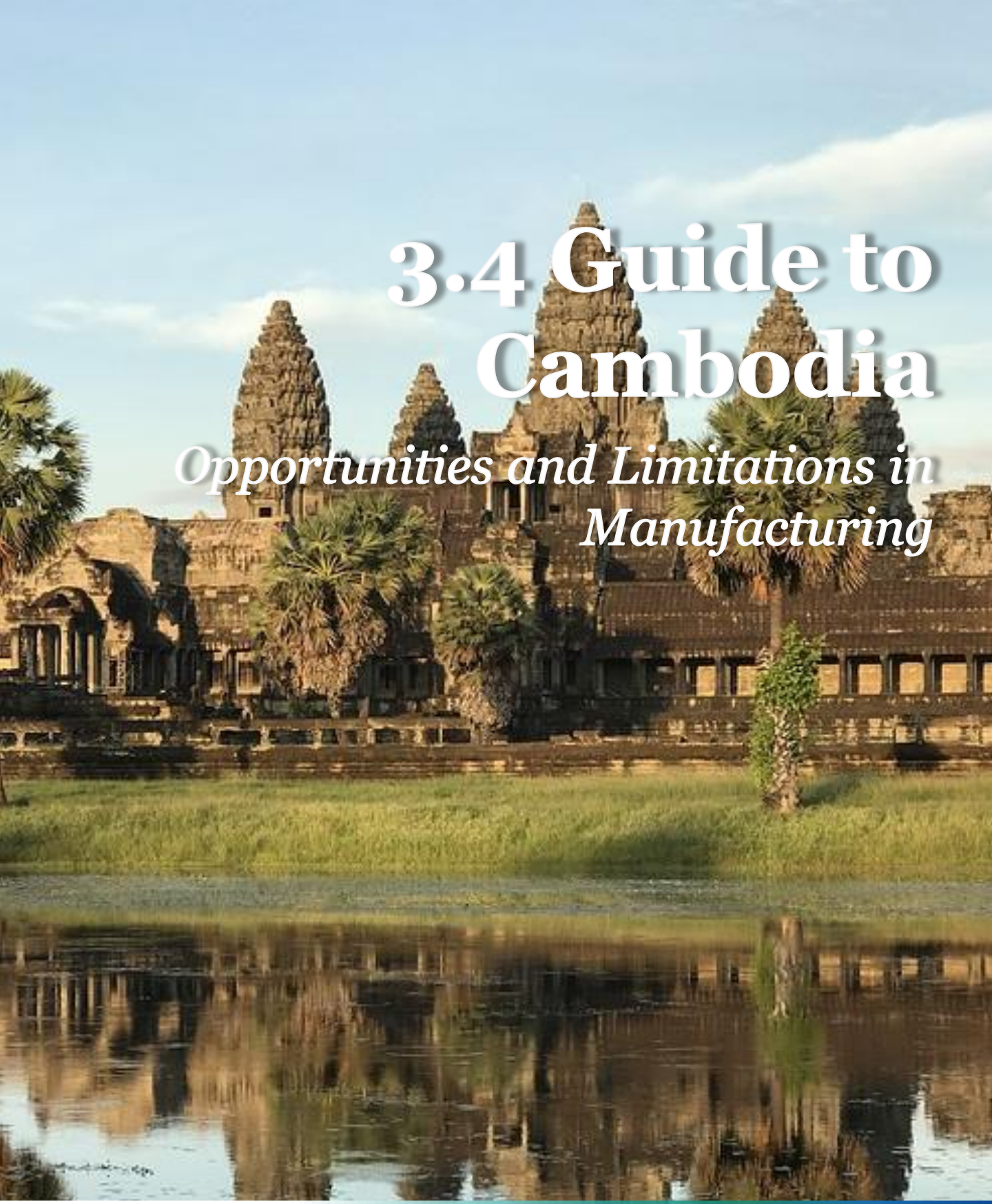
Glossary – Section 1 to 9 Operational Requirements

ADTP	Anggerek Desa Technology Park
AFTA	ASEAN Free Trade Agreement
AHTN	ASEAN Harmonised Tariff Nomenclature
AMBD	Autoriti Monetari Brunei Darussalam (Monetary Authority of Brunei)
ASEAN	Association of Southeast Asian Nations
ATP	Agro Technology Park
BDNSW	Brunei Darussalam National Single Window
BEDB	Brunei Economic Development Board
BHD	Public Limited Company
BND	Brunei Dollar
BRC	Brunei Research Council
BRI	Belt and Road Initiative
BruIPO	Brunei Darussalam Intellectual Property Office
BWN	Brunei International Airport
CBNI	Currency and Bearer Negotiable Instruments
CIT	Corporate Income Tax
CMC	Case Management Conference
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DARE	Darussalam Entreprise
DTA	Double Taxation Agreement
FAST	FDI Action and Support Centre
FDI	Foreign Direct Investment

FTA	Free Trade Agreement
FTZ	Free Trade Zone
GDP	Gross Domestic Product
GIPC	Global Innovation Policy Center
ICT	Information and Communications Technology
IFRS	International Financial Reporting Standards
IP	Intellectual Property
LMTP	Land Transport Master Plan
LPI	Logistics Performance Index
MOD	Ministry of Development
MOFE	Ministry of Finance and Economy
MPTC	Multi-Purpose Training Centre
PIE	Public Interest Entities
R&D	Research and Development
RCED	Royal Customs and Excise Department
S&T	Science and Technology
SCP	Supplemental Contributory Pensions
SDN BHD	Limited Liability Company
SGD	Singapore Dollar
STARS	The System for Tax Administration and Revenue Services
STI	Science, Technology and Innovation
TAP	Tabung Amanah Pekerja (Employees'Trust Fund)
TVET	Technical and Vocational Education and Training
UNN	Unified National Networks Sdn Bhd
WTO	World Trade Organization

Glossary – Section 10 Environmental Requirements

ASEAN	Association of Southeast Asian Nations
BOD_5	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DEPR	Department of Environment, Parks and Recreation
EDD	Environmental Due Diligence
EMMP	Environmental Management and Monitoring Plan
EMPO	Environmental Protection and Management Order
EIA	Environmental Impact Assessment
NMHC	Non-methane Hydrocarbon
TVOC	Total Volatile Organic Compounds



3.4 Guide to Cambodia

Opportunities and Limitations in Manufacturing

Contents

Published November 2019

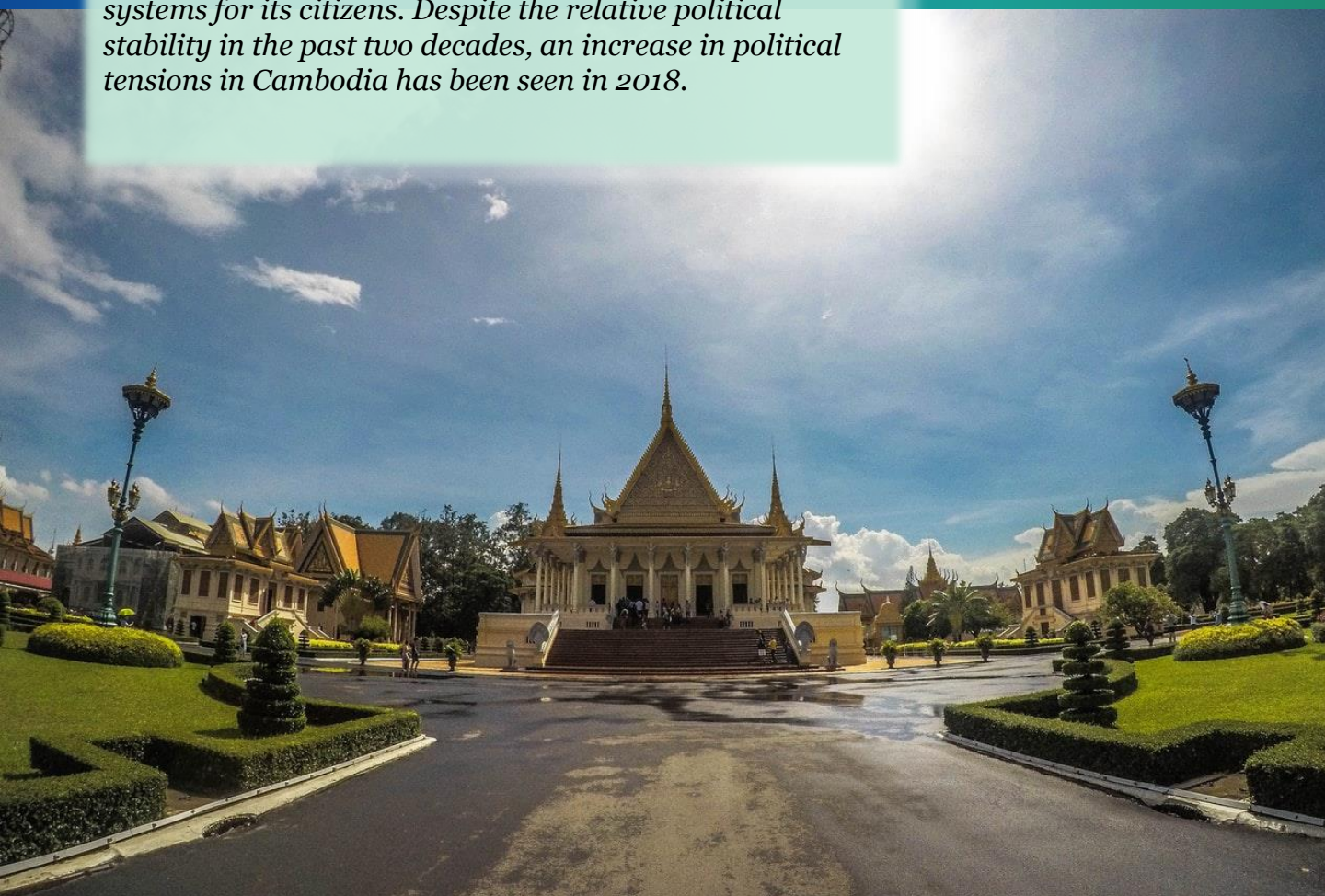
1. Overview of Cambodia

Executive Summary

Cambodia is considered a lower-middle income economy and is aiming to become an upper-middle economy by 2030. It is forecasted that the country will maintain a strong gross domestic product (GDP) growth over the next few years.

Cambodia signed a Trade and Investment Framework with the US. In addition, Cambodia is a member of the Association of Southeast Asian Nations (ASEAN), and thereby benefits from six multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Nonetheless, Cambodia remains one of the poorest Southeast Asian countries, plagued by lack of infrastructure and inadequate education or healthcare systems for its citizens. Despite the relative political stability in the past two decades, an increase in political tensions in Cambodia has been seen in 2018.



1. Overview of Cambodia

I. Country Profile[1,2,3,4,5,6]

In the last two decades, Cambodia witnessed an average annual gross domestic product (GDP) growth of more than 7%. In addition, the Cambodian economy is expected to grow at a 9.1% rate between 2018 and 2019. As a result of this sustained economical growth, Cambodia attained the status of lower-middle income country in 2015 and is striving to become an upper-middle income economy by 2030. In order to achieve this objective, the country will need to continue its socio-economic efforts such as poverty rates reduction, improve health and education conditions and bridging the infrastructure or technology gap. Diversifying the Cambodian economy, which relies on garment exports and the tourism industry, is another key challenge facing the country.

GDP *(in USD)*
26.3 bn (2019f)
24.1 bn (2018e)

GDP Per Capita *(in USD)*
1,594 (2019f)
1,482 (2018e)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 25.3%
Industry: 32.8%
Services: 41.9%

External Trade *(% of GDP)*
Import: 63.3% (2018)
Export: 61.6% (2018)

Population
16.49 million (2019)
World ranking: 70/191

Median Age
25.7 (2018)
World ranking: 155/228 (from oldest to youngest)

Language
Khmer (official)

English Literacy
Very low proficiency (2018)
World ranking: 85/88

Government Structure
Constitutional Monarchy

Land Area
176,515 sq. km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[7,8,9]

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. It allows companies located in two or more countries to trade goods with each other at reduced or zero tariffs. Cambodia was the last country to join the ASEAN in 1999 and became a member of the World Trade Organization (WTO) in 2004. The country has therefore a preferential access to the Southeast Asian market and is also involved in international trade.

Cambodia currently does not have any signed and effective bilateral free trade agreement (FTA). However, the country signed a trade and investment framework with the US which paves the way for a FTA. In addition, as a member of the ASEAN, the country benefits from the FTA signed between ASEAN and six other countries. In addition, the ASEAN – Hong Kong FTA came into effect in June 2019 (see section below). Furthermore, Cambodia might benefit from the Regional Comprehensive Economic Partnership, which is currently under negotiation.

Signed and Effective Bilateral Trade Agreements

	Affected Industry	Agreement (effective date)
	• N/A	**US-Cambodia Trade and Investment Framework Agreement (2006)** • Facilitates bilateral trade between the two countries • Constitutes a forum to address regional and multilateral issues

Signed and Effective Regional Trade Agreements as Member of the ASEAN

As a member of the ASEAN, Cambodia benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

Regional Comprehensive Economic Partnership (RCEP)

This partnership is being negotiated between the ASEAN members and their FTA partners (i.e. Mainland China, South Korea, Japan, India, Australia, and New Zealand). The RCEP is designed to be a mutually beneficial economic partnership that will foster cooperation and integration between the 16 countries. The agreement aims to lower tariffs and other barriers to promote trade between the partners.

The Association of Southeast Asian Nations (ASEAN)

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

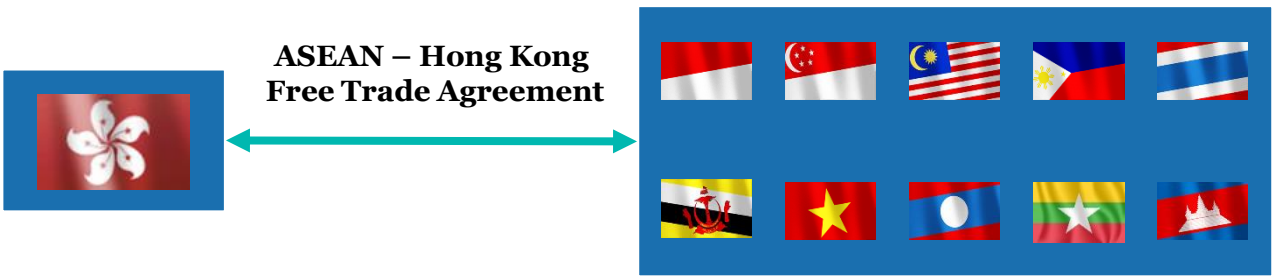
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11]

Cambodia has a constitutional monarchy with a multi-party system. The King reigns as the Chief of State while the government governs under the leadership of the Prime Minister. The state powers comprise of three branches: the Executive, Legislative and Judiciary.

- The executive power is shared between the Prime Minister who leads the government and appoints cabinet members, and the King. The Prime Minister is voted on by the National Assembly and appointed by the King.
- The legislative power is shared between the Senate and the National Assembly. The Senate is composed of members elected (or appointed) by the King, the National Assembly and local commune councillors. The National Assembly is composed of 125 seats. Its members are elected every five years in a general public election.
- The judicial power is held by the Supreme Court and other Constitutional courts. The judges of both courts are appointed by the King.

Since the general election of 2018, the Cambodian People's Party (CPP) controls the 125 seats of the National Assembly and Hun Sen acts as Prime Minister. He has been in office since 1998.

C. Political Uncertainties and Historical Coup Record[12,13]

Cambodia is regarded as a fairly politically stable country, as it ranked 87th out of 195 countries in the World Banks Political Stability Index (with an above average value of 0.17 in 2017). The country is currently benefiting from two decades of relative stability after having witnessed the 1998 coup staged by the CPP. Previously, in the 1970s the country underwent a civil war and experienced the Khmer Rouge regime.

However, some political issues can be underlined. Prior to the 2018 general elections, the government cracked down on dissidents. The Supreme Court dissolved the major opposition party (the Cambodia National Rescue Party) and its members were banned from politics. Therefore, the CPP, and the Prime Minister Hun Sen secured all 125 parliamentary seats. As a consequence of these actions, the country is facing international economic sanctions.

D. Recent Progress on Potential Trade Sanctions[14,15,16]

The *Everything But Arms (EBA)* arrangement is a part of European Union's (EU) Generalised Scheme of Preferences, granting duty-free and quota-free access to EU market for products from the world's least developing economies. Cambodia has long been benefiting from the EBA arrangement. In 2018, 95% of its export (totalled €5.3 billion) to EU market enjoyed the benefits and nearly three quarters of them were clothing and textile products.

Since July 2018, the EU has been warning Cambodia that it may lose its status on trade preferences because of its records on human rights and democracy issues. In February 2019, the EU started the process to temporarily suspend Cambodia's status under the EBA arrangement and more recently in November 2019, the European Commission finalised the preliminary report outlining the findings of the investigation. According to EU's regulations, Cambodia has one month to react and the European Commission is expected to finalise the report and make a decision in February 2020.

Besides, Cambodia is also facing the threat of sanctions by the US under the Generalised System of Preferences. The potential suspension of Cambodia's trade preference status, once implemented, is expected to have a significant impact and pose great challenges to the country's economy.

Source:

[1] *World Bank in Cambodia, The World Bank, Apr 2019*

[2] *Cambodia 10-Year Forecast, Fitch Solutions, 2019*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

[5] *Cambodia Population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Free Trade Agreements, Asia Regional Integration Centre*

[8] *Trade and Investment Framework Agreements, Office of the United State Trade Representative*

[9] *ASEAN official website*

[10] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, May 2019*

[11] *Cambodia government, Global Edge*

[12] *Political Stability Index, The World Bank, 2017*

[13] *Uncertainty and Pressure: Cambodia Under the Weight of Sanctions, The Diplomat, 2019*

[14] *Cambodia: European Commission Finalises Preliminary Report on Temporary Suspension of Trade Preferences, The European Commission, 2019*

[15] *EU Begins Process to Hit Cambodia with Trade Sanctions, Reuters, 2019*

[16] *EU to Hit Cambodia with Trade Sanctions, says Myanmar may follow, Reuters, 2018*

2. Legal Environment and Competition Law

Executive Summary

Cambodia is generally open to foreign investments. Additionally in 2019, the government is planning to amend the Investment Law in order to create a more favourable investment climate. However, some sectors, listed in the Negative List, are still restricted for foreign investors.

In Cambodia, Mainland China and Hong Kong companies can choose to operate via a Limited Liability Company (LLC), a Branch Office, a Representative Office or a Partnership. All these different entities types can be 100% foreign-owned, and the time required to set up these entities can vary from four to eight weeks.

2. Legal Environment and Competition Law

Cambodia generally welcomes and is liberal towards foreign investments. Foreign investment is governed under the Investment Law, which was promulgated in 1993 and revised in 2003. The laws and regulations are designed to encourage investments. As such, the annual Foreign Direct Investment inflow increased by 25% between 2016 and 2018. In addition, the Cambodian government has announced that further amendments of the Investment Law will be made in 2019 in order to have a more competitive, attractive and favourable investment climate in the country. Cambodia has a negative list with prohibited investment areas, however, as opposed to many other countries, there are no sectors which are closed to foreign investments only: the same regulations apply to Cambodian as well as Mainland China and Hong Kong companies. For more details, please refer to section 8 of this report.

Cambodia's Negative List Contains Three Lists of Prohibited or Restricted Business Sectors[1,2,3,4]

List 1

Investment Activities Prohibited by the Relevant Law and Sub-decrees

Examples:

- Processing and production of electricity power by using any waste imported from a foreign country; and
- Forestry exploitation, prohibited by Forestry Law.

List 2

Investment Activities Not Eligible for Incentives

Examples:

- All kinds of commercial activities, including import, export, wholesale, retail; and
- Production of electrical and electronic appliances, and office materials with an investment capital of less than USD 300,000.

List 3

Investment Activities with Specific Characteristics Which Shall be Eligible for Custom Duties Exemption, But Not Eligible for Profit Tax Exemption

Examples:

- Basic telecommunications services; and
- Exploration of oil and gas, and all kinds of mining, including supply bases for oil and gas activities.

I. Types of Legal Business Entities Available for Foreign Investment[5,6,7,8,9]

There are different structures to expand a business or a manufacturing footprint as an investor from Mainland China or Hong Kong to Cambodia. The registration and operation of a business under Cambodia's jurisdiction is generally governed under three laws: 1) the Law on Commercial Rules and Commercial Register from 1995, 2) the Law on the Amendment of the Law on Commercial Rules and Commercial Register 1999, and 3) the Law on Commercial Enterprises 2005. Companies need to register with the Ministry of Commerce (MOC) and comply with various requirements listed in the laws above.

An investor considering to expand to Cambodia has to define what kind of activities the company should carry out in order to choose the most suitable entity. Among others, there is the option to operate through a locally-registered legal enterprise or also to enter a contractual agreement with existing Cambodian entities.

The four main forms of doing business or expanding the manufacturing footprint to Cambodia are:

1. Limited Liability Company (LLC)
2. Branch Office
3. Representative Office
4. Partnerships

Limited Liability Company (LLC)

This is the most common business type for foreign investors in Cambodia. An LLC is incorporated under the Cambodian laws as a subsidiary of a Mainland China or Hong Kong's parent company. It represents a separate legal entity limiting the shareholders' liability to their capital contribution. An LLC can be 100% foreign-owned, conduct commercial activities and generate revenues and profits. Cambodia's regulations require a minimum of two and a maximum of 30 shareholders for the private LLC. However, there is also the possibility to set up a single-member private LLC with only one physical or legal person as shareholder. In addition, Mainland China and Hong Kong companies can choose to establish a public limited company, which can trade shares and issue securities to the public.

Another incentive to choose an LLC as a business vehicle is the fact that LLCs are allowed to engage in qualified investment projects (QIP) approved by the Council for the Development of Cambodia (CDC). For more details, please refer to section 8 of this report.

The minimum capital requirement to set up an LLC is KHR 4 million (around USD 1,000). The establishment process usually takes around eight weeks.

Branch Office

Investors from Mainland China and Hong Kong also have the possibility to engage in business and to run productive operations in Cambodia through a branch office. Branch offices are 100% owned by the corresponding parent company and considered as an extension thereof. They are not separate legal entities, which makes the parent company liable for the branch's liability. In addition, branches are not allowed to engage in QIPs. However, the advantage is that the branch office usually simplifies the internal, legal and accounting structure.

Branches of foreign banks require a minimum capital of KHR 200 billion (around USD 50 million) if they have an investment grade rated by an international credit rating agency. If they do not have an investment grade, a minimum capital of KHR 300 billion (around USD 75 million) is required. Setting up a branch office takes eight weeks on average.

Representative Office

As opposed to the branch office, the representative office is not allowed to conduct commercial or service activities. It is also not allowed to engage in manufacturing, processing or construction activities. It may negotiate commercial contracts on behalf of its parent company, however, it may not enter into these contracts itself. This business type is not a separate legal entity and usually undertakes activities such as market research, and the promotion and quality control of the parent company. Therefore, an investor from Mainland China or Hong Kong would usually choose a representative office as a way to enter the Cambodian market. An advantage of setting up a representative office is the rapid establishment process, needing only four weeks on average, with low legal documentation requirements.

Partnerships

In Cambodia, businesses can enter into two different types of partnerships: general partnership or limited partnership

General Partnership

It is generally signed between two or more partners in order to combine their assets (e.g. property, knowledge) and carry out business together. Companies involved in a general partnership are personally responsible and liable for the partnership's debts and obligations.

Limited Partnership

A limited partnership is a contract between one or more general partners and at least one limited partner. The general partners administer the partnership and are personally responsible and liable for the partnership's debts and obligations, whereas the limited partners are only liable to the extent of capital they invested in the partnership. The registration process for this form is still unclear and is therefore not very widely used by foreign investor to carry out business in the country.

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[10,11]

In December 2018, Cambodia released the Draft Law on Competition in Cambodia (in English) which is based on the Draft Khmer Version published in February 2018. According to the latest information, this Draft Law is under review and can be amended by the Council of Minister and the Council of Jurists. Therefore, Mainland China or Hong Kong companies are advised to consult the last Khmer legislation that should be published in 2019 before expanding their manufacturing footprint in the country, as it may differ from the information provided below.

The Law should apply to any business (whether local or foreign-owned) which carries out activities that may affect competition in the Cambodian market. It will be supervised by two regulatory entities: the Competition Commission will be responsible for issuing decisions, rules, procedures or fines in order to safeguard competition; while the Directorate will investigates violation cases and makes recommendations to the Commission.

The new law prohibits four types of anti-competitive activities:

1. Horizontal Agreements
2. Vertical Agreements
3. Abuse of Dominant Position
4. Business Combination *(Note)*

Note: the acquisition of the right of control, voting rights, shares or assets or the combination of two or more businesses which were previously independent from each other in order to acquire joint ownership of that combined business.

Common examples of anti-competitive activities under the Law on Competition are listed below. In addition to these examples, the Competition Commission can also prohibit other types of actions that prevent, restrict or distort competition in Cambodia. However, the Commission can also grant individual or collective exemptions.

1. Horizontal Agreements

The Law prohibits businesses from entering into Horizontal Agreements that affect competition by:

- Fixing, controlling or maintaining the price (of goods or services);
- Preventing, restricting or limiting goods or services' quantity, type or development;
- Allocating geographic areas or customers between competitors; or
- Favouring certain companies during contracts bidding.

2. Vertical Agreements

The Law prohibits businesses from entering into Vertical Agreements that affect competition by:

- Requiring a business to resell goods or services within a specific geographic area, to a specific customer or category of customers;
- Requiring a business to purchase all or nearly all goods or services from a specific seller;
- Prohibiting resale; or
- Requiring tied selling (e.g. force a purchaser to purchase unrelated goods or services in addition to the one originally needed).

The Law also prohibits Vertical Agreements that force purchasers to resell goods and services at a minimum price (set by the seller).

3. Abuse of Dominant Position

The Law prohibits Dominant Businesses from carrying the following activities if they affect competition:

- Prohibiting suppliers or customers to avoid dealing with competitors;
- Refusing to supply goods or services to a competitor;
- Requiring tied selling;
- Selling goods or services below production costs; or
- Preventing a competitor from having access to essential facilities.

However, a Dominant Business can perform these activities if approved by the Competition Commission.

4. Business Combinations

The Law prohibits Businesses Combinations that affect competition, and defines that the Competition Commission should examine and monitor at all times their effects on competition.

Please refer to the official Draft Law on Competition in Cambodia document for additional information (www.asean-competition.org/file/pdf_file/Draft%20Law%20on%20Competition%202018.pdf)

B. Intellectual Property Protection Law on Trademarks[12,13]

A trademark is a visible sign capable of distinguishing the goods or services of an enterprise and shall include a stamped or marked container of goods. Trademarks are protected since 2002 by the Cambodian Law Concerning Marks, Trade Names and Acts of Unfair Competition (Trademark Law). Additional Decrees and Declarations concerning online applications, international applications or certification process have been issued by the MOC. In addition, Cambodia is a member of the Madrid System which allows businesses to register trademarks in 110 countries with a simplified and centralised application.

The laws and processes apply in general and do not specify particular rules for Mainland China or Hong Kong companies that consider to expand their manufacturing footprint to Cambodia. However, foreign companies must be represented by a Cambodian agent residing and practicing in the country in order to register their trademarks. Applicants must register with the Department of Intellectual Property of the MOC and must supplement the application with samples as well as ownership proofs. The registration is valid for a period of 10 years starting from the date of publication in the Official Gazette of the MOC. However, a registration can be protested within 90 days prior to the publication in the Official Gazette.

For more information, please consult the official Law Concerning Marks, Trade Names and Acts of Unfair Competition (www.wipo.int/edocs/lexdocs/laws/en/kh/kh001en.pdf)

C. Import/Export Regulations and Licenses[14,15]

In Cambodia, imports and exports are regulated by the 2007 Law on Customs among other additional policies. In order to do business in the country, importers and exporters need to register with Cambodia's Departments of Business Registration (which operates under the MOC). Additionally they need to register with various departments such General Department of Customs and Excise (GDCE) or the General Department of Taxation. For more detailed information on customs procedures, please refer to GDCE homepage (www.customs.gov.kh/customs-declaration/) or section 6 of this report.

Import

Mainland China and Hong Kong companies that want to import goods to Cambodia have to obtain a Customs Declaration Certificate from the GDCE. Once registered, copies of the Customs Declaration Form must be sent to Customs along with: invoice and packing list, transportation documents and other possible necessary documents (e.g. manifest, licences or certificate of origin).

Export

Exporters need to obtain from the GDCE an export permit and must also complete a Customs Declaration Certificate. Exporting certain goods that have been determined by Cambodia as sensitive require additional documentation (e.g. permission letter for jewellery or unprocessed precious stones, certificates for garments).

D. Jurisdiction System on Business Related Matters[16,17]

The Cambodian legal system is a based on both the French legal system and the common law system. The Cambodian Constitution is the overarching law in the country and all decisions taken by state institutions must conform with it.

The country's judiciary system is divided into three layer: the Supreme Court, the Appellate Court and the Court of First Instance (Provincial/Municipal Courts) . There is no dedicated Commercial Court in Cambodia in charge of judging disputes in the business sector. Therefore, these cases are handled by the Civil Court. However, since 2013, the country has a National Commercial Arbitration Centre which serves as an independent alternative to the country's court system to solve commercial matters. The body uses a panel of commercial and legal experts in order to arbitrate contract disputes and issue legally binding solutions.

Source:

[1] *Investment Law to be revised, Khmer Times, Feb 2019*

[2] *Policies toward FDI, Council for the Development of Cambodia*

[3] *Cambodia: Foreign Investment, Santander Trade Portal, Jun 2019*

[4] *Limitation on Foreign Investment, Council for the Development of Cambodia*

[5] *Sub-decree On The Implementation Of The Law On The Amendment To The Law On Investment Of The Kingdom Of Cambodia No 111 ANK/BK dated September 27, 2005, Kingdom of Cambodia*

[6] *Doing business in Cambodia: overview, Thomson Reuters – Practical Law*

[7] *Investment Guide Cambodia: Company Law and Commercial Registration, DFDL 2017*

[8] *Business entities in Cambodia, Healthy Consultants Group PLC*

[9] *New Minimum Registered Capital Requirements for Banking and Financial Institutions, Rajah & Tann Asia 2016*

[10] *Cambodia Legal Alert: Cambodia's Latest Draft Competition Law, DFDL, 2018*

[11] *Draft Law on Competition of Cambodia*

[12] *Department of Intellectual Property homepage*

[13] *Guide to Trademark Law in Cambodia, Abacus IP*

[14] *Import/Export Procedures of Cambodia, HKTDC, 2017*

[15] *General Department of Customs and Excise homepage*

[16] *Overview of Cambodian Judiciary, ASEAN Judiciaries Portal*

[17] *Commercial arbitration body settles its first two cases, The Phnom Penh Post, 2017*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation in Cambodia are personal and corporate income tax (CIT), and value added tax (VAT), among other specific business taxes.

Cambodia generally welcomes foreign direct investment (FDI). Most sectors are open for investment, but certain sectors, detailed in the Negative List, have restrictions over foreign investments. The Cambodian government also provides incentives through the Qualified Investment Projects programme.

The Cambodian riel (KHR) can be freely exchanged, and there are also no restrictions on the import or export of foreign currencies into or out of Cambodia. In practice, the US dollar is the most common currency used in Cambodia.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

The principal tax law governing the corporate tax provisions in Cambodia is the Law on Taxation enacted in 1997, along with supporting Prakas, Decrees, and Notifications. In general, all companies in Cambodia, regardless of their tax residence, are subject to corporate income tax (CIT).

Resident companies in Cambodia are generally taxed on worldwide income. A resident company is a company that is organised or mainly operating in Cambodia. Non-resident companies are only taxed on income sourced from Cambodia.

Local and family businesses with an annual revenue of less than KHR 250 million (around USD 62,500), are exempt from taxation.

A. Corporate Income Tax (CIT)[1,2]

Tax Calculation

Taxable income is calculated from total taxable revenue, minus deductible expenses, plus other income such as interest and royalties.

All foreign companies in Cambodia are under the self-declaration system. This means that businesses must prepare an annual CIT return that shows the adjustments made to arrive at taxable profit from accounting profit.

Applicable Tax Rate

The standard tax rate for resident companies is 20%.

Industry	Tax Rate
Standard	20%
Oil and Gas; Exploitation of Natural Resources (e.g. timber, precious stones and metals)	30%
General Insurance (not including life insurance)	5%

Deductions

In general, expenses are tax deductible if they were incurred and paid during the same tax year in the operation of a business. However, some expenses are specifically non-deductible, such as:

- Entertainment or recreation expenses;
- Payments to company management deemed unreasonable;
- Donations over 5% of taxable income;
- Personal expenses and income tax; and
- Loss on sales of property between related parties, whether direct or indirect.

Dividend Income

Dividend distribution maybe be subject to additional CIT depending on the CIT rate that the dividend was initially subject to. Dividends that were originally exempt from CIT will be subject to an additional CIT rate of 20% or 30%. Dividends that were originally subject to 20% or 30% CIT will be exempt from the additional dividend CIT payment.

Losses and Consolidation

In Cambodia, any business losses can be set off against future income for five years. Businesses must maintain records and tax returns for the tax losses in order to be able to carry forward the tax losses. The business must also not have changed its ownership or operational activities. If the business is subjected to a unilateral tax reassessment from the General Department of Taxation (GDT), any tax losses will also be forfeited. Carryback of losses is not permitted.

There are no consolidated filing or group loss relief provisions in Cambodia.

Tax Return and Payment

Tax returns must be filed within three months of the year end. The tax year is generally the calendar year in Cambodia, but businesses may apply for different tax years. Tax payment should be made with the tax return filing.

There are no interim tax return requirements in Cambodia.

Double Tax Agreement (DTA) with Hong Kong[3]

Cambodia has entered into DTAs with six countries: Indonesia, Vietnam, Thailand, Brunei, Mainland China, and Singapore. The DTA between Cambodia and Hong Kong was signed on 26 June 2019, but is currently pending ratification. For updated information regarding the status of the DTA between Cambodia and Hong Kong, please refer to the Hong Kong Inland Revenue Department's page on DTAs (www.ird.gov.hk/eng/tax/dta_inc.htm).

DTAs aim to eliminate double taxation. The table below illustrates the tax rates applied to various sources of income stipulated in the signed DTA between Cambodia and Hong Kong:

Category	Rate
Dividends	10%
Interest	10% or 0% *(Note)*
Royalties	10%
Technical Fees	10%

Note: Interest derived from certain government bodies are exempt from tax.

B. Value Added Tax (VAT)[1,2]

VAT is applicable to all goods and services provided. Since Cambodia uses a self-declaration regime, businesses are responsible for charging VAT on the goods and services they provide. Imported goods and services are subject to VAT, and the importer should pay the VAT together with any import duties at Customs. VAT returns should be declared and paid each month. VAT payment should be made no later than the 20th of the following month.

Applicable Tax Rate

In Cambodia, the VAT that must be paid to the GDT is calculated as output tax minus input tax. The output tax is paid by the customer, while input tax is paid on purchases to suppliers.

The standard VAT rate is 10%. However, certain goods and services are subject to 0% VAT, including:

- Exported goods and services originating from Cambodia;
- Industries supporting the export industry, through supplying goods and services to exporters;
- Domestic paddy rice; and
- Exports of milled rice.

Goods subject to 0% VAT are exempt for output VAT, but may still be eligible for input VAT credits. For example, VAT from goods and services related to rice farming, purchase of paddy rice, and exported milled rice, are eligible for input VAT credits, or may be refunded.

Goods Exempted

Certain goods are specifically exempt from VAT, including:

- Medical services;
- Transportation provided by state-owned providers;
- Insurance;
- Primary financial services;
- Imports of items for personal use;
- Non-profit activities, subject to approval;
- Education services;
- Electricity and clean water supply;
- Unprocessed agricultural products; and
- Solid and liquid waste removal or collection.

For more information on exempt goods, please refer to the General Department of Taxation website (www.tax.gov.kh/en/bvat.php).

Tax Incentives

The main tax incentive in Cambodia is the Qualified Investment Projects (QIP). A business can register with the Council for Development of Cambodia (CDC) for a project to be recognised as a QIP. QIPs will be entitled to a tax holiday of at least three years. For more information on tax incentives, please refer to section 9 of this report.

C. Transfer Pricing Provisions[1]

Cambodia's transfer pricing provisions are detailed in the Prakas No. 986 MEF.Prk., issued by the Cambodian Ministry of Economy and Finance on 10 October 2017, and effective since that date.

Major points of the transfer pricing provisions are as follows:

- A related party is any business that controls, is controlled by, or under common control of the taxpaying business. Control refers to 20% or more equity ownership in the business, or voting power in the board of directors;
- Acceptable methods for determining whether a transaction was performed using the arm's length principle are those in the Organisation for Economic Co-operation and Development (OECD)'s Transfer Pricing Guidelines;
- Any related party transactions and any related information must be declared when filing the annual CIT return;
- Transfer pricing documentation may be required by the tax authority; and
- Documents related to transactions must be kept for 10 years after the tax year end in which the transaction took place.

D. Statutory Auditing Requirements and Accounting Standards[1,2]

Audit Requirements

Any businesses that meet two or more of the criteria set by the Ministry of Economy and Finance must be audited by an independent external auditor registered with the Kampuchea Institute of Certified Public Accountants and Auditors (KICPAA). The three criteria are as follows:

- Annual revenue of KHR 3 billion or more (around USD 750,000);
- Total assets of KHR 2 billion or more (around USD 500,000); or
- Employ 100 or more workers.

Any businesses that have been subjected to a statutory audit must continue to have their financial statements audited.

Any businesses with QIPs registered with the CDC must also be audited by an independent external auditor registered with the KICPAA.

Financial Statements

There is no prescribed format or details for financial statements in Cambodia. Financial statements should be prepared in Khmer and use KHR. Businesses may also prepare a secondary copy of financial statements in English and use a foreign currency if they engage with foreign businesses. All financial statements should be prepared within three months of the financial year end. However, there is no deadline in the law for the submission of financial statements.

Financial Reporting Framework

The National Accounting Council of the Ministry of Economy and Finance is the authority in Cambodia responsible for issuing accounting standards and other financial reporting requirements. Businesses with public accountability such as financial institutions, insurance providers, and any public companies, are required to apply the Cambodian International Financial Reporting Standards (CIFRS), based on the International Financial Reporting Standards (IFRS). Other businesses are required to at least apply the CIFRS for Small and Medium-sized Entities, but may choose to apply the full CIFRS.

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)

Bank Account Setup Requirements[4]

In general, it is easy for foreigners to set up bank accounts in Cambodia as there are no restrictions for foreigners opening bank accounts in Cambodia. A business must register the bank account in its own name. The initial required capital for starting a business must be deposited at an authorised bank in Cambodia, and the bank statement should be submitted to the Ministry of Commerce.

There are no restrictions for foreign individuals wishing to open a bank account in Cambodia. Each bank may have their own specific requirements, but in general, an individual will only need to provide his or her passport, visa, and letter of employment in order to open a bank account. A copy of the rental lease or equivalent may also be required, but this is occasionally overlooked.

FDI Restrictions[5]

In Cambodia, FDI is generally encouraged. The Cambodian government is continually increasing the amount of investment incentives available for foreign investors (for example by establishing the special economic zone (SEZ) scheme in 2005). However, certain industries are restricted for foreign investments. These industries are detailed in the Negative List (Annex 1 of the Sub-Decress No.111 on the Implementation of the Law on the Amendment to the Law on Investment). For further information regarding the Negative List, please refer to section 8 of this report.

B. Restriction on Inbound and Outbound Funding in Foreign Currency and Local Currency[6]

Under the Foreign Exchange Law of 1997, there are no restrictions on foreign exchange in Cambodia. Both local currency and foreign currency may be freely imported and exported.

Local Currency

Local currency (KHR) is mostly used in Cambodia in the rural and countryside areas. In cities and tourist areas, any change from transactions in other currencies will also only be provided in KHR.

Foreign Currency

The use of foreign currency is common in Cambodia. The main foreign currency used in the country is the USD. 90% of the economy is dollarised, and businesses in cities will usually list prices in USD. ATMs in Cambodia will also dispense USD, and any Cambodian visas must be paid for in USD. Other common foreign currencies used in Cambodia include the Thai baht and the Vietnamese dong, in the regions neighbouring Thailand and Vietnam respectively.

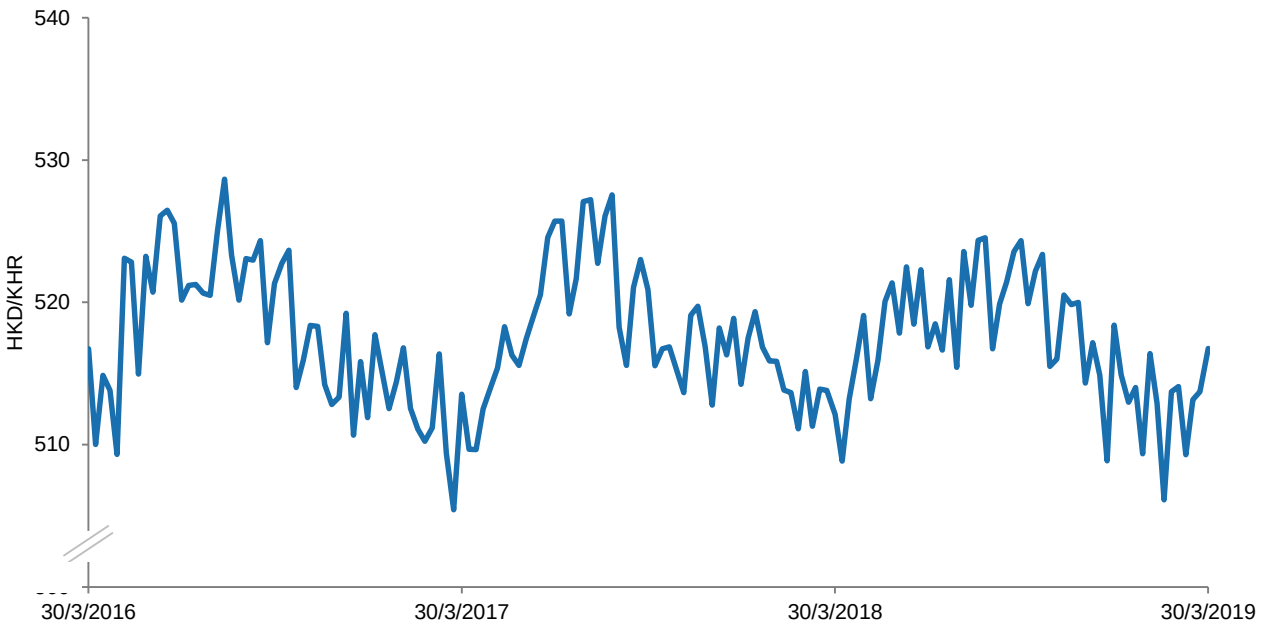
Under law, only authorised financial institutions may perform foreign exchange transactions. However, in practice, unregistered currency exchangers will also perform foreign exchange transactions.

There are no restrictions on repatriation of profits or capital from Cambodia. Businesses are responsible for reporting import or export payments of USD 10,000 or more (or equivalent in other foreign currency), to Customs at the border checkpoint. Customs is then responsible for informing the National Bank of Cambodia.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend[7]

Cambodia's official currency is the Cambodian riel (KHR). The first riel was issued between 1953 and 1975. The second riel, which is currently in use, has been issued in March 1980. Between 1975 and 1980, there was no official currency in Cambodia due to Khmer Rouge abolishing money in the country. Currently, the riel is pegged to the US Dollar, at a rate of around KHR 4,000 to USD 1. The KHR is managed by the National Bank of Cambodia, which is the central bank in the country.

Three-year Exchange Rate Trend for HKD to KHR[8]



Date	HKD/KHR Rate
30/03/2016	516.00
30/03/2017	518.81
30/03/2018	509.47
30/03/2019	511.49

D. List of Banks from Foreign Investments[9]

According to the National Bank of Cambodia, there are currently 44 commercial banks in Cambodia; 16 of these are foreign-owned banks, while another 14 are foreign bank branches.

Foreign-owned Banks in Cambodia

#	Name of Foreign-ownedBank
1	Advanced Bank of Asia Limited
2	ANZ Royal Bank Cambodia Ltd.
3	Booyoung Khmer Bank
4	BRED Bank (Cambodia) plc
5	Cambodia Commercial Bank Ltd.
6	Cambodian Public Bank plc
7	Cathay United Bank (Cambodia) Corp., Ltd.
8	CIMB Bank plc
9	Hong Leong Bank (Cambodia) plc
10	Kasikorn Bank Public Company Limited
11	Kookmin Bank Cambodia
12	Maybank (Cambodia) plc
13	Phillip Bank plc
14	Sathapana Bank plc
15	Shinhan Bank (Cambodia) plc
16	Union Commercial Bank plc

Foreign Bank Branches in Cambodia

#	Name of Foreign Bank Branches
1	Agribank
2	Bangkok Bank
3	Bank of China
4	Bank of India
5	First Commercial Bank
6	ICBC Bank
7	Industrial Bank of Korea
8	Krung Thai Bank
9	MB Bank plc
10	Mega International Commercial Bank
11	Mizuho Bank
12	Sacom Bank
13	SHB
14	Taiwan Cooperative Bank

Source:

[1] *Cambodian 2018 Tax Booklet, PricewaterhouseCoopers*

[2] *Cambodia Tax Profile, KPMG, Aug 2018*

[3] *Comprehensive Double Taxation Agreements concluded, Inland Revenue Department*

[4] *Opening a bank account in Cambodia, Expat.com*

[5] *Sub-decree on the Implementation of the Law on the Amendment to the Law on Investment of the Kingdom of Cambodia No. 111/ANK/BK (2005), The Royal Government of Cambodia*

[6] *Cambodia – Foreign Exchange Controls, Export.gov, 2019*

[7] *KHR (Cambodian Riel), Investopedia, Jul 2018*

[8] *Bloomberg*

[9] *Commercial Banks, National Bank of Cambodia*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Cambodia has established its Labour Law providing guidance on matters such as maximum working hours, minimum wages, and welfare to protect employees.

Foreign workers are forbidden or restricted from engaging in certain jobs which can only be done by local workers. A maximum percentage of foreign employees in a company is also set to protect the local workforce.

Foreign workers are required to obtain a work permit and a visa for legal employment in Cambodia, which is approved by the relevant government departments on a discretionary basis.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2]

The Labour Law enacted in 1997, along with other supporting laws, govern the Cambodian labour employment. It forms the basis of the laws governing labour relations and employment of private employees. These laws apply to both regular employment and casual employment.

Minimum Legal Working Age

The minimum wage employment age is 15.

Children over 12 but under 15 years of age are only allowed to do "light work" during periods of the day that would not affect their regular school attendance. No one under 18 years of age is allowed to perform work which is hazardous in nature to their mental and physical health or their morality as determined by the Ministry of Labour and Vocational Training (MLVT). Employers shall not discriminate against any potential employees based on their age.

Labour Contract

The Labour Law governs agreements between employer and employees. An employment contract, either oral or written, must be concluded for all categories of employment arrangements recognised by the Labour Law. The contract must include descriptions of "wages, working hours, and other working conditions" as prescribed by the Civil Code.

Termination of Employment

The Labour Law only recognises the following causes for the termination of employment: when the employment contract is completed or expired; serious misconduct; force majeure; and with both parties' consent.

In the event of serious misconduct, the employer can dismiss the employee without notice or compensation. Examples of serious misconducts include but are not limited to, fraud, stealing, embezzlement, serious disciplinary misbehaviour, and threat or assault. Dismissals based on serious misconduct must happen within seven days after the employer has learned about the said misconduct.

Termination of a labour contract with no specified duration can be arranged with a notice of what is specified and agreed upon in the contract. However, dismissals in this case must have a valid reason related to the employee's performance at work.

Severance Payments

For unilateral termination of employment on the employer's part, the dismissed employee shall receive a severance payment. If the employee has been working for the employer for six to 12 months, the employee is entitled to receive a severance payment of seven days of wages. If the employee has been working for more than 12 months, he/she is entitled to 15 days of wages for every year of service. Working six months or more in a year is considered as one whole year.

B. Minimum Wage Level[3,4]

As of 2019, the minimum wage is KHR 730,000 (around USD 180) per month. The minimum wage rate is updated every year by the government.

C. Maximum Working Hours and Days[1,2]

The maximum number of working hours is eight hours per day, or 48 hours per week. The 48 hours in a week should allow for a break on Saturday afternoon or equivalent. Allocation of working hours in another period (i.e. not by week) should ensure the average working time does not exceed 48 hours per week or 10 hours per day.

In the event of mass interruption of work, such as due to bad weather or accidents, the MLVT can authorise the extension of the working hours to compensate for the lost hours of work by issuing a ministerial order. The extension will not exceed one hour per day and total daily working hours will not be more than 10.

Overtime and Overtime Pay

For work performed in excess of the maximum number of hours, employees must be compensated with overtime pay equivalent to their regular wage plus at least 50% if the overtime is at night, and plus 100% if the overtime is during the employee's weekly break.

D. Mandatory Welfare[5,6]

National Social Security Fund (NSSF)

Under the Law on Social Security Schemes, employers with eight or more employees must register and contribute to the NSSF. The NSSF is a mutual provident insurance system supported by mandatory contributions from employees and employers, and provides injury and healthcare insurance.

Type of Scheme	Maximum Total Contribution (KHR)	Employee's Contribution	Employer's Contribution
Occupational Risk	9,600	-	0.8%
Healthcare	31,200	1.3%	1.3%
Total	40,800	1.3%	2.1%

For detailed contribution tables for the NSSF, please refer to the official NSSF website (www.nssf.gov.kh/default/employment-injury-scheme-2/contribution-payment/).

Other Benefits and Rights

In addition to these provisions, workers in Cambodia are entitled to various leaves, as described below.

- Annual leave: employees are entitled to at least 1.5 days of annual leave per month of service; employees who have worked continuously for more than three years are entitled to one extra day of leave per month of service, for every three years of continuous employment. The right to use paid leave is granted after a year of service.
- Special leave: Should there be issues affecting the employee's immediate family, the employer should grant his employee special leave, either deducting the leave from the employee's annual leave if there is any remaining on the year or reallocating the working hours lost under the guidance of the Labour Law and relevant ministerial orders.
- Maternity leave benefits: full pay during maternity leave of 90 days. Only light work should be assigned in the first two months of work after maternity leave. Employers are not allowed to dismiss women during their maternity leave, or arranged their notice period to end during their maternity leave.

E. Labour Law Governing Authorities, Enforcements, and Restrictions[1,2,7,8]

Governing Authorities

The MLVT is the official government body responsible for the oversight of labour administration and protection, social policy, and the promotion of employment in Cambodia.

Labour Law Enforcements

The MLVT, and the associated departments at the capital, provincial, and municipal levels, are in charge of administrating and enforcing the Labour Law. Labour Inspectors and Labour Controllers are in charge of labour inspections, while Labour Medical Inspectors are in charge of labour medical inspections. The MLVT is responsible for setting up a Labour Advisory Committee to study labour problems, employment conditions, vocational trainings, allocation of the workforce, and matters of labour health and safety. The Committee consists of representatives from the MLVT, the relevant ministries, and an equal number of representatives from the workers' unions.

Employment Restrictions

A maximum of 10% of the employees of an enterprise may be foreigners. The MLVT may allow exemptions if the business requires skills that cannot be provided by local workers in Cambodia. Such exemptions must be applied for between 1 September and 30 November every year.

Any foreign nationals wishing to work in Cambodia must obtain a work permit, which is valid for one year. Renewal of the work permit is subject to conditions, such as whether foreigner's work can be done by a local worker.

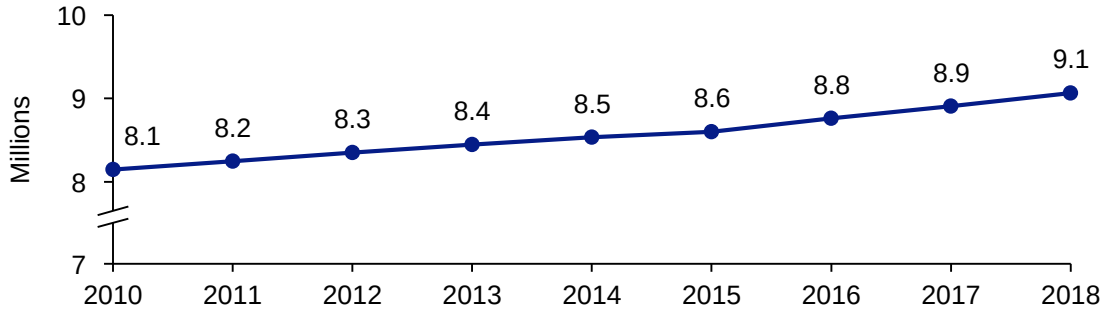
Prohibition Against Discrimination

The Labour Law protects female employees from discrimination, including issues such as: a female employee's wages must not be lesser than what a male employee receives for work of equal value; male employees should not have an unfair advantage for promotion and training opportunities due to their sex; an employer must not require female employees to not get married as a condition of employment or continuation of employment.

II. Local Labour Supply Market Condition

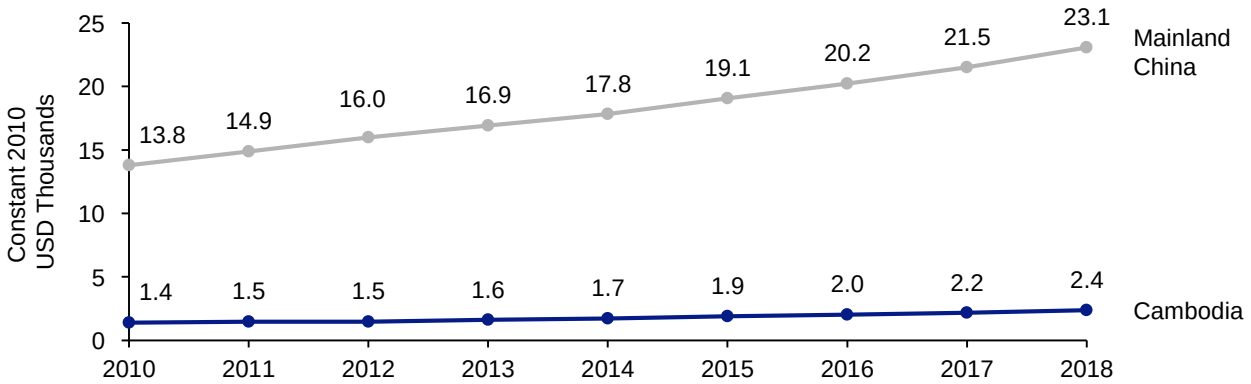
A. Supply Situation for Total Labour Force[9,10]

Cambodia's Total Labour Force (2010 – 2018)



The estimated total labour force was around 9.1 million in 2018. The supply of labour has shown an overall upward trend over the past nine years. As of 2017, approximately 37% of the labour force was in the agriculture sector, 26% in manufacturing industry, and 37% in service industry.

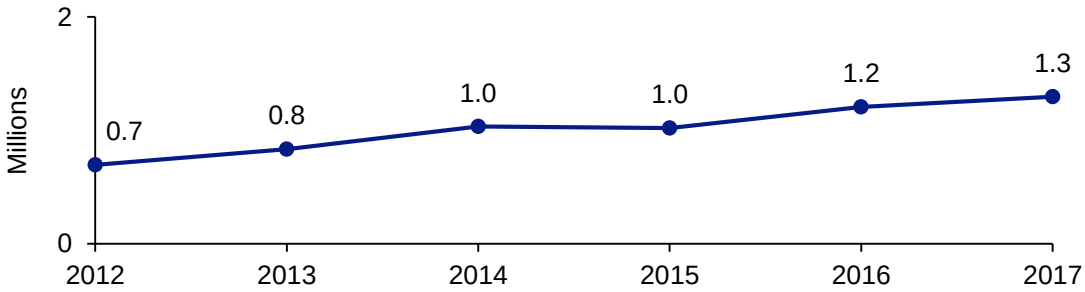
Cambodia's Labour Productivity (GDP per worker) (2010 – 2018)



Cambodia's labour productivity is around 90% lower than Mainland China's in 2018. At the same time, Mainland China's productivity was growing at a similar rate (around 6.7%) as Cambodia's (around 7.0%) between 2010-2018. Cambodia's productivity has been ranked last (10th) among the ASEAN countries.

B. Supply of Educated Employees[11]

Cambodia's Estimated Labour Force with Higher Education (2012 – 2017)



The estimated labour force with higher education (defined as level of education beyond upper secondary school) was around 1.3 million in 2018, or approximately 15% of the total labour force.

C. Government Support on Employee Training[1,2]

The National Technical Vocational Education and Training (TVET) Policy 2017-2025 was officially launched by the MLVT in 2017. This policy targets the demand for skilled labour in the country by facilitating the implementation of strategies for skills development, coordinating the skills development systems currently in Cambodia, and guiding the development of future skills development.

For more information, please refer to the TVET policy document (www.tvetsdp.ntb.gov.kh/wp-content/uploads/2018/02/NTVET-Policy-2017-2025.ENG_.pdf).

D. Labour Unionisation and Related Government Regulations[1,2]

All labour organisations must be registered with the MLVT to enjoy the benefits stated in the law.

Protection of Rights of Unionisation

Chapter XI of the Labour Law states that employers and employees have the right to form and join professional organisations. The employers' organisations are called employers' associations, while the employees' are called workers' unions. These organisations cannot have both employees and employers as members.

The law also protects employees from an employer's disciplinary actions and any discrimination intended to discourage or encourage membership in a certain labour organisation in terms of recruitment, work assignment, promotion, disciplinary measures, or dismissal. Employers are not allowed to pay union dues for their employees by deducting it from their wages. Moreover, employers are also restricted from interfering with the administration of labour organisations, including through provision of financial support.

Labour Dispute Settlement

Chapter XII of the Labour Law details the procedures in collective bargaining. If there isn't any settlement procedure planned in a collective agreement, the parties involved in the dispute should notify the Labour Inspector of their province. The MLVT will assign a conciliator within 48 hours from receiving the notification, and conciliation will happen within 15 days after that. During the conciliation period, the parties must attend every relevant meeting, and an absence may result in a fine.

If the dispute cannot be settled, the Labour Inspector will record the reasons for failure in a report, which will be passed on to the MLVT and the Council of Arbitration within three days. The Council of Arbitration will meet within three days from receiving the case.

E. Work Permits and Visa [7,13]

Work Permits

Foreign employees need a work permit, secured by an employer and approved by the labour authorities, in order to work in Cambodia. The work permit is valid for up to one year, and regardless of when the permit is issued, it will expire on 31 December of the same year. Renewal can be arranged from 1 January to 30 March. The work permit can be extended for as long as the fixed validity period of the employee's residency permit. The permit is only valid for work under the employer it was secured for. Please note that the work permit is not an alternative to the employment card; foreign employees are required to obtain both in order to work in Cambodia.

- Approval criteria: Approval is considered by the Ministry of Interior on a case-by-case basis. The permit is granted provided that specific conditions are met. These conditions include, but are not limited to: the foreigner must have entered Cambodia legally; the foreigner must have a valid passport and residency permit; and the foreigner must not have any contagious disease.
- Termination of employment: In case of termination of employment or resignation of the employee, the work permit will be revoked either when the employee is hired by another employer, or when the employee is unemployed for more than one month.

For the detailed procedures, guidelines on application filing and required documents in work permit application, please refer to the Labour Law.

Visas

Non-immigrant visas are issued by the Ministry of Foreign Affairs and International Cooperation. The most common work visa in Cambodia is the E-class visa, also known as the ordinary visa. The E-class visa is initially valid for 30 days, and can be renewed indefinitely for up to 1 year at a time. Upon the first renewal, the foreigner can choose between four classes of E-class visas: the EB, EG, ER, or ES visa.

EB visa: the most common visa for expatriates working in Cambodia, covering foreign employees, their partners, and children. The employee must provide a stamped letter from a Cambodian company to verify their employment.

EG visa: suitable for foreigners looking for employment, and can be extended for one to six months. Foreigners who have been granted an EB visa previously may not be granted an EG visa as the EG visa is not intended for people who have been in the country long term. The EG visa will also typically be extended once only.

ER visa: intended for retirement, and for people aged 55 and above. It will also typically require proof of sufficient funds to support the retirees.

ES visa: intended for students, with a letter from a Cambodian school and evidence of sufficient funds to support themselves.

Travelling to Cambodia

Hong Kong residents need a visa to visit Cambodia. A single-entry visa is valid for three months, and will allow a 30-day stay.

F. Religious and Cultural Concerns or Considerations[14,15]

Religion

In Cambodia, religious freedom is respected by the government and supported by the Constitution. Nonetheless, Theravada Buddhism has been the state religion for eight centuries, and 95% of the country's population follows and practises Buddhism. Islam, Christianity, and other religions make up the remainder.

Culture

The business culture in Cambodia is based on mutual respect, traditions, and hierarchy. It is not unusual for Cambodian businessmen to avoid direct confrontation as they believe that subtlety and conserving the honour of others are more important. Companies usually have a "top-down" structure where the employers and senior employees make all the important decisions.

Source:

[1] *The Cambodian Labour Law, International Labour Organisation*

[2] *Cambodian Labour and Employment Law, khmerlex*

[3] *Minimum Wage – Cambodia, WageIndicator, 2019*

[4] *Cambodia Minimum Wages, Trading Economics, 2019*

[5] *Health Insurance Scheme, National Social Security Fund*

[6] *Contribution Payment, National Social Security Fund*

[7] *The Guide to Employment Permits for Foreign Workers in Cambodia, ASEAN BRIEFING, 2017*

[8] *Cambodia Market Profile, HKTDC, 2019*

[9] *Total labour force (Cambodia), The World Bank*

[10] *APO Productivity Databook, Asian Productivity Organisation*

[11] *Cambodia Socio-Economic Survey, National Institute of Statistics*

[12] *National Technical Vocational Education and Training Policy 2017-2025, The Royal Government of Cambodia*

[13] *Cambodia visas, Move To Cambodia, 2019*

[14] *Doing Business in Cambodia, Expat Arrivals, 2019*

[15] *Religious Beliefs in Cambodia, World Atlas*

5. Research and Development Environment

Executive Summary

Cambodia is currently implementing the National Master Plan of Science and Technology (NSTMP) 2014-2020 in order to transform the country into an economy driven by science and technology (S&T).

The Master Plan focuses on developing every aspect of the S&T ecosystem, and defines six priority areas mainly focused on agriculture technologies. Additional policies are being implemented to develop a strong information and communications technology (ICT) sector in the country.

Cambodia's S&T ecosystem is underdeveloped. The country lacks national, academic, and private research centres. There is a lack of S&T proficient workforce, and intellectual property protection is still developing. Nevertheless, the country seems eager to create a proficient ICT sector and has therefore rolled out specialised funding schemes.

5. Research and Development Environment

I. Science and Technology (S&T) in Cambodia

A. Policies and Trends in S&T

Cambodia's economic development is shaped by strategic plans spanning five years which serve as general roadmaps for the implementation of national priority policies. The country is currently implementing the National Strategic Development Plan (NSDP) 2019-2023. In addition, the government has also drafted a development framework called the Rectangular Strategy (RS). All policies currently implemented in Cambodia fall under one of the four pillars of the RS.

The Four Pillars of the Rectangular Strategy (RS)[1]

Agricultural Sector Promotion *(e.g improve productivity)*	**Infrastructure Development** *(e.g. for transportation and utilities)*	**Private Sector Development** *(e.g. foster small and medium-sized enterprises (SMEs))*	**Capability Building** *(e.g. strengthen education and S&T)*

National Master Plan of Science and Technology (NSTMP) 2014-2020

One of the major policies falling under the Capability Building pillar is the NSTMP 2014-2020, which aims to transform Cambodia into an innovative S&T nation. The NSTMP lays out the following four objectives: 1) establishing the basis of S&T, 2) creating an S&T environment, 3) building research and development (R&D) capabilities and 4) improving core industrial capacities.

In order to achieve these targets, the government focuses on training S&T human resources, improving financial support for S&T, driving R&D, reinforcing international cooperation, strengthening the S&T legal framework, and enhancing public awareness on the importance of S&T. Lastly, the NSTMP defines six national priority areas: agro-processing technology, agricultural engineering technology, biotechnology, textile technology, material design technology, and software and digital content.

Other Policies[2]

In addition, in 2014, the government also drafted the ICT Masterplan 2020. It focuses on expanding information and communications technology (ICT) infrastructure, training a proficient workforce, and increasing digital literacy and the population's access to the internet. This policy was drafted in order to strengthen the effects of the NSTMP.

Outlook[3,4]

Cambodia's innovation capabilities are still very limited. In the 2018 Global Competitiveness Index, the country ranked 96th out of 140 countries below every other ASEAN countries except Laos. Nevertheless, compared to its 2017 ranking (110th), the country has moved up 14 places. Cambodia's lowest scores were recorded in the categories of patent applications (113th), quality of research institutions (112th), and trademark applications (107th). R&D expenditures in the country are also very low, as in 2015 they represented only 0.12% of GDP. However, the country had high scores in the categories of state of cluster development (45th) and buyer sophistication (47th).

B. S&T Related Organisations

There are no specific ministries dedicated to the management of S&T related matters in Cambodia. However, the Ministry of Planning and other specialised entities are in charge of implementing science, technology and innovation strategies.

Ministry of Planning (MOP)[5]

The MOP is generally in charge of drafting and implementing national policies such as the NSDP 2019-2023. With the support of the Korea International Cooperation Agency, it drafted the NSTMP 2014-2020. In addition, the ministry manages specific organisations, including the National Science and Technology Council of Cambodia.

National Science and Technology Council (NSTC)

The NSTC is in charge of developing and promoting S&T in the country. One of its main missions is to coordinate every stakeholder of the S&T ecosystem and to foster cooperation among them. In addition, the NSTC is charged with assessing Cambodia's S&T status (e.g. by conducting national surveys to understand the status on R&D) in order to better implement the NSTMP and keep track of its results.

Other Ministries

Other various ministries are implementing policies to improve the overall Cambodian S&T ecosystem. The Ministry of Education, Youth and Sport is trying to increase S&T awareness; the Ministry of Industry and Handicraft is charged with supporting SMEs; and the Ministry of Labour and Vocational Training is tasked with creating and improving vocational trainings.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[6,7]

In Cambodia, national R&D facilities are very scarce. The majority of facilities are small institutions managed by non-profit and non-governmental organisations. For example, the Cambodian Research Centre for Development was created by an independent association and carries out research in technology transfer, renewable energy, climate change or environmental economics.

The government is willing to upgrade the country's R&D infrastructure to transform Cambodia into a strong S&T nation. Therefore, it supports the Institute of Technology of Cambodia (ITC), which is the main national R&D centre in Cambodia. The ITC focuses on 13 main research fields, among which include:

Agricultural technologies and engineering

Food Processing

Utilities technologies, and management

Environmental issues and climate change

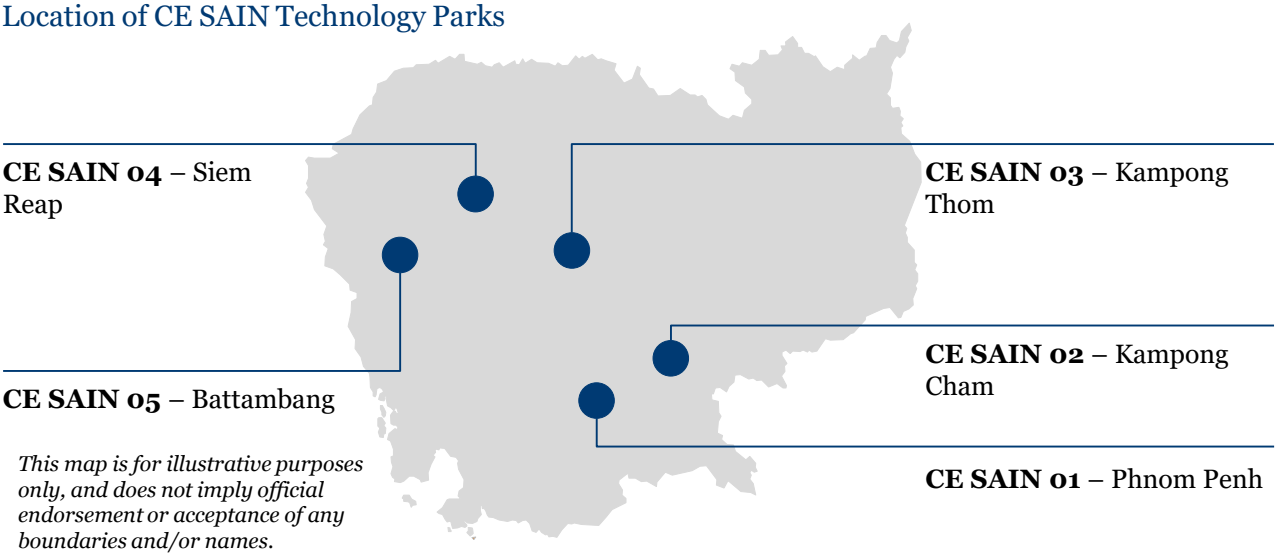
In addition, the government manages the National Institute of Posts, Telecoms and ICT (NIPTICT), which aims to be a major national R&D centre. The NIPTICT mainly focuses on R&D, design and engineering, and technology transfer in ICT.

B. University-based R&D Institutes[8,9]

Apart from the government, universities are usually important players in the R&D field. Every year, QS Institute publishes a ranking of the top universities in Asia. This ranking is based on six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). None of the Cambodian universities are listed in this ranking, indicating that the R&D carried out in Cambodia has nearly no impact in the international S&T scene. However, there are two universities in Cambodia that carry out research in S&T fields. The Royal University of Phnom Penh offers degrees in biology, chemistry, physics, mathematics, computer science and environmental science, while the University of Cambodia has a track specialised in S&T which focuses on computer science and information technology (IT). The University of Cambodia also has four different computer laboratories on its campus.

In addition, the Rural University of Cambodia, the leading agricultural university in the country, is establishing Centers of Excellence on Sustainable Agricultural Intensification and Nutrition (CE SAIN). The CE SAIN are technology parks, which try to attract private investors to participate in agricultural R&D to improve the country's food safety.

Location of CE SAIN Technology Parks



C. Private Business Firms (Research Centres)[10]

Cambodia lacks major private research and innovation facilities. However, since March 2018, an ICT Innovation Center (IIC) has been under construction near Phnom Penh, on the NIPTICT campus. This project, which will host ICT research laboratories, and startups and co-working spaces for private and public companies, is the first of its type nationwide. The USD 4 million construction fee of the IIC is being indirectly funded by telecommunications companies through the national R&D Fund that the companies contribute to annually. The IIC can therefore be considered as a private R&D centre. Once built, the institute will focus on training an ICT proficient workforce, supporting technology startups, and boosting research and innovation in ICT.

D. Infrastructure Availability for Foreign Investments

As Cambodia lacks strong S&T infrastructure, foreign investors cannot benefit from a high number of investment destination options. Nevertheless, the country is trying to attract more foreign direct investment (FDI) in order to upgrade its research capabilities and meet the objectives of the NSTMP 2014-2020.

III. Priority Areas in Cambodia (major exports)[11,12]

The Cambodian economy is supported by a proficient garment industry. In 2018, the country's top five exports were:

Top 5 Exports	% of Total Exports (in 2018)
Apparel and Clothing	64.5%
Footwear	10.5%
Leather and Related Products	4.5%
Electrical Machinery and Equipment	2.7%
Vehicles	2.5%

Due to the structure of its economy, the country does not have hi-tech capabilities. In 2016, less than 1% of total manufactured exports were labelled hi-tech products (e.g. products with high R&D intensity, such as computers, aerospace products, and pharmaceuticals), compared to around 6% for Myanmar.

IV. Funding for S&T, R&D[13]

Before 2017, Cambodia did not have national R&D funds. In 2017, the Ministry of Posts and Telecommunications created two specific funds that are targeted at developing Cambodia's ICT infrastructure. In order to fund these reserves, each of the 31 telecommunications companies in the country is required to contribute a fixed percentage of its annual gross revenue.

Fund	Description	Mandatory Contribution	Total Fund Reserve (Nov 2018)
R&D Fund Capacity Building, Research and Development Fund	Fund intended to develop: • Human capital (e.g. scholarships or trainings); • Research (e.g in internet of things (IoT) or data science); • Innovation (e.g. laboratories); and • ICT companies (e.g. digitalisation of SMEs).	1% of annual gross revenues	USD 4.5 million
USO Fund Universal Service Obligation Fund	Fund intended to develop ICT infrastructure and services in rural areas.	2% of annual gross revenues	USD 9 million

V. Human Resources for S&T[14,15]

Cambodia's S&T labour force is nearly non-existent. According to the latest data available from 2015, the country's ratio of researchers in R&D was 30 per one million people, which adds up to less than 500 full-time researchers nationally. In the 2019 Global Innovation Index, the country ranked 100th out of 126 countries on the criteria "Researchers, FTE/mn pop." below every other ASEAN country (not including Myanmar, Laos, and Brunei, which were not ranked). In addition, Cambodia cannot leverage a strong base of S&T educated people to increase the number of researchers. Indeed, only 15% of the country's tertiary-level students graduated in science and engineering *(Note)*.

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Support in Testing and Verification

Usually, support in testing and verification can be obtained from government agencies. However, in Cambodia, there is no dedicated ministry managing S&T related matters, or supervising S&T institutions, to offer these services to private companies. In addition, the ITC and the NIPTICT are still emerging national R&D centres, and therefore, they focus on carrying out research rather than providing additional services.

VII. Intellectual Property (IP) Policy[16,17]

Cambodia is not ranked in the 2019 IP Index published by the Global Innovation Policy Center, which analyses IP protection in 50 different countries worldwide.

Cambodia has implemented various law concerning IP rights, for example the Law on Copyright (2003), Law on Patents (2003), Law on Trademarks (2002) or the Law on Geographical Indications of Goods (2014). However, the legal framework in the country is still new and in its early years of development. Therefore, the enforcement of IP protection remains a challenge in the country.

Source:

[1] *National Strategic Development Plan 2014 – 2018, Royal Government of Cambodia*

[2] *Cambodian ICT Masterplan 2020, Korea International Cooperation Agency*

[3] *The Global Competitiveness Report 2018, World Economic Forum*

[4] *Research and Development expenditure (as % of GDP), The World Bank*

[5] *Ministry of Planning Homepage*

[6] *Institute of Technology Cambodia homepage*

[7] *NIPTICT homepage*

[8] *QS Asia University Rankings 2019, QS World University Rankings*

[9] *CE SAIN homepage*

[10] *Centre for tech innovation to break ground next month, Khmer Times, 2018*

[11] *Trade Map, International Trade Centre*

[12] *High-technology exports as a share of manufactured exports, World Bank*

[13] *ICT funds collect $13.5 million, Khmer Times, 2018*

[14] *Researchers in R&D per million people, World Bank*

[15] *Global Innovation Index 2018, INSEAD*

[16] *2019 IP Index, Global Innovation Policy Center, 2019*

[17] *Intellectual Property in Cambodia, Startup Cambodia*

6. Supply Chain Environment

Executive Summary

Cambodia's economy is reliant on traditional industries such as the agriculture, garment, tourism, and construction sectors. Exports in Cambodia are heavily reliant on the garment industry, which mostly operates under the Cut/Make/Trim (CMT) model. Industries in Cambodia suffer from not being able to participate along the whole value chain, often due to the lack of either raw materials or a value-added processing industry. In response, the government is promoting information and communications technology (ICT) development, with the aim of using ICT to assist in the modernisation of industries.

Logistics and transport infrastructure in Cambodia are also lacking, with existing facilities either outdated or in disrepair. However, with the assistance of foreign countries such as Mainland China, Japan, and other Southeast Asian countries, Cambodia is expanding, upgrading, and modernising its infrastructure.

6. Supply Chain Environment

I. Industry Profiles in Cambodia

Breakdown of 2018's Top 10 Exports[1,2,3]

Cambodia's major sectors by gross domestic product (GDP) in 2017 were services (41.9%), industry (32.8%) and agriculture (25.3%).

In Cambodia, the services sector mainly includes tourism, construction, finance, and telecommunications. The major industries are garment, footwear, and leather products. The primary products dominating the agricultural industry are rice, maize, cassava, and sugarcane.

In 2018, Cambodia's total global shipments amounted to USD 19 billion of which over 90% were contributed by its top 10 exports.

Product Groups	Value	% of Total Exports
1. Apparel and clothing, knitted or crocheted	USD 8,422 million	44.4%
2. Apparel and clothing, not knitted or crocheted	USD 3,809 million	20.1%
3. Footwear and related products	USD 2,001 million	10.5%
4. Leather and leather products	USD 863 million	4.5%
5. Electrical machinery and equipment	USD 514 million	2.7%
6. Vehicles other than railway and trams	USD 471 million	2.5%
7. Cereals	USD 404 million	2.1%
8. Furs and fur products	USD 283 million	1.5%
9. Plastics and related products	USD 242 million	1.3%
10. Edible vegetables	USD 218 million	1.1%

Cambodia's exports are heavily dominated by the garment industry, making up over 60% of total exports in 2018. Cambodia's two main exports markets are the EU and the US, respectively accounting for around 40% and 30% of the country's total garment manufacturing exports. However, the potential suspension of Cambodia's trade preference status by the EU and US may pose significant challenges to the country's garment exports.

Other major exports of Cambodia include tanned furs (largest exporter in the world), bicycles (fourth largest globally), and rice (10th largest globally).

II. The Key Supported Industries in Cambodia[4,5]

Cambodia is one of the last frontier markets in Asia, and also one of Asia's fastest-growing economies, with an average annual GDP growth of over 7% for more than twenty years. In 2018, Cambodia received around USD 3.1 billion in Foreign Direct Investment (FDI), with Mainland China being the country's largest investor.

Exports in Cambodia are heavily dominated by the garment and footwear industries, together accounting for over 70% of exports in 2018. The garment industry is also historically the sector attracting the most FDI in the country out of all manufacturing industries. Other major FDI recipient industries include infrastructure as well as information and communications technology (ICT).

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations[6,7,8]

Garment

The garment industry is one of the four economic pillars of Cambodia. It accounts for over 60% of exports, and employs over 600,000 workers, making the sector one of the biggest employers in the country. Many major global apparel companies such as Adidas, Gap, H&M, and Uniqlo, purchase from the Cambodian garment industry.

Most of the garment factories in the country operate using the cut-make-trim (CMT) model. The CMT model is similar to the Cut, Make, and Package (CMP) process used in Myanmar garment factories. In the CMT model, all the raw materials, machinery, and designs are imported by overseas customers. The fabrics are then cut and sewn in local factories before exporting to the customers. The main foreign countries dominating the Cambodian garment industry are Hong Kong, Mainland China, Singapore, and Korea. The industry is labour intensive, but only requires low-skilled workers. Therefore, a country like Cambodia, which has a large population living near or below the poverty line with low education, provides the industry with a large pool of low-cost and low-skilled workers.

The CMT model allows Cambodia to take advantage of its low-cost labour force. However, Cambodia does not have an established textile industry, and therefore needs to import most of the raw materials required. This restricts the Cambodian garment industry to only using the CMT model, as it cannot produce apparel domestically, and must rely on foreign companies.

Information and communication technology

While the ICT industry in Cambodia is currently relatively weak, the Cambodian government is committed to developing the industry, with the aim of using ICT to assist in modernising and optimising other industries in the country. With that in mind, the government has developed the ICT Masterplan 2020.

Under the ICT Masterplan 2020, the Cambodian government has cooperated with many other countries to improve Cambodia's telecommunications infrastructure. In January 2018, Cambodia launched a programme with Japan which focuses on developing human resources in the ICT sector. In March 2019, the Cambodian and Indian governments signed a memorandum of understanding to exchange ICT knowledge, assist in cybersecurity, and cooperate in development. Cambodian students have also been travelling to Mainland China to learn from Huawei under its "Seeds for the Future" programme. Through cooperating with other countries, the government aims to better train its workforce, and upgrade the country's economy.

III. Key Raw Materials Sourcing Platforms/Channels[9,10]

Industry exhibitions and trade fairs are often held by the Ministry of Industry and supported by the Ministry of Commerce. For example, the garment industry holds both the Cambodia International Textile & Apparel Accessories Exhibition (CitaTex), and the Cambodia International Textile & Garment Industry Exhibition (CTG) in August. The machinery industry benefits from the Cambodia International Machinery Industry Fair (CIMIF), which covers the automotive, printing, plastics, hardware, electronics, and packaging industries, among others. These exhibitions are all held at the Diamond Island Convention & Exhibition Center in Phnom Penh, and both allows Cambodian companies to showcase their products and for foreign companies to source materials from Cambodia.

IV. Procurement Situation (local and oversea) of Raw Materials

A. Hurdles or Problems Encountered[11]

Most industries in Cambodia are focused only on one step of the industry's value chain. This is mostly due to the lack of a skilled workforce, and a lack of processing machinery and infrastructure needed to produce more value-added products. For example, the export-focused garment industry primarily operates using the CMT model to take advantage of cheap labour. The garment industry is unable to develop beyond the CMT model due to the inadequacy of the domestic textile industry, resulting in the garment industry relying on imported raw materials. On the other hand, the agriculture industry in Cambodia only produces raw materials. Due to the inadequate domestic agro-processing industry in the country, farmers are only able to sell raw unprocessed products. This makes the domestic industry vulnerable to fluctuating global prices on raw materials, and prevents the country from making better profits from more value-added products.

According to the 2019 report by the World Bank, Cambodia is ranked 138th in the world in terms of ease of doing business, and is ranked eighth out of the ASEAN countries (Hong Kong is ranked fourth globally in the same report). While Cambodia ranks poorly in Starting a Business (185th), Dealing with Construction (179th), and Enforcing Contracts (162nd), it ranks well in Getting Credit (22nd) and Resolving Insolvency (79th).

B. Efficiency of Customs and Clearance Process[12]

Cambodia applies two systems of tariff classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Cambodia and the other ASEAN countries, whilst the Harmonized Commodity Description and Coding System (commonly called the HS Code) applies for trade with non-ASEAN countries. For more information regarding tariff classification, please refer to the Customs Tariff of Cambodia 2017 (www.customs.gov.kh/publication-and-resources/customs-tariff-of-cambodia-2017/)

All imports and exports in Cambodia are governed by the Law on Customs, enacted in 2007. The Law on Customs is supplemented by various supporting regulations that specify procedures for different methods of entry or exit of goods into or out of Cambodia.

Importers and exporters in Cambodia must register with a number of government departments in order to be allowed to import and export. Both importers and exporters will need to register with the Department of Business Registration. Cambodia uses the Automated System on Customs Data (ASYCUDA), which requires a Taxpayer Identification Number (TIN). In order to get a TIN, importers and exporters will also need to register with the General Department of Taxation. They will then need to register with the General Department of Customs and Excise, then register the value added tax (VAT) accounts with the General Department of Taxation again.

Businesses operating in the Special Economic Zones (SEZs) will instead need to apply with the Free Zone Management Department, which is part of the General Department of Customs and Excise.

Customs Clearance Process[13]

Goods Declaration → **Selectivity System** → **Examination of Goods** → **Inspection and Release of Cargo**

Step 1:

Goods imported or exported are subject to customs declaration. Goods are lodged in the Single Administration Document (SAD) using the ASYCUDA.

Relevant list of documents are required for submission to the customs officer at the place where the goods are imported/exported.

Step 2:

The ASYCUDA will categorise goods into one of these four controlled channels:

- Green: SAD automatically assessed
- Yellow: SAD must be checked against documents
- Red: SAD must be checked against documents and goods physically inspected
- Blue: to be considered for post-clearance audit

Step 3:

Goods in the yellow or red channel will need to go through documentary checks and examination if appropriate. Container scanning will allow the customs officer to compare the SAD to the goods found in the scan.

Step 4:

Goods will be assessed and valued for duties, taxes, and fees.

After payment of duties, taxes, and fees, Customs will issue the Cargo Release Note authorising the release of cargo.

SAD processed under the blue channel may be subject to post-clearance audit.

The following table shows the documents needed for customs declaration in addition to the SAD:

#	Import and Export Goods
1	Invoice
2	Bill of lading or air waybill
3	Packing list
4	Manifest, if necessary
5	Import/export permit or clearance, if necessary
6	Certificate of Origin, if necessary
7	Certificate of Insurance, if necessary
8	Any other specific documents required by specific regulations

For specific regulations regarding the customs clearance process, please refer to the Handbook on Customs Clearance issued by the General Department of Customs and Excise of Cambodia (GDCE) (www.customs.gov.kh/wp-content/uploads/2015/10/Handbook-on-Customs-Clearance-EN-Final-Oct-19.pdf)

V. Logistic Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[14,15,16,17,18]

Cambodia suffers from poorly maintained and outdated logistics infrastructure. Many of the country's transport infrastructures were built during the colonial period by foreign countries, and now suffer from decades of neglect and disrepair. However, the Cambodian government is committed to developing the country's infrastructure: it is currently implementing the Logistics Master Plan Development, and additionally approved many expansion plans for air, sea, road, and rail transport.

Airports

Cambodia has 11 airports, of which three are international airports: Phnom Penh International Airport (PNH), Siem Reap International Airport (REP), and Sihanoukville International Airport (KOS). The three airports combined handled around 10 million passengers in 2018. This number is expected to grow in the near future due to growing tourism in the country. In 2018, around 30% of the country's tourists originated form Mainland China.

Seaports

Cambodia has two major ports that handle international shipments: Phnom Penh Port, and Sihanoukville Port. Phnom Penh is a river port, while Sihanoukville is a deep water port. Phnom Penh is located at the junction of the Bassac, Mekong, and Tonle Sap rivers, and handled 205,000 TEUs in 2018. The Kampot Port, which began construction in August 2018, is expected to be completed by the end of 2019. It was funded by the Asian Development Bank, and is expected to sustain the increase in tourism in the region.

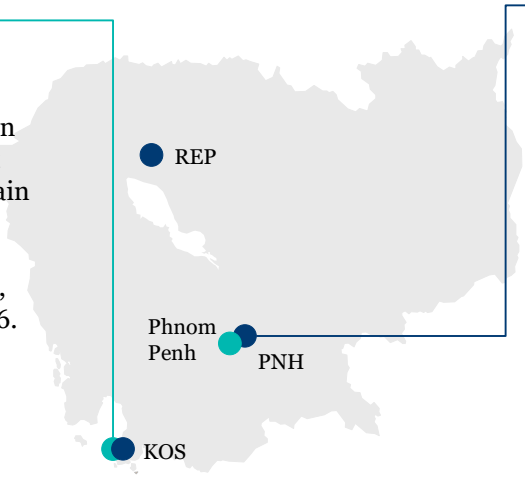
Waterways are also very important to domestic trade and travel. The Mekong and Tonle Sap rivers provide around 1,750 km of navigable waterways. The rivers are still the main form of transport for many villagers, both in transporting passengers and in transporting cargo.

Locations of Major Airports and Seaports

International Airports
Ports

Sihanoukville Autonomous Port (SAP)

As the only deep water port in Cambodia, SAP is the largest port in Cambodia and the main gateway for seaborne cargo. SAP handled around 70% of container trade in Cambodia, (over 400,000 TEUs) in 2016. SAP is expected to complete construction of a new container terminal by 2023, allowing the port to handle larger container ships.



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Phnom Penh International Airport

As the largest airport in Cambodia, this airport is located 10 km west of Phnom Penh. It is currently running overcapacity as it handled more than 5 million passengers in 2018. The airport just underwent an expansion project. However, due to limited space, the government approved a USD 1.5 billion project to build a new airport to cope with increasing influx of tourists.

Highways

The road network in Cambodia is over 61,000 km long, but only around 10,000 km (18%) of it is paved. Nevertheless, road transport accounts for over 70% of total cargo traffic in Cambodia. There are nine National Roads, mostly originating from Phnom Penh. Cambodia is also building expressways with the help of Mainland China, as part of Mainland China's Belt and Road Initiative (BRI). The first expressway in Cambodia will be built by the China Road and Bridge Corp. between the capital of Phnom Penh and the export hub of Sihanoukville, and is expected to cost around USD 1.9 billion.

Railways

Cambodia has over 600 km of railways, but most of them are not in use due to years of poor maintenance. Currently, the railway in Cambodia consists of two lines. One line starts in Phnom Penh and ends in Sihanoukville, while the other starts in Phnom Penh and ends in Poipet. The Phnom Penh-Sihanoukville route was reinstated in 2016, and the Phnom Penh-Poipet line was reopened in 2018. A cross-border link from Poipet to Arayprathet in Thailand was inaugurated in April 2019, connecting the two countries by rail for the first time in 45 years.

B. Key Logistics Hubs[19]

Currently, most of the logistics infrastructure in Cambodia are concentrated around the capital of Phnom Penh, and the export hub of Sihanoukville. To upgrade the country's poor logistics infrastructure, the government cooperated with the World Bank and the Japan International Cooperation Agency (JICA) to create Logistics Master Plan Development. Under this plan, Cambodia will develop three main economic corridors: one between Phnom Penh and the export hub of Sihanoukville, and two between Phnom Penh and the industrial centres of Poipet and Bavet. The master plan will be accomplished in three stages:

1) Short-term (2018 – 2019): enhance transport infrastructure, smoother transits and border points, and simplify customs permit applications and inspections;
2) Medium-term (2020 – 2022): reach global standards on infrastructure, internationalised permits and inspections, and harmonising cross-border operations with Thailand and Vietnam; and
3) Long-term (2023 – 2025): establish efficient transport networks and hubs to facilitate optimal transport, high connectivity with other countries in the region, and diversified logistics services.

C. Logistics Information Tractability and Transparency[20]

Cambodia has a relatively poor logistics performance as compared to the other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Cambodia was ranked 98th out of 160 countries for the overall LPI, a large drop from the 2016 result (ranked 73rd out of 160). Cambodia ranked ninth among the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing, and (6) Timeliness. Cambodia ranked relatively better in International shipments (71st), but scored poorly in Infrastructure (130th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Cambodia, Central Intelligence Agency*

[3] *Cambodia, Observatory of Economic Complexity*

[4] *ASEAN Investment Report 2018, The ASEAN Secretariat*

[5] *Cambodia's Garment Manufacturing Industry, Dezan Shira & Associates, Nov 2018*

[6] *Summary on Cambodian ICT Masterplan 2020, Korea International Cooperation Agency, 2014*

[7] *Government links up with Japan to strengthen ICT sector, Phnom Penh Post, Jan 2018*

[8] *Cambodia, India to cooperate on ICT, Phnom Penh Post, Mar 2019*

[9] *Citatex, Chan Chao International Co., Ltd.*

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[13] *Handbook on Customs Clearance, General Department of Customs and Excise of Cambodia, Oct 2015*

[14] *Airports in Cambodia expect 10 million passengers in 2018, Bangkok Post, Dec 2018*

[15] *Cambodia: Opportunities and Challenges in the Logistics Sector, HKTDC, Jun 2017*

[16] *Government approves plan to relocate Phnom Penh's airport, Phnom Penh Post, Jan 2018*

[17] *Chinese investment in Cambodia is bringing Phnom Penh closer to Beijing – and further from the EU, SCMP, May 2019*

[18] *Cambodia – Thailand rail link inaugurated by prime ministers, Railway Gazette, Apr 2019*

[19] *Logistics Master Plan Development in the Kingdom of Cambodia, Ministry of Public Works and Transport, Dec 2017*

[20] *Logistics Performance Index (LPI), The World Bank, 2018*

7. Infrastructure

Executive Summary

Cambodia's infrastructure and industrial estates ecosystem are still developing.

There are currently only three industrial estates and 11 operational Special Economic Zones (SEZs) in the country, which cater mainly to manufacturing companies. The industrial estates and SEZs are mainly concentrated around four strategic locations: Phnom Penh (Cambodia's capital), Sihanoukville (the country's only deep water port), Poipet (near the Thai border) and Bavet (near the Vietnamese border).

Cambodia is forecasted to need an overall of around USD 87 billion to upgrade its infrastructure between 2016 and 2040. Most of the future investments will be carried out via public private partnerships or by foreign companies (mainly Mainland Chinese and Japanese ones). However, by 2040, less than 70% of Cambodia's infrastructure needs is expected to be met.

7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates[1,2,3]

In Cambodia, there is no official authority managing the development of industrial estates, and therefore, no official source lists the number of operating industrial parks in the country. Overall, it seems that Mainland China and Hong Kong companies looking to expand their manufacturing footprint to Cambodia can choose to locate their operations in the following three industrial parks located around Phnom Penh: Y Seven Industrial Park, Canadia Industrial Park, and Vattanac Industrial Park.

In addition, in Cambodia, most of the Special Economic Zones (SEZs) can be considered as industrial parks as they usually include General Industrial Zones and/or Export Processing Zones. The Council for the Development of Cambodia (CDC), has approved about 45 SEZ projects and 11 are currently operational.

Support and Incentives

When considering establishing in Cambodia's SEZs and/or industrial estates, it is important to consider the availability of utilities, the transportation networks leading to the estate, and the incentives provided by the government.

Utilities

The country's main SEZs and/or industrial estates offer underground water and drainage facilities, and electricity is usually supplied via public transmission. Some SEZs additionally offer accommodation for management staff, along with banks, clinics, or grocery shops.

Transportation

The industrial estates and SEZs located near Phnom Penh will benefit from a privilege access to the established transportation networks such as National Roads.

Government Incentives

Companies choosing to locate their manufacturing operations in Cambodia's SEZs are eligible for fiscal and non-fiscal incentives. The Cambodian Special Economic Zone Board (CSEZB) is in charge of examining the investors and has the power to provide the following incentives, among others:

- Fiscal incentives such as custom duty exemption on import of specific goods (e.g. machinery), 0% value added tax rate or profit tax exemption;
- Non-fiscal incentives such as special customs procedures or non-discriminatory treatments towards foreign employees.

For further details regarding incentives, please refer to section 9, or the CDC's official homepage (www.cambodiainvestment.gov.kh/investment-scheme/investment-incentives.html)

Industrial Estates and SEZ's Location and Regional Implications

Number of SEZ Industrial Parks # SEZ

Vattanac Industrial Park

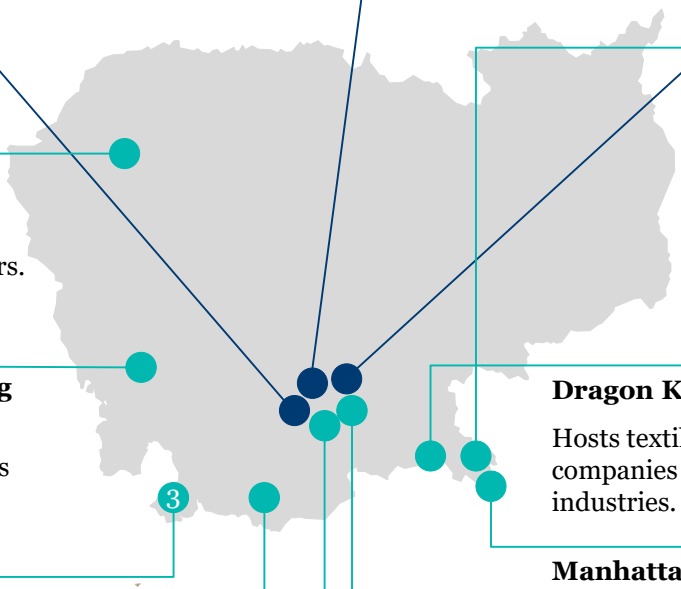
Hosts mainly garment manufacturers which employ a total of 10,000 workers operating across two parks.

Canadia Industrial Park

Hosts around 50 garment, textile, or packaging manufacturers, aiming to export their production to Europe and the US.

Y Seven Industrial Park

Hosts mainly garment manufacturers.



Tai Seng Bavet

Import/export-focused SEZ located near the Vietnamese border. It hosts bicycle, footwear and garment manufacturers.

Poi Pet O'Neang

Hosts vehicles or packaging manufacturers.

Neang Kok Koh Kong

Hosts vehicle assembly factories and spare parts manufacturers.

Dragon King

Hosts textile manufacturers and companies engaged in hi-tech industries.

Manhattan

SEZ located near Ho Chi Minh Port, and is therefore tailored for import and export industries. It hosts bicycle, packaging, footwear, and garment manufacturers.

Sihanoukville

The country's largest SEZ, which can host up to 300 factories, is co-developed by Mainland Chinese and Cambodian companies. It is strategically located near Cambodia's only deep water port.

It hosts around 160 companies engaging in motor and bicycle assembly, garment and footwear manufacturing, or plastic production.

Phnom Penh

One of the country's most developed SEZs, which is a result of a collaboration between Cambodia and Japan. It is located 8km away from Cambodia's capital (Phnom Penh) thus granting companies access to a large pool of workers.

It hosts around 80 companies engaged in motor assembly, metal processing, textile and footwear manufacturing, or food processing.

Goldfame Pak Shun

Hosts carton, plastic labels printing and knitting factories.

Kampot

SEZ which harbours a USD 100 million deep seaport project.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Foreign Direct Investment (FDI)[4,5]

In 2018, Cambodia received around USD 3.1 billion in FDI, a 15% increase compared with USD 2.7 billion in 2017. In 2018, Mainland China was by far the country's leading investor, representing more than 50% of the total FDI, followed by Hong Kong and the US. The top three sectors attracting the most FDI were construction, infrastructure and manufacturing. Within the manufacturing sector, garment attracts the most FDI, but assembly and electronics production are receiving an increasing amount of capital.

Cost of Usage

Companies choosing to locate their manufacturing operations in SEZs or industrial estates are usually charged with three main types of fees: 1) land renting price and land tax, 2) maintenance, and 3) water and other utilities.

The land price in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links, proximity and access to raw materials etc. In Cambodia, the most expensive locations are the two most advanced SEZs: Sihanoukville and Phnom Penh. These SEZs benefit from access to various transportation networks, such as National Roads or ports, and are close to the country's key logistic hubs.

Please refer to Appendix 1 for more details or visit the CDC homepage for information concerning utility, telecommunications and logistic costs (www.cambodiainvestment.gov.kh/why-invest-in-cambodia/investment-enviroment/cost-of-doing-business/real-estate-cost.html)

Outlook[6]

The Cambodian SEZ ecosystem is still developing. Currently, there are only 11 operating SEZs in Cambodia, while the CDC has approved around 45 development projects. The exact status of each project is not clear. However, it is estimated that the other 34 SEZs are under construction. In the near future, the ecosystem will specifically be linked to investments coming from Mainland China and Japan. For example, the country could benefit from the US-Mainland China trade war by positioning itself as a viable manufacturing destination for companies looking to relocate their operations. In addition, Cambodia is looking to leverage foreign investors' knowledge to create industrial estates and/or SEZs targeting small and medium-sized enterprises (SMEs) and non-garment industries.

B. Land or Building for the Major Industrial Estates[7]

Availability for Foreign Ownership and Terms

Article 16 of the Law on Investment of the Kingdom of Cambodia defines the land ownership and usage restrictions, which apply to foreign investors. Foreign companies are prohibited from owning land for the purpose of carrying out promoted investment activities (please refer to section 8 for more details). Indeed, only Cambodian citizens or legal entities with at least 51% Cambodian ownership are allowed to own land for this purpose. However, foreign investors can sign long-term leases of a maximum period of 70 years, which are renewable.

Application Procedures for Business Operations in SEZs

Usually, Cambodia's SEZs offer onsite one-stop services for application and registration. Various government authorities (e.g. the CDC, Ministry of Commerce, Customs, Camcontrol, and the Ministry of Labour) have representative offices in the SEZs, and the one-stop services centres offer services such as: documentation processing for registration, investment licensing, and export/import permits, or work permits.

II. Potential Infrastructure Shortfall[8,9]

In the World Economic Forum's 2018 Competitiveness Report, Cambodia ranked 112nd out of 140 countries for the quality of its infrastructure, which is below every other ASEAN country (except Myanmar which is not ranked in this report). The major problems of the country's infrastructure are:

- Very low electrification rate (115th), with only 59.7% of population having access to electricity;
- Inefficient air transport services (114th);
- Inefficient train services (109th);
- Poor quality of roads (100th) and poor road connectivity (100th).

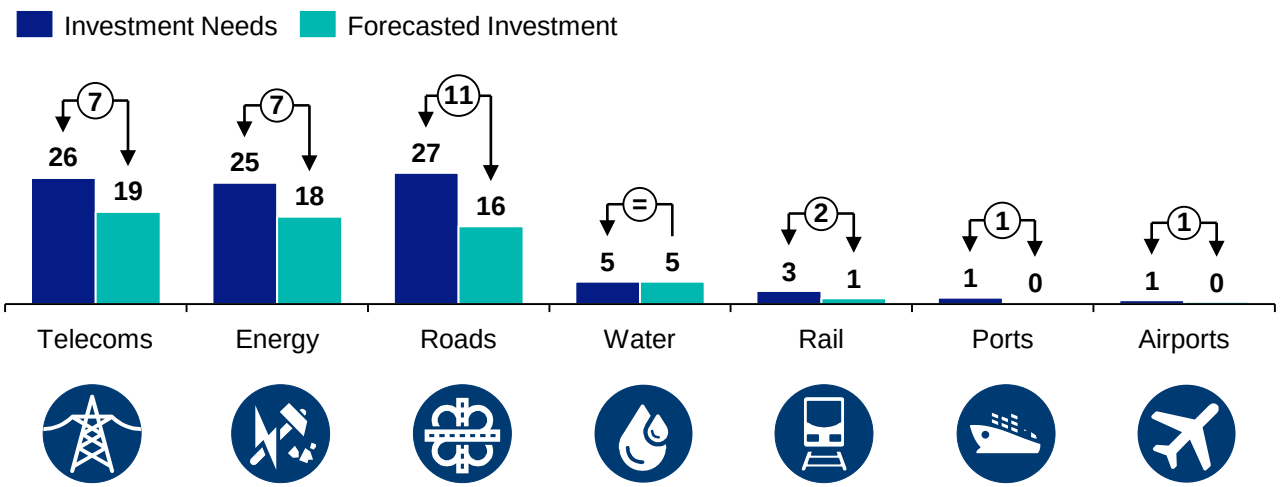
In addition, the development of infrastructure, especially in urban areas, struggles to keep up with the growing population. For example, even in the country's most advanced infrastructure areas (e.g. Phnom Penh), road congestion is increasingly an issue, with a lack of suitable alternatives such as light rail.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending[10,11]

Through the Ministry of Public Work and Transport, Cambodia published the Logistic Master Plan Development in 2018, which is meant to address the country's lack of infrastructure. The plan mainly focuses on upgrading and building new infrastructure in the country's four major logistics hubs: Phnom Penh (the capital), Sihanoukville port (the country's only deep seaport) and Bavet and Poipet which are near the borders with Vietnam and Thailand respectively. The total investment budget and list of specific infrastructure projects are not provided in the available Master Plan documents.

According to Global Infrastructure Outlook by G20 in 2017, from 2016 to 2040, around USD 87 billion will be needed to upgrade or build new infrastructure in Cambodia (see chart below for breakdown by sector). Over the period, it is forecasted that the country's public and private sectors will invest USD 59 billion, therefore covering around 70% of the country's needs. The main infrastructure that will suffer the most from the lack of investments are: roads (USD 11 billion gap), telecommunications (USD 7 billion gap) and energy (USD 7 billion gap).

Cambodia's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



The following section highlights the major infrastructure developments in Cambodia.

Transportation

Roads[12,13]

It is estimated that by 2040, USD 27 billion will need to be invested on the roads in Cambodia, which represents the construction of around 2,200 km of roads. Currently, there is one expressway project underway in Cambodia, and another one which is being considered by the government:

- The Phnom Penh-Sihanoukville expressway is a USD 1.9 billion project funded by Mainland China. Construction of the new highway, which will span over 190 km and contain four lanes, started in 2019 and is expected to be completed by 2023. Once completed, it will be the country's first expressway.
- The Phnom Penh-Bavet Expressway is currently under consideration. According to the Japan International Cooperation Agency (JICA), the 160 km highway would cost USD 3.8 billion. The Cambodian government has not yet decided whether or not to build it.

Rail[14]

It is estimated that between 2009 and 2019, Cambodia spent around USD 227 million to restore and upgrade its Northern and Southern railways. As of August 2019, there are no official undergoing or planned railways projects. However, the Cambodian Prime Minister asked the China Railway Construction Corporation in April 2019 to partner with the local Royal Group of Cambodia in order to further develop the country's railroad network.

Ports[15]

In Cambodia, several new or improvement port projects, mostly around Sihanoukville, Kampot and Koh Kong, are underway:

- The Sihanoukville port expansion is a USD 205 million project funded by the JICA. The construction of a new container terminal started in 2019 and is expected to be completed by 2023. This will increase the port's capacity from 700,000 TEUs to around 1.3 million TEUs a year.
- Construction of the Kampot international seaport. The USD 18 million project is funded by the Asian Development Bank (ADB) with the aim of boosting tourism in Cambodia.

Airports[16,17]

In addition to the completed expansion of the Phnom Penh airport, there are two other major undergoing projects in Cambodia:

- The new Siem Reap Angkor International Airport. The USD 880 million project will create the largest airport in Cambodia. After completion of the first construction phase, the airport will be able to receive 7 million passengers a year.
- The new Dara Sakor International Airport. The Mainland Chinese-funded project (USD 200 million for the first phase) aims to create a new airport in Koh Kong, which should start operating in 2020.

Utilities

Water[18]

In order to ensure public health safety, the Cambodian government established the Department of Construction of Sewage Treatment System. It is charged with managing the wastewater treatment systems located in Siem Reap, Battambang and Sihanoukville and study and/or implement additional projects related to this topic. In addition, the ADB is financing projects related to the construction of new/expansion of sewers and wastewater treatment plants in multiple Cambodian cities.

Energy[19,20,21]

Cambodia is looking to reach 100% electrification rate by 2020. In order to cope with the increasing electricity demand, a coal-fired power plant, and other renewable energy projects are being planned.

- As of June 2019, Royal Group is conducting a feasibility study to build a 700-megawatt coal-fired power plant in Preah Sihanouk province.
- In December 2018, the country's largest hydropower dam started producing electricity. The 400-megawatt dam was built under a Mainland Chinese-Cambodian joint venture and cost around USD 800 million.
- In January 2019, the US company Gideon Group announced its intention to invest USD 488 million to build a 135-megawatt solar plant in Kandal Province.

Telecommunications[22]

Cambodia is aiming to boost the telecommunications sector in the country. To do so, the government struck a public private partnership with the Mainland Chinese-owned Southeast Asia Telecommunications (Seatel). The company already invested USD 300 million in Cambodia to install 12,000 km of fibre optic cables across the country. Seatel additionally pledged to invest USD 200 million to provide most Cambodian citizens with affordable high-speed internet.

IV. Availability of Natural Resources[23,24,25,26,27,28,29,30]

Natural Resource	Details
Natural Vegetation, Forests and Timber	• There are different landscapes in Cambodia, such as dry forests in the north and northeast, deciduous forests in the eastern highlands and rainforests in the south. • Two major factors endangering the Cambodian forests are illegal logging and the growth of rubber plantations.
Agriculture	• Agriculture accounts for around 25% of Cambodia's GDP and employs the majority of the country's workforce. • Rice is the country's major crop and food. • Other products include cassava, corn, sugarcane, soybean and coconuts.
Fishing/ Aquaculture	• Cambodia mainly relies on its inland fisheries which are part of the Mekong River system • The usual fish caught in fresh water are perch, carp, lungfish, and smelt. • It is estimated that in 2015, the Tonle Sap lake employed 2 million people throughout the entire fishing value chain. • Overfishing and environmental degradation are major concerns affecting large-scale fishing in Cambodia's Tonle Sap Lake
Livestock	• The livestock industry witnessed strong growth in the past years. Between 2015 and 2016, the total animal production grew by 5%, swine grew by 7%, and poultry by 4%. • The government estimates that 300,000 tonnes of meat would be needed by 2020.
Water Resources	• Inland fisheries are an important industry in Cambodia. The country relies more on freshwater (Mekong River and Tonle Sap Lake) than on coastal areas. • Around 75% of Cambodia's renewable freshwater comes from other countries (mainly Laos), and the country therefore has a very high dependency ratio.
Minerals	• The mining industry is still developing in Cambodia: it contributed to around 2.5% of national revenue in 2018, and is expected to contribute 10% in 2023. • There are no major industrial-scale extractions of minerals in the country. The industry is composed of small-scale quarries producing construction materials (e.g. limestone, granite, marble, granite) and artisanal miners recovering gold and gemstones.
Coal, Oil and Fossil Fuels	• In Cambodia, coal accounted for more than 35% of the total yearly electricity production in 2018. The country aims to reach nationwide electrification by 2020. To face the increasing demand, the government has already approved the construction of two new coal-fired power plants (at least three coal power plants are operational in the country). • Cambodia has reduced the proportion of imported electricity from 63% in 2011 to 19% in 2017.
Renewable Energy	• In Cambodia, hydropower accounted for nearly 40% of the total yearly electricity production in 2018. However, the country needs to overcome the challenging dry season during which electricity production drops by 25%. • Solar power is expected to grow at a high speed in the near future. Investors from Mainland China, Singapore and the US are in the process of building solar power plants in the country.

Source:

[1] *The Council for the Development of Cambodia Homepage*

[2] *Cambodia: SEZs in Focus, HKTDC, 2017*

[3] *Strengthening connectivity through the southern economic corridor, Japan International Cooperation Agency*

[4] *Cambodia Foreign Investment, Santander*

[5] *Inflow of FDI up in first half, The Phnom Penh Post*

[6] *Cambodia's Investment Outlook for 2019, ASEAN Briefing, 2019*

[7] *Law on the Investment of the Kingdom of Cambodia*

[8] *The Global Competitiveness Report 2018, World Economic Forum*

[9] *Infrastructure development struggles to keep pace with needs of a growing city, The Phnom Penh Post*

[10] *Logistics master plan ready for submission, Khmer Times, 2018*

[11] *Global Infrastructure Outlook 2017, G20*

[12] *Feasibility study on new expressway completed, Khmer Times, 2018*

[13] *Sihanoukville highway work to begin, The Phnom Penh Post, 2019*

[14] *CRRC of China set to partner Royal Railways to improve railroads in Cambodia, Khmer Times, 2019*

[15] *Port of Sihanoukville poised for double digit growth, Khmer Times, 2018*

[16] *Shanxi helps construct Cambodia's largest airport, Khmer Times, 2019*

[17] *New airport to be operational in 2020, Khmer Times, 2019*

[18] *Improving sanitation and wastewater treatment in Cambodia, Ramboll, 2019*

[19] *Royal Group to do study on 700 MW power plant, Khmer Times, 2019*

[20] *Cambodia's biggest hydropower dam now producing electricity, Bangkok Post, 2018*

[21] *Biggest solar project yet gets half billion in funding, Khmer Times, 2019*

[22] *Telecom Cambodia and Seatel team up to boost telco sector, Khmer Times, 2019*

[23] *Encyclopaedia Britannica, Cambodia*

[24] *Fisheries production and water ressources in Cambodia, Open Development*

[25] *Rising Cambodia's livestock sector a lifeline for farmers' prosperity, The Phnom Penh Post, 2019*

[26] *Minning in Cambodia, Open Development*

[27] *Mining industry expected to be viable from late this year, The Phnom Penh Post, 2019*

[28] *Energy-hungry Cambodia shows no sign of backing down on coal, Eco-Business, 2018*

[29] *Cambodia's rising renewable energy supply to grow, The Phnom Penh Post, 2019*

[30] *Cambodia's Renewable Energy Prospects, Leaders in Energy*

8. Types of Industries Encouraged by the Local Government

Executive Summary

The Law on Investment of the Kingdom of Cambodia defines and governs the establishment and benefits of the Qualified Investment Projects (QIPs). QIPs are entitled to incentives and privileges including, but not limited to, tax and customs duty exemptions. Except for the prohibited and restricted industries listed in the Law on Investment, investments in all industries are eligible for QIPs.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1,2,3,4]

In Cambodia, investments in a wide range of industries are promoted. According to the Council for the Development of Cambodia (CDC), Cambodia does not and will not discriminate against any kind of investment, and offers incentives focusing on industries such as agriculture and agro-industries; labour-intensive industries such as garment, tourism, and mining.

The Law on Investment enacted in 1994 governs all investments in Cambodia, and establishes the Qualified Investment Project (QIP) incentive programme, which is the main investment incentive in Cambodia for foreign investors.

Qualified Investment Projects (QIPs)

To encourage and attract foreign investments, Cambodia offers various investment incentives to projects recognised as QIPs. Companies can apply to the CDC for their projects to be recognised as a QIP. QIPs are entitled to various fiscal and non-fiscal benefits as entailed in the Law on Investment. The main two benefits available are profit tax exemption or special depreciation allowance. Businesses may only select one of these two main benefits. For more details on the specific incentives provided to QIPs, please refer to section 9.

Investment projects in any industries except for those listed as prohibited or restricted in the Law on Investment (see the following section) are eligible to qualify as QIPs. Different industries will have different minimum required investment amounts to be eligible for incentives, for example:

- Requiring an investment capital of more than USD 300,000:


Leather and Related Products


Metals and Related Products


Electrical and Electronic Appliances


Toys and Sporting Goods


Motor Vehicles

- Requiring an investment capital of more than USD 500,000:


Food and Beverage

Garment and Textile


Furniture and Fixtures


Paper and Related Products


Rubber and Plastic Products

For a detailed list of the minimum required capital for different industries, please refer to the CDC's official website (www.cambodiainvestment.gov.kh/investment-scheme/investment-incentives.html).

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[5,6]

The lists of business activities that foreign investors are prohibited from, and activities that are not eligible for incentives are provided in the Negative List in Annex 1 of the Sub-decree on the Implementation of the Law on the Amendment to the Law on Investment of the Kingdom of Cambodia.

Section	Status	List of Prohibited or Restricted Industries
Section One	• Prohibited by Law and Sub-decrees	• Production or processing of psychotropic and narcotic substances; • Production of poisonous chemicals, and other goods using chemical substances prohibited by international regulations or the World Health Organization, negatively affecting public health or the environment; • Processing and production of electrical power by using any waste imported from a foreign country; and • Forestry exploitation business prohibited by the Forestry Law.
Section Two	• Not eligible for incentives	46 industries and sectors listed in Section Two of Annex 1 of the Sub-decree including, but not limited to: • Currency and financial businesses and services, including banks, insurance, financial intermediation, etc.; • Professional services; • Tourism; • Production of tobacco products; • Casino or gambling businesses; and • Investments not meeting the required minimum capital of the relevant industry.
Section Three	• Eligible for customs duty exemption, but not for profit tax exemption	• Basic telecommunications services; and • Exploration of gas, oil and all kinds of mining, including supply bases for gas and oil activities

For a detailed list of industries and sectors that are prohibited or not eligible for incentives, please refer to the Negative List (www.cambodiainvestment.gov.kh/wp-content/uploads/2011/10/Sub-Decree-111-on-Implementation-LOI_050927.pdf)

Source:

[1] *Investment Incentives, Council for the Development of Cambodia*

[2] *Qualified Investment Projects in Cambodia, Tilleke & Gibbins, Nov 2016*

[3] *Investment Guide Cambodia: Investment Incentives and Procedures, DFDL, 2017*

[4] *Law on the Investment of the Kingdom of Cambodia (1994), The National Assembly*

[5] *Sub-decree on the Implementation of the Law on the Amendment to the Law on Investment of the Kingdom of Cambodia No. 111/ANK/BK (2005), The Royal Government of Cambodia*

[6] *Prohibited Fields of Investment, Council for the Development of Cambodia*

9. Key Government Incentives

Executive Summary

To promote investments and development in Cambodia, the Cambodian government has set up the Council for the Development of Cambodia (CDC). The CDC is responsible for recognising and providing tax and non-tax investment incentives to Qualified Investment Projects (QIPs).

The Cambodian government has also created 11 operational Special Economic Zones (SEZs) to attract foreign businesses to establish their manufacturing bases in Cambodia.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments[1,2,3,4]

Qualified Investment Projects (QIPs)

All investments in Cambodia are governed by the Law on Investment enacted in 1994, and relevant sub-decrees. The Law on Investment also established the Council for the Development of Cambodia (CDC), which is responsible for promoting investments and development in the country.

The main incentive programme in Cambodia is the QIP incentives. Projects that are recognised as QIPs by the CDC will receive either profit tax exemption or special depreciation allowance, among other benefits, depending on specific project criteria. Investors should apply to the CDC for their projects to be granted QIP status, which will be granted on a case-by-case basis. The application fee for QIP status will be KHR 7 million (around USD 1,700).

Application Processes

Submission of Investment Proposal to the CDC

Time required: N/A

- Complete the Application Form *(Note)*
- Pay the application fee

↓

Issuance of Conditional Registration Certificate (CRC) or Letter of Non-compliance

Time required: 3 working days

- The CRC provides the authorisations required to operate the QIP, and the incentives that the QIP is qualified for
- The Letter of Non-compliance provides the reasons why the proposed project was not accepted
- Should a CRC or Letter of Non-compliance not be issued within 3 days, the CRC is considered automatically approved

↓

Obtaining Relevant Licenses and Issuance of a Final Registration Certificate (FRC)

Time required: within 28 working days

- The CDC will obtain the relevant licenses from the ministries on behalf of the applicant
- The FRC will be issued after all licenses are obtained
- The FRC issuance date is the commencement date of the QIP

Note: The Application Form is provided in Annex 2 of the Sub-decree on the Implementation of the Amendment to the Law on Investment (www.cambodiainvestment.gov.kh/wp-content/uploads/2011/10/Sub-Decree-111-on-Implementation-LOI_050927.pdf)

Incentives[5]

QIPs are eligible for different incentives depending on whether they are located within a Special Economic Zone (SEZ) or not. For the incentives available to businesses located in an SEZ, please refer to the next subsection on SEZs. QIPs not located in an SEZ may be eligible for the following tax and non-tax incentives:

Category	Incentives
Tax Incentives	• Profit tax exemption for 3 to 9 years OR 40% special depreciation allowance on the value of tangible properties used in production or processing; • Customs duty exemption on import of production equipment and construction materials; and • 100% exemption on export tax.
Non-tax Incentives	• Preferential treatment when hiring foreign employees; • Permission to hire as many foreigners as necessary for the QIP provided that they are required for the job; • Permission to bring into Cambodia the spouses and dependents of foreign employees of the QIP; and • Ability to enter into land leases for unlimited terms.

II. Scope of Special Economic Zone Schemes and Geographical Location[2,5,6,7]

Special Economic Zones (SEZs)

The SEZ scheme in Cambodia was established through Sub-decree No. 147 on the Organization and Functioning of the CDC issued in 2005. Supporting sub-decrees include Sub-decree No. 148 on the Establishment and Management of the Special Economic Zone which governs the SEZs, and a Law on the Special Economic Zones that was drafted in 2008, but has not yet been enacted.

SEZs provide additional incentives for investors on top of the QIP incentives, and aim to provide established infrastructure and utilities to attract foreign investors. The CDC will provide incentives for both developers of SEZs in Cambodia, and foreign investors in SEZs. For more information on the application process, costs and available infrastructure in SEZs, please refer to section 7.

Zone Developer Incentives

In order to develop an SEZ, the developer must have at least 50 hectares of land, and provide sufficient utilities, road systems, and other necessary infrastructure. The SEZ must be approved by the CDC in order to be eligible for the incentives, which include:

- Profit tax exemption of up to nine years;
- Import duty and customs duty exemption on equipment, machinery, and construction materials;
- Temporary admission to import transport and machinery used in construction;
- Permission to transfer all income from the SEZ to banks in other countries; and
- Land concession to establish the SEZ, and ability to lease land to zone investors.

Zone Investor Incentives

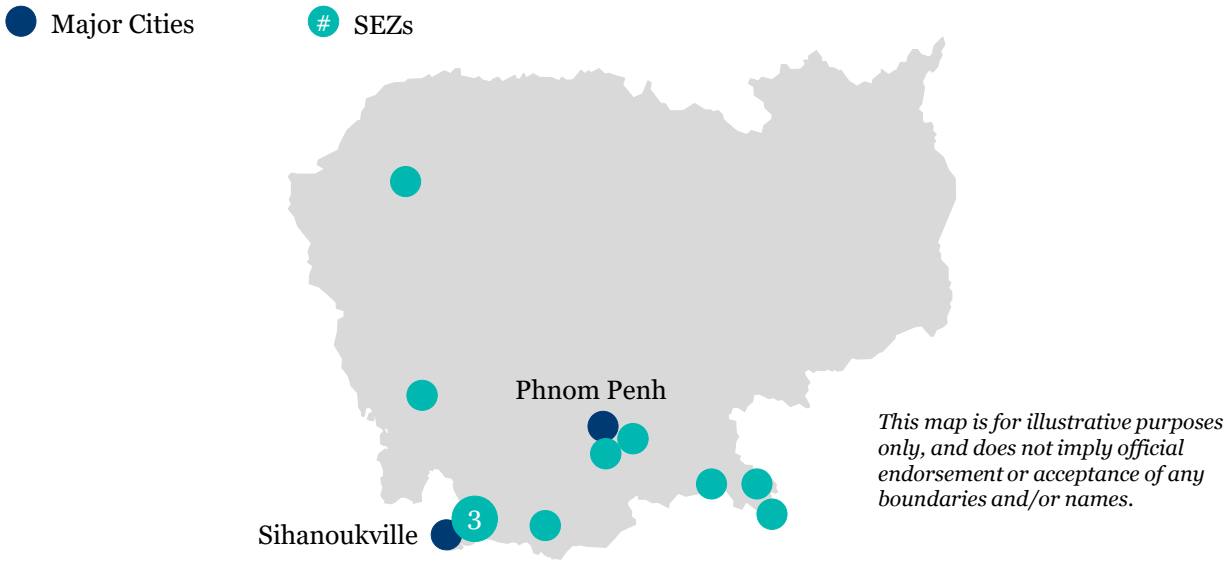
Businesses with recognised QIPs that are approved to be located in SEZs may be eligible for additional investment incentives, including:

- Any tax incentives that the project may be eligible for as a QIP;
- 0% value added tax on all imports used for production of goods that are exported;
- Expedited import and export procedures; and
- Permission to transfer all income from the SEZ to banks in other countries.

Geographical Location of SEZs

The SEZs in Cambodia are mainly located near the country's capital of Phnom Penh, the main port in Sihanoukville, and in the border regions with Thailand and Vietnam.

Map of SEZs in Cambodia



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Source:

[1] *Sub-decree on the Implementation of the Law on the Amendment to the Law on Investment of the Kingdom of Cambodia No. 111/ANK/BK (2005), The Royal Government of Cambodia*

[2] *Investment Application Procedures, Council for the Development of Cambodia*

[3] *Law on the Investment of the Kingdom of Cambodia (1994), The National Assembly*

[4] *Law on Amendment to the Law on Investment of the Kingdom of Cambodia (2003)*

[5] *Investment Incentives, Council for the Development of Cambodia*

[6] *Qualified Investment Projects in Cambodia, Tilleke & Gibbins, Nov 2016*

[7] *Sub-decree on the Establishment and Management of the Special Economic Zone No. 148/ANK/BK (2005), The Royal Government of Cambodia*

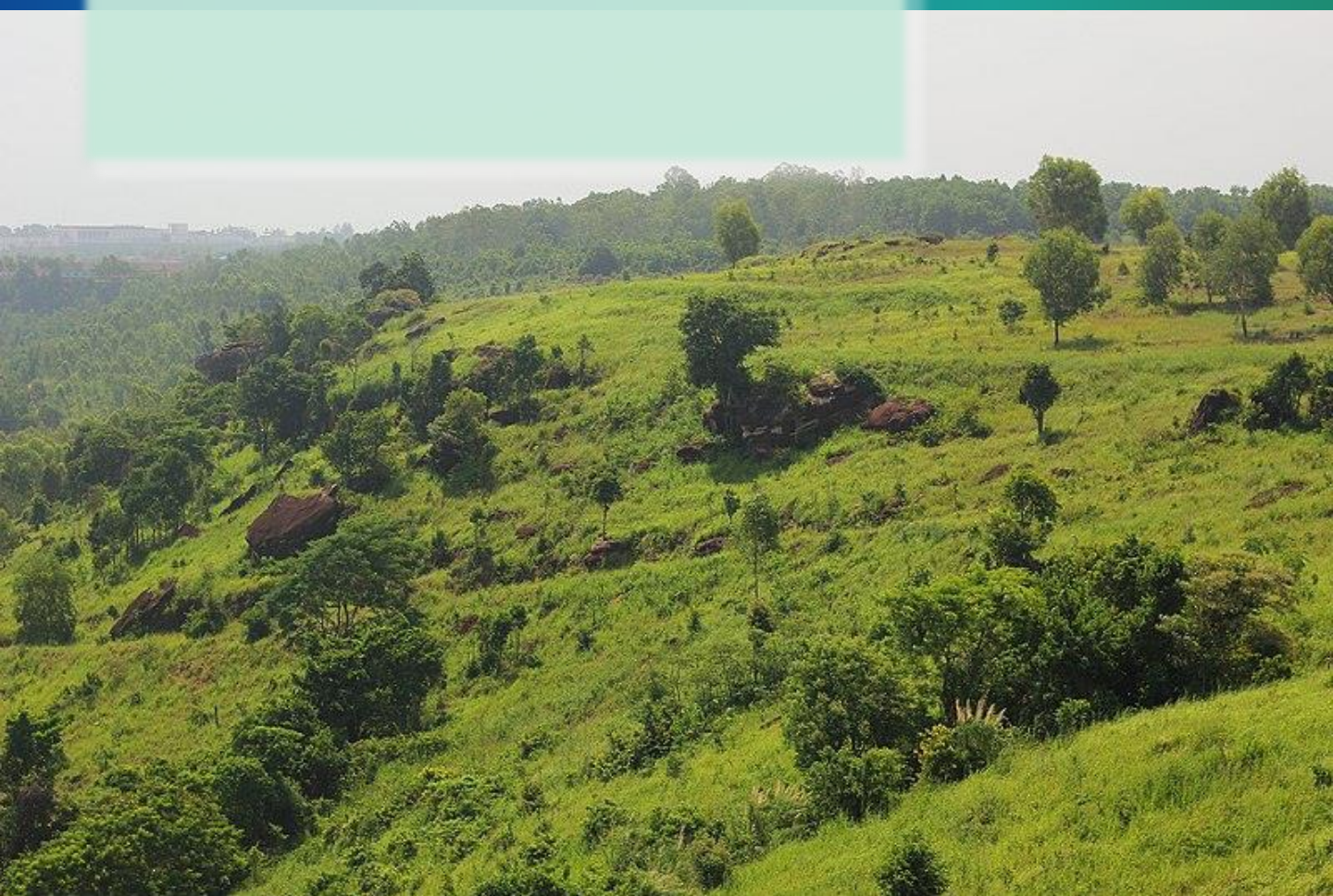
10. Environmental Requirements

Executive Summary

The Ministry of Environment (MOE) is the primary regulatory body responsible for environmental protection in Cambodia. The Law on Environmental Protection and Natural Resources Management is the primary environmental law in Cambodia. Any foreign businesses wishing to invest or do business in Cambodia must abide by the Law.

Factories in Cambodia may encounter environmental hurdles or problems, such as historical pollution, and license requirements.

There are environmental organisations and agencies in Cambodia that can provide relevant environmental supporting services to those companies requiring assistance.



10. Environmental Requirements

I. Environmental Laws and Regulations in Cambodia

Established in 1993, the Ministry of Environment (MOE) is the main body for environmental policies and standards setting in Cambodia. It also coordinates management of environmental issues together with other departments and institutions.

Law on Environmental Protection and Natural Resources Management is the fundamental environmental law in Cambodia. It widely covers the environmental issues from environmental protection, environmental impact assessment management, to public participation and access to information.

A. The Main Environmental Protection Administrations in Cambodia[1]

Ministry of Environment (MOE)

The MOE is responsible for implementation and development of policies, legislation, environmental planning, and environmental education. It is also responsible for the management of natural resources and conservation that are necessary for sustainable development.

The responsibilities and main duties of the MOE are as follows:

- Prepare specific legislation for environmental protection and natural resources management;
- Implement the environmental legal instruments throughout the country;
- Facilitate the public participation in the decision making process of environmental issues and natural resource utilisation;
- Assess the status of water environment and natural resources (current status and future trend), based on existing data/information;
- Collect and collate related data/information about water quality at public water areas as well as pollution sources; and
- Issue effluent water quality standard.

B. The Main Environmental Legislation in Cambodia

Law on Environmental Protection and Natural Resources Management[2,3]

The Law on Environmental Protection and Natural Resources Management is the main environmental law in Cambodia focusing on the environmental and natural assets management and protection. The law addresses the area of national and regional environmental plans, environmental impact assessment management, and public participation and access to information and management of natural resources. The objectives of this law are as follows:

- Protect and promote environmental quality and public health through the prevention, reduction, and control of point sources and non-point sources of pollution;
- Assess the environmental impact of all proposed projects prior to the issuance of a decision by the Royal Government of Cambodia;
- Ensure the rational and sustainable conservation, development, management, and use of the natural resources of the Kingdom of Cambodia;
- Encourage and enable the public to participate in environmental protection and natural resource management; and
- Suppress any acts that cause harm to the environment.

Pollution Control

The prevention, reduction, and control of airspace, water and land pollution, noise and vibration disturbances, as well as waste, toxic substances, and hazardous substances, shall be determined by Sub-decree following a proposal of the MOE.

The MOE may enter to inspect on site in the areas, premises, buildings, or any means of transportation or place, etc. in collaboration with the concerned ministries, in case these sources cause negative effects on the environmental quality.

Environmental Impact Assessment (EIA)

It requires every prescribed private and public project/activity should carry out the EIA to prevent and intercept the environmental pollution.

The MOE requires an Initial Environmental Impact Assessment (IEIA) report for review, and then determine whether a Full Environmental Impact Assessment report (FEIA) is required. After the evaluation of MOE, the IEIA/FEIA report shall be submitted to the Royal Government or the Council for the Development of Cambodia (CDC) for decision.

Penalties

Any person who violates the rule of this law, the MOE shall issue a written order requiring such person to:

- Correct his/her/its offending activities immediately or within a specified period; or
- Stop his/her/its activities, until the offence is corrected; or
- Immediately clean up the pollution.

And any person who refuses to allow access or obstructs the inspection officials from entering to examine or carry out an inspection shall be subject to an administrative fine in cash of between KHR 500 to 1 million.

Other Regulations against Pollutions

Cambodia has also issued environmental laws such as Law on Water Resources Management, Law on Forestry, Protected Area Law, etc. In addition, emissions and disposal of air and noise pollution, water pollution, soil pollution, wastes and hazardous materials are clearly regulated by the relevant laws, regulations, and standards. There are corresponding penalties for violation of such laws and regulations.

A detailed list of environmental laws and regulations in Cambodia can be found in Appendix 2.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China Have Issued with Cambodia

China and the Association of Southeast Asian Nations (ASEAN) have made a series of statements and plans to further enhance the environmental cooperation, such as Joint Statement of China and ASEAN Leaders on Sustainable Development, China-ASEAN Environmental Protection Cooperation Strategy 2016-2020 and so on.

Main Environmental-Related Joint Announcements and Statements[4,5]

Statements	Impact	Detail
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clause 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clause 45, 47, 53, 54

D. The Main Environmental Permits in Cambodia[6,7]

Cambodia has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Environment Impact Assessment (EIA)

An EIA is required for prescribed projects/activities in Cambodia, which are specified in Sub-decree No. 72 on Environmental Impact Assessment Process (1999).

For the list of projects/activities that require an EIA, please refer to Appendix 3.

Effluent Discharge Permit

In Cambodia, the discharge or transport of wastewater from certain types of pollution sources to other places for any purpose is subject to prior permit from the MOE. There are two categories of pollution sources, which have different requirements on applying the effluent discharge permit:

- Category I: the effluent discharge permit must be applied for if the wastewater exceeds 10 m^3/day (not including the amount of water volume used for cooling the engine);
- Category II: the effluent discharge permit must be applied for on any condition.

For a list of the classification of pollution sources prescribed by the MOE, please refer to Appendix 4.

II. Environmental Situations in Cambodia

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period		Operation Period
Historical Pollution Issues	**License Requirements**		**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	EIA	Effluent Discharge Permit *(subject to project characteristic)*	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The Processes are as below:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify significant potential environmental risks in a report.

EDD Case

SLP Environmental Consultants was appointed to conduct Environmental Due Diligence (EDD) assessments for a portfolio of land holdings located in Southern Cambodia. The client was considering the acquisition of the sites. An assessment was required for transaction risk management process, as to whether there were any potential environmental liabilities associated with the ownership of any of the study sites. The assessments also included an appraisal of the existing infrastructure and services in the study sites and their capacity to support redevelopment on the study sites.

For a list of organisations/agencies providing EDD services in Cambodia, please refer to Section 10.III.A.

Pre-construction Period: Environmental Impact Assessment (EIA)[8]

The local environmental laws have stipulated the activities of industries which are required to conduct an EIA, typically they are not allowed to operate without meeting the requirements.

Resolutions

EIA

According to the Guidebook on Environmental Impact Assessment in the Kingdom of Cambodia, EIA reports can be prepared by the project owners themselves or independent consulting company.

EIA Processes:

- Supporting agency selection: Hiring an independent consulting company to prepare an IEIA report (or do this by the project owners themselves);
- Submission: Submitting the IEIA report to the MOE for review, and the MOE will determine whether a FEIA report is required;
- Approval: The Royal Government or the CDC will review the IEIA/FEIA report and grant a final approval within 30 working days.

For the list of projects/activities that require an EIA, please refer to Appendix 3.

EIA Case

To meet the requirements of Law on Environmental Protection and Natural Resources Management, a local cement company appointed Phnom Penh International Consultants to conduct Environmental Impact Assessment on its new construction project. The EIA report includes study on water resource, air and land around the site, as well as a social economic survey according to Guidebook on Environmental Impact Assessment. The construction project got approval from the Royal Government. As a result, construction of the new site was commenced on schedule.

For a list of organisations/agencies providing EIA supporting services in Cambodia, please refer to Section 10.III.B.

Pre-construction Period: Effluent Discharge Permit[7]

The factories with pollution sources of Category I and Category II shall apply for an Effluent Discharge Permit from the MOE before discharging or transporting the effluent.

Resolutions

Effluent Discharge Permit

- Related Organisation: Ministry of Environment (MOE);
- For the new sources of pollution located in Phnom Penh, the permit should be applied for 40 days in advance, while the new sources of pollution located in other provinces or cities should apply for the permit 60 days in advance;
- For the functioning sources of pollution located in Phnom Penh, the permit should be applied for 30 days in advance, while the functioning sources of pollution located in other provinces or cities should apply for the permit 40 days in advance.

For the list of the classification of pollution sources prescribed by the MOE, please refer to Appendix 4.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emission: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The MOE is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous wastes;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For the list of organisations/agencies providing waste disposal services and other related services in Cambodia, please refer to Section 10.III.C.

B. Study on Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Cambodia

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards Between Cambodia and Mainland China

Please refer to the below legend for the understanding of all the comparison tables in this section.

Values in brackets refers to the limit of effluent discharged into water sources serving tap water supply in China and protected public water area in Cambodia, while the values outside the brackets refers to the limit of effluent discharged into water sources not serving tap water supply in China and public water area and sewer in Cambodia.

For the Mainland China standards in the electronic and textile industries, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Cambodia.

"↑" indicates the requirement of Cambodia is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Cambodia.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non industrial areas in Cambodia at the moment, i.e. residential areas. If there are plans to build or operate factories in such areas, it is recommended to confirm with the local environmental department for specific regional requirements.

Electronics (Part 1/5)

The water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	pH		5.0-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Total suspended solids		80 (50)	50	↓ (=)
		COD		100 (50)	80	↓ (↑)
		Nitrate (NO_3)		20 (10)	-	N/A
		Ammonia	Special electronic materials	7.0 (5.0)	10/20[c]	↑ (↑)/↑[c] (↑[c])
			Electrical units		5	↓ (=)
			Printed circuit boards		20	↑ (↑)
			Semiconductor devices		10	↑ (↑)
			Display device and photoelectron components		5	↓ (=)
			Electron terminals products		5	↓ (=)
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Phosphate (PO_4)		6.0 (3.0)	-	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulphide (as Sulphur)	Special electronic materials	1.0 (0.2)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	= (↑)
			Semiconductor devices		1.0	= (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Zinc	Special electronic materials	3.0 (1.0)	1.5	↓ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓ (↑)
			Display device and photoelectron components		1.5	↓ (↑)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.5 (0.1)	0.05	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓ (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.5 (0.05)	0.2	↓ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		1.0 (0.2)	-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Arsenic	Special electronic materials	1.0 (0.1)	0.3	↓ (↑)
			Electrical units		0.3	↓ (↑)
			Printed circuit boards		-	
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron components		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	1.0 (0.1)	0.2	↓ (↑)
			Electrical units		0.1	↓ (=)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron components		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	1.5 (0.2)	0.2	↓ (=)
			Electrical units		0.2	↓ (=)
			Printed circuit boards		0.2	↓ (=)
			Semiconductor devices		0.2	↓ (=)
			Display device and photoelectron components		0.2	↓ (=)
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Silver	Special electronic materials	0.5 (0.1)	0.3	↓ (↑)
			Electrical units		0.3	↓ (↑)
			Printed circuit boards		0.3	↓ (↑)
			Semiconductor devices		0.3	↓ (↑)
			Display device and photoelectron components		0.3	↓ (↑)
			Electron terminals products		-	N/A
		Barium		7.0 (4.0)	-	N/A
		Tin		8.0 (2.0)	-	N/A
		Iron		20 (1.0)	-	N/A
		Boron		5.0 (1.0)	-	N/A
		Manganese		5.0 (1.0)	-	N/A
		Mercury		0.05 (0.002)	-	N/A
		Selenium		0.5 (0.05)	-	N/A
		Molybdenum		1.0 (0.1)	-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Small industrial factories intermingling in residential areas		75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[10], and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Garment & Clothing

Water pollutants and air pollutants were the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Cambodia[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, temperature, and colour)	pH	5.0-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Total suspended solids	80 (50)	50	↓ (=)
		COD	100 (50)	80	↓ (↑)
		BOD_5	80 (30)	20	↓ (↓)
		Temperature[c]	45	-	N/A
		Colour[d]	-	50	N/A
		Detergents	15 (5)	-	N/A
		Nitrate (NO_3)	20 (10)	-	N/A
		Ammonia	7.0 (5.0)	10	↑ (↑)
		Total nitrogen	-	15	N/A
		Phosphate (PO_4)	6.0 (3.0)	-	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine dioxide	-	0.5	N/A
		AOX	-	12	N/A
		Sulphide (as Sulphur)	1.0 (0.2)	0.5	↓ (↑)
		Aniline	-	Not be detected	N/A
		Hexavalent chromium	0.5 (0.05)	Not be detected	↓ (↓)
		Cyanide	1.5 (0.2)	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Small industrial factories intermingling in residential areas	75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[12], Integrated Emission Standard of Air Pollutants[13], and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

c. *The unit for temperature is ˚C.*

d. *The method of measuring Colour in China is dilution method, and the value refers to the dilution factor.*

Watches & Jewellery

Water pollutants and air pollutants from washing process and air pollutants from polishing process were the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Cambodia[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH)	pH	5.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Total suspended solids	80 (50)	150 (70)	↑ (↑)
		COD	100 (50)	150 (100)	↑ (↑)
		BOD_5	80 (30)	30 (20)	↓ (↓)
		Nitrate (NO_3)	20 (10)	-	N/A
		Ammonia	7.0 (5.0)	25 (15)	↑ (↑)
		Cyanide	1.5 (0.2)	0.5 (0.5)	↓ (↑)
		Hexavalent chromium	0.5 (0.05)	0.5 (0.5)	= (↑)
		Grease and oil	15 (5.0)	15 (10)	- (↑)
		Petroleum	-	10 (5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Small industrial factories intermingling in residential areas	75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[14], Integrated Emission Standard of Air Pollutants[13], and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

Toys & Games

Water pollutants from the washing process, the air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Cambodia[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH)	pH	5.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Total suspended solids	80 (50)	150 (70)	↑ (↑)
		COD	100 (50)	150 (100)	↑ (↑)
		BOD_5	80 (30)	30 (20)	↓ (↓)
		Nitrate (NO_3)	20 (10)	-	N/A
		Ammonia	7.0 (5.0)	25 (15)	↑ (↑)
		Sulphide (as Sulphur)	1.0 (0.2)	1.0 (1.0)	= (↑)
		Cyanide	1.5 (0.2)	0.5 (0.5)	↓ (↑)
		Hexavalent chromium	0.5 (0.05)	0.5 (0.5)	= (↑)
		Grease and oil	15 (5.0)	15 (10)	- (↑)
		Petroleum	-	10 (5)	N/A
		Phenols	1.2 (0.1)	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Small industrial factories intermingling in residential areas	75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[14], Integrated Emission Standard of Air Pollutants[13] , and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

Hi-tech (Part 1/4)

Water pollutants and air pollutants from the chemical cleaning process are the major types of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	pH		5.0-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Total suspended solids		80 (50)	50	↓ (=)
		COD		100 (50)	80	↓ (↑)
		Nitrate (NO_3)		20 (10)	-	N/A
		Ammonia	Special electronic materials	7.0 (5.0)	10/20[c]	↑ (↑)/↑[c] (↑[c])
			Electrical units		5	↓ (=)
			Printed circuit boards		20	↑ (↑)
			Semiconductor devices		10	↑ (↑)
			Display device and photoelectron components		5	↓ (=)
			Electron terminals products		5	↓ (=)
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Phosphate (PO_4)		6.0 (3.0)	-	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulphide (as Sulphur)	Special electronic materials	1.0 (0.2)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	= (↑)
			Semiconductor devices		1.0	= (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 2/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Copper	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	3.0 (1.0)	1.5	↓ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓ (↑)
			Display device and photoelectron components		1.5	↓ (↑)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.5 (0.1)	0.05	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓ (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.5 (0.05)	0.2	↓ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 3/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Trivalent chromium		1.0 (0.2)	-	N/A
		Arsenic	Special electronic materials	1.0 (0.1)	0.3	↓ (↑)
			Electrical units		0.3	↓ (↑)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron components		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	1.0 (0.1)	0.2	↓ (↑)
			Electrical units		0.1	↓ (=)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron components		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	1.5 (0.2)	0.2	↓ (=)
			Electrical units		0.2	↓ (=)
			Printed circuit boards		0.2	↓ (=)
			Semiconductor devices		0.2	↓ (=)
			Display device and photoelectron components		0.2	↓ (=)
			Electron terminals products		-	N/A

Hi-tech (Part 4/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Cambodia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Silver	Special electronic materials	0.5 (0.1)	0.3	↓ (↑)
			Electrical units		0.3	↓ (↑)
			Printed circuit boar ds		0.3	↓ (↑)
			Semiconductor devices		0.3	↓ (↑)
			Display device and photoelectron components		0.3	↓ (↑)
			Electron terminals products		-	N/A
		Barium		7.0 (4.0)	-	N/A
		Tin		8.0 (2.0)	-	N/A
		Iron		20 (1.0)	-	N/A
		Boron		5.0 (1.0)	-	N/A
		Manganese		5.0 (1.0)	-	N/A
		Mercury		0.05 (0.002)	-	N/A
		Selenium		0.5 (0.05)	-	N/A
		Molybdenum		1.0 (0.1)	-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Small industrial factories intermingling in residential areas		75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[14], Integrated Emission Standard of Air Pollutants[13], and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc.

In Cambodia, both food & beverage and chemicals & plastics industries should be in compliance with the general environmental standards.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as the logistics & transportation industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Cambodia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Cambodia[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	5.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Total suspended solids	80 (50)	150 (70)	↑ (↑)
		COD	100 (50)	150 (100)	↑ (↑)
		BOD_5	80 (30)	30 (20)	↓ (↓)
		Ammonia	7.0 (5.0)	25 (15)	↑ (↑)
		Sulphide (as Sulphur)	1.0 (0.2)	1.0 (1.0)	= (↑)
		Formaldehyde	-	2.0 (1.0)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for mall industrial factories intermingling in residential areas	75 (6:00 - 18:00) 70 (18:00 - 22:00) 50 (22:00 - 6:00)	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Cambodia Standards: Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7], Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9], Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[14], Integrated Emission Standard of Air Pollutants[13], and Emission Standard for Industrial Enterprises Noise at Boundary[11].*

III. The Main Local Supporting Organisations/Agencies in Cambodia

Cambodia faces significant challenges with regards to the management of waste and water. More attention by NGOs from both abroad and at home are drawn on environmental management of Cambodia.

To ensure environmental compliance and to maintain a good relationship with the public, the investor should pay attention to the environment survey, license application and must meeting the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environmental-related support services.

A. Environmental Due Diligence Services in Cambodia

Agency/ Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Environmental and Social Risk Management; • Environmental and Health and Safety (EHS) Regulatory Compliance Assessments; and • Independent Assurance, etc.	+855 (0) 23 860606
SLP Environmental	• Environmental Due Diligence; • Technical Assistance & Advisory Services; and • Environmental & Social Impact Assessment, etc.	+ 66 (0) 2168 7016 (ASEAN Headquarter)
Only Solutions	• Environmental Due Diligence; • Environmental Impact Assessment; and • Social and Environmental Auditing Services, etc.	+855 (0) 12 333758

B. EIA Supporting Services in Cambodia (Part 1/2)

Agency/ Organisation	Service Coverage	Contact
Phnom Penh International Consultants	• Primary Study on Environmental Impact Assessment; • Soil Management; • Feasibility Studies and Detailed Design Engineering Services; and • Social, Opinion and Marketing Research, etc.	+ 855 (0) 88 3875878
Sustinat Green	• Environmental Impacts Assessment; • Environmental Management Plan; • Environmental Monitoring Report; and • Life-Cycle Assessment and Cleaner Production, etc.	+ 855 (0) 23 981456

B. EIA Supporting Services in Cambodia (Part 2/2)

Agency/ Organisation	Service Coverage	Contact
Only Solutions	• Environmental Due Diligence; • Environmental Impact Assessment; and • Social and Environmental Auditing Services, etc.	+855 (0) 12 333758
CAVAC	• Environmental Impact Assessment; • Development and Implementation of Environmental Management Plan (EMP) including Monitoring Requirements; and • Monitoring and Evaluation, etc.	info@cavackh.org

C. Wastes Disposal Services in Cambodia

Agency/ Organisation	Service Coverage	Contact
CINTRI Cambodia	• Collection and Transportation of Waste; and • Premium Quality Garbage, etc.	+855 23 726573

Source:

[1] *Government Agencies Related to Water Environment: Cambodia, WEPA 2019*
[2] *Legislative Framework: Cambodia, WEPA 2019*
[3] *Law on Environmental Protection and Natural Resource Management, 1996*
[4] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*
[5] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*
[6] *Sub-decree No. 72 on Environmental Impact Assessment Process, 1999*
[7] *Sub-Decree No.27 on the Control of Water Pollution ,1999*
[8] *Guidebook on Environmental Impact Assessment in the Kingdom of Cambodia, MOE 2012*
[9] *Sub-Decree on the Control of Air Pollution and Noise Disturbance, 2000*
[10] *Emission Standard of Pollutants for Electrical Industry, 2nd edition for suggestion*
[11] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*
[12] *Discharge Standards of Water Pollutants for Dyeing and Finishing of Textile Industry, GB 4287-2012*
[13] *Integrated Emission Standard of Air Pollutants, GB 16297-1996*
[14] *Integrated Wastewater Discharge Standard, GB 8978-1996*
[15] *Protected Area Law, 2008*
[16] *Law on Water Resources Management, 2007*
[17] *Law on Forestry, 2002*

Appendix

Appendix 1

Land and Factory Rental Cost in the Main SEZs

SEZ	Land Rental Cost (USD/sq.m)	Factory Rental Cost (USD/month)
Sihanoukville	USD 65 - 28	USD 1.6
Phnom Penh	USD 55	USD 2.5
Poipet	USD 40	N/A
Koh Kong	USD 28	USD 1.6 – 2.0
Manhattan	USD 25	USD 2
Dragon King	USD 25	N/A
Tai Seng Bavet	USD 22	USD 1.6

Appendix 2

The Main Environmental Laws/Regulations in Cambodia

Ministry of Environment	Ministry of Water Resources and Meteorology	Ministry of Agriculture Forestry and Fisheries
Law on Environmental Protection and Natural Resource Management, 1996[3]	Law on Water Resources Management, 2007[16]	Law on Forestry, 2002[17]
Protected Area Law, 2008[15]		

The Main Environmental Ambient Standards in Cambodia

Ambient Standards	1	Ambient Air Quality Standard[9]
	2	Maximum Allowable Concentration of Hazardous Substance in Ambient Air[9]
	3	Noise Control Standard at Workshop, Factory and Industry[9]
	4	Water Quality Standard in Public Water Areas for Bio-diversity Conservation[7]
	5	Water Quality Standard in Public Water Areas for Public Health Protection[7]

The Main Environmental Effluent Standards in Cambodia

Effluent Standards	1	Maximum Allowable Standard of Pollution Substance for Immobile Sources in Ambient Air[9]
	2	Gas Emission Standard of Mobile Sources[9]
	3	Maximum Standard of Noise Emission Level Allowable for Vehicles on Public Roads[9]
	4	Standard of Sulfur, Lead, Benzene, and Hydrocarbon Permitted in Fuel and Coal[9]
	5	Maximum Standard of Noise Level Allowable in the Public and Residential Areas (dB (A))[9]
	6	Effluent Standard for Pollution Sources Discharge Wastewater to Public Water Areas or Sewer[7]

Appendix 3

Projects/Activities that Require EIA (Issued with Sub-decree No. 72 on Environmental Impact Assessment Process (1999))[6] (Part 1/2)

Industries	Projects/Activities	Scale
Food & Beverage	Food processing and caned	> 500 tons/year
	All fruits drinks manufacturing	> 1,500 Liters/day
	Fruit manufacturing	> 500 tons/year
	Orange juice manufacturing	All sizes
	Wine manufacturing	All sizes
	Alcohol and Beer brewery	All sizes
	Water supply	> 10,000 users
	Tobacco manufacturing	> 10,000 boxes/day
	Tobacco leave processing	> 350 tons/year
	Sugar refinery	> 3,000 tons/year
	Rice mill and cereal grains	> 3,000 tons/year
	Fish, soy bean, chili, tomato sauces	> 500,000 liters/year
Garment & Clothing	Textile and dyeing factory	All sizes
	Garment washing, printing and dyeing	All sizes
	Leather tanning and glue	All sizes
	Sponge rubber factory	All sizes

Appendix 3

Projects/Activities that Require EIA (Issued with Sub-decree No. 72 on Environmental Impact Assessment Process (1999))[6] (Part 2/2)

Industries	Projects/Activities	Scale
Chemicals & Plastics	Plastic factory	All sizes
	Tire factory	> 500 tons/year
	Rubber factory	> 1,000 tons/year
	Battery industry	All sizes
	Chemical production industries	All sizes
	Chemical fertilizer plants	> 10,000 tons/year
	Pesticide industry	All sizes
	Painting manufacturing	All sizes
	Fuel chemical	All sizes
	Liquid, powder, solid soaps manufacturing	All sizes

Appendix 4

Types of Pollution Sources Requiring Permission from the Ministry of Environment before Discharging or Transporting Their Wastewater (Issued with Sub-Decree No.27 on the Control of Water Pollution (1999))[7] (Part 1/2)

Industries	Type of Pollution Sources	Category
Food & Beverage	Canned food and meat manufacturing	I
	Canned vegetable and fruit manufacturing	
	Aquatic production processing	
	Frozen manufacturing	
	Flour manufacturing	
	Sugar manufacturing	
	Pure drinking water manufacturing	
	Soft drink manufacturing and brewery	
	Wine and alcohol manufacturing	
	Feed mill manufacturing	
	Oil and fat manufacturing	
	Yeast manufacturing	
	Cake and sweet manufacturing	
	Cigarette manufacturing	
Garment & Clothing	Garment manufacturing without chemical washing	
	Leather manufacturing	II

Appendix 4

Types of Pollution Sources Requiring Permission from the Ministry of Environment before Discharging or Transporting Their Wastewater (Issued with Sub-Decree No.27 on the Control of Water Pollution (1999))[7] (Part 2/2)

Industries	Type of Pollution Sources	Category
Chemicals & Plastics	Plastic manufacturing	I
	Gelatin and Glue manufacturing	
	Acetylene derivative manufacturing	II
	Soap and detergent manufacturing	
	Inorganic pigment manufacturing	
	Chemical organic substance manufacturing	
	Solvent (for cleaning) manufacturing	
	Pesticide manufacturing	
Electronics	Battery manufacturing	
	Electronic manufacturing	

Glossary – Section 1 to 9 Operational Requirements

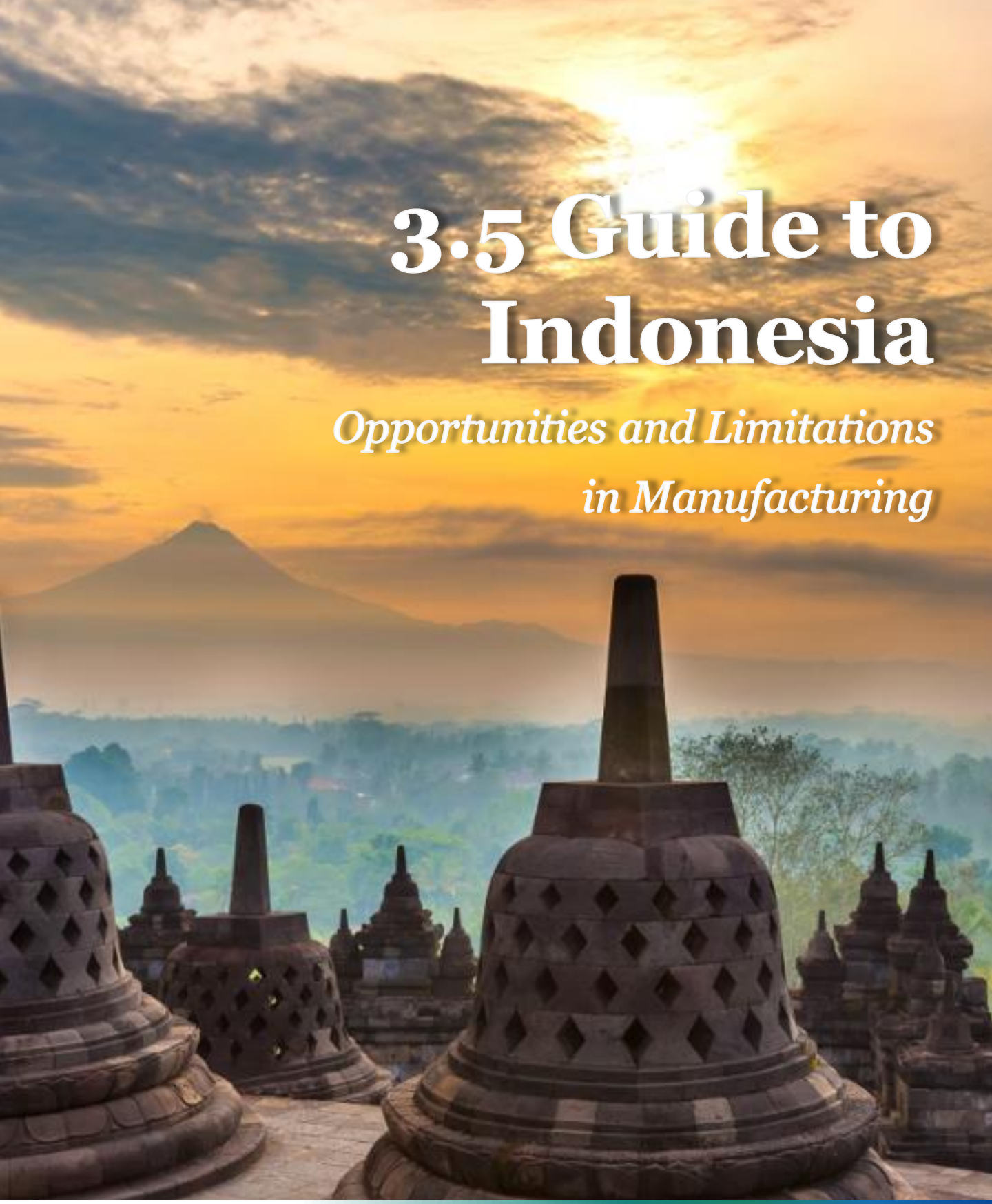
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AHTN	ASEAN Harmonised Tariff Nomenclature
ASEAN	Association of Southeast Asian Nations
ASYCUDA	Automated System on Customs Data
CDC	Council for the Development of Cambodia
CE SAIN	Center of Excellence on Sustainable Agricultural Intensification and Nutrition
CIFRS	Cambodian International Financial Reporting Standards
CIT	Corporate Income Tax
CMT	Cut-Make-Trim
CPP	Cambodia's People Party
CSEZB	Cambodian Special Economic Zone Board
DTA	Double Tax Agreement
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDCE	General Department of Customs and Excise
GDP	Gross Domestic Product
GDT	General Department of Taxation
IAS	Investment Approval Scheme
ICT	Information and Communications Technology
IIC	ICT Innovation Center

IP	Intellectual Property
ITC	Institute of Technology of Cambodia
JICA	Japan Investment Cooperation Agency
KHR	Cambodia Riel
KICPAA	Kampuchea Institute of Certified Public Accountants and Auditors
LPI	Logistics Performance Index
MLVT	Ministry of Labour and Vocational Training
MOC	Ministry of Commerce
MOP	Ministry of Planning
NIPTICT	National Institute of Posts, Telecom and ICT
NSDP	National Strategic Development Plan
NSSF	National Social Security Fund
NSTC	National Science and Technology Council
NSTMP	National Master Plan of Science and Technology
QIP	Qualified Investment Projects
R&D	Research and Development
RCEP	Regional Comprehensive Economic Partnership
RS	Rectangular Strategy
S&T	Science and Technology
SAD	Single Administration Document
SEZ	Special Economic Zone
TEU	Twenty-foot Equivalent Unit
TIN	Taxpayer Identification Number
TVET	Technical Vocational Education and Training

USD	United States Dollar
VAT	Value Added Tax

Glossary – Section 10 Environmental Requirements

AOX	Absorbable Organic Halogen
ASEAN	Association of Southeast Asian Nations
BOD	Biochemical Oxygen Demand
CDC	Council for the Development of Cambodia
COD	Chemical Oxygen Demand
EDD	Environmental Due Diligence
EIA	Environmental Impact Assessment
FEIA	Full Environmental Impact Assessment
IEIA	Initial Environmental Impact Assessment
MOE	Ministry of Environment
NMHC	Non-methane Hydrocarbon



3.5 Guide to Indonesia

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

1. Overview of Indonesia

Executive Summary

Indonesia is the fourth most populated country in the world. It is an emerging middle income country with a robust projected gross domestic product (GDP) growth. The country is currently in the third phase of a 20-year economic development plan. The current plan is designed to foster infrastructure development and focuses on social assistance programmes in education and healthcare.

Indonesia has only signed two bilateral trade agreements and is finalising a third one with Chile. These agreements eliminate tariffs and incentivise investments in a number of industries. As part of the Association of Southeast Asian Nations (ASEAN), Indonesia also benefits from six other multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Indonesia is the third largest democracy in the world. Foreign investors are recommended to consider the political tensions arising from the latest presidential election before investing in the country.

1. Overview of Indonesia

I. Country Profile[1,2,3,4,5,6,7]

Indonesia is an emerging middle income country with an estimated gross domestic product (GDP) growth rate of 8.5% in 2018-19. The country's economy is mainly supported by its large domestic demand. Indonesia is currently the fourth most populated nation in the world. The country's economic development is shaped by a 20-year plan spanning from 2005 to 2025, which is segmented into five-year plans called the Rencana Pembangunan Jangka Menengah Nasional (RPJMN). The current plan (2015-2020) focuses on infrastructure development and on supporting programmes targeting education and healthcare. To achieve its economic goals, Indonesia still has to tackle the poverty issue. In 2017, around 10% of its population lived below the poverty line.

GDP *(in USD)*
1,130.3 billion (2019f)
1,041.8 billion (2018)

GDP Per Capita *(in USD)*
4,193 (2019f)
3,904 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 13.7%
Industry: 41.0%
Services: 45.3%

External Trade *(% of GDP)*
Import: 22.1% (2018)
Export: 21.0% (2018)

Population
269.54 million (2019)
World ranking: 4/191

Median Age
30.5 (2018)
World ranking: 116/228 (from oldest to youngest)

Language
Bahasa Indonesia (official)
English
Dutch

English Literacy
Low proficiency (2018)
World ranking: 51/88

Government Structure
Multiparty Republic

Land Area
1,811,570 sq km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. They allow companies located in two or more countries to trade goods with each other at reduced or zero tariffs. Indonesia is a member of the World Trade Organization since 1995 and is a founding member of the Association of Southeast Asian Nations (ASEAN). This grants the country preferential access to international trade and to goods and services exchange in the Southeast Asian region.

Indonesia has only two effective bilateral trade agreements, but as part of the ASEAN, it benefits from signed and effective trade agreements with six countries: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010). In addition, the ASEAN – Hong Kong Free Trade Agreement (FTA) came into effect in June 2019 (see section below).

Indonesia is currently finalising an FTA with Chile, which will offer 3,000 Chilean products preferential access to the Indonesian market. In addition, the country has launched negotiations with eight potential partners and has proposed FTA to eight other countries. Moreover, Indonesia is also part of two organisations which have or are negotiating trade agreements: the Regional Comprehensive Economic Partnership and the Developing 8 (D8) Organization. *(Note)*

Signed and Effective Bilateral Trade Agreements[8]

	Affected Industry	Agreement (effective date)
	• Manufacturing • Agriculture	**Indonesia-Japan Economic Partnership Agreement (2008)** • Enhance cross-border trade of goods and services by eliminating import duties. • Foster Japan's investments in Indonesia and liberalise travel regulations between the two countries. • Strengthen bilateral cooperation in sectors such as manufacturing, agriculture, forestry and fishery.
	• Agriculture	**Indonesia-Pakistan Preferential Trade Agreement (2013)** • Preferential tariffs on more than 200 products. • Pakistan is granted a 15% margin of preference on the standard tariff rate applicable to Indonesian palm oil products.

The Regional Comprehensive Economic Partnership (RCEP)[9]

This partnership is currently being negotiated between the ASEAN members and their FTA partners (i.e. Mainland China, South Korea, Japan, India, Australia, New Zealand). The RCEP is designed to be a mutually beneficial economic partnership that will foster cooperation and integration between the 16 countries. The agreement aims to lower tariffs and other barriers to enhance trade between the partners.

Developing 8 (D8) Organization for Economic Cooperation[10]

Trade agreement between eight developing countries (i.e. Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, Turkey) to foster economic cooperation in industries such as agriculture, automotive, energy, textile and pharmaceuticals, etc.

Note: Indonesia is also a member of the Organisation of the Islamic Conference which is considering a trade preferential system.

The Association of Southeast Asian Nations (ASEAN)[9]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

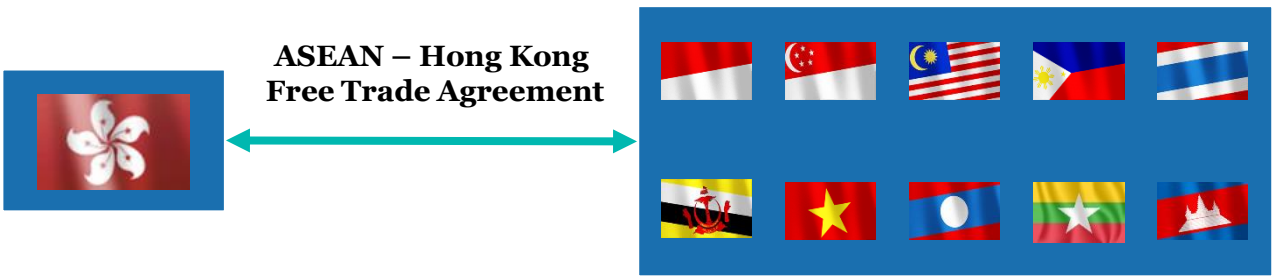
International Trade Agreement between Hong Kong and ASEAN[11]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods, trade of services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[12]

Indonesia is a multiparty democracy with a presidential system.

- The executive power is held by the President and the Vice President. They run as a pair and are elected by direct popular vote for a five-year term with the possibility of being re-elected for a second term, for a total of 10 years. The President governs together with a council of ministers, known as the Cabinet, appointed by him.
- The People's Consultative Assembly (Majelis Permusyawaratan Rakyat, MPR) holds the legislative power. The MPR is composed of two houses and has the power to draft and change the Constitution, and to impeach the President/Vice President pair.
- The judiciary power is held by the Supreme Court (Mahkamah Agung) which is independent from the executive branch.

In 1998, Indonesia implemented a decentralisation policy which provides more independence to its 34 provinces. The elected local government executes the majority of functions, except a few key areas which are controlled by the central government (i.e. foreign affairs, defence, justice, monetary policy and religion).

C. Political Uncertainties and Historical Coup Record[13,14]

Indonesia is not considered a politically stable country. The country ranked 135th out of 194 countries in the World Bank's Political Stability Index (with a below average value of -0.51 in 2017).

Indonesia's democratisation process started in 1999 with its first free election. Before that, the country only had two Presidents: Sukarno, the first President of Indonesia who served from 1945 to 1967 and fought for the country's independence from the Dutch; and Suharto who ruled from 1967 to 1998 with a centralised and military dominated government. When he was in power, only three parties were authorised. However, after his resignation in 1998, restrictions were withdrawn and the number of parties grew significantly to more than 100.

Four presidential elections have been held since then. The latest election took place in April 2019. The early results announced that running President Joko Widodo had beaten former Army General Prabowo Subianto, who did not accept his defeat and filed a lawsuit claiming that the election was rigged. In June 2019, the Indonesia court ruled against the General, therefore officially acknowledging Widodo's victory. This legal battle aroused political uncertainty in the country and led to heavy protests in Jakarta against the election results. The confrontation between Subianto's supporters and the police resulted in nine deaths and hundreds injured.

Source:

[1] *The World Bank in Indonesia, The World Bank, Apr 2019*

[2] *Indonesia 10-Year Forecast, Fitch Solutions, 2019*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), World Bank*

[5] *Indonesia population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Indonesia, Worldatlas*

[8] *Free Trade Agreements, Asia Regional Integration Centre*

[9] *ASEAN official website*

[10] *Developing 8 official website*

[11] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, May 2019*

[12] *Doing Business in Indonesia, Mazars, 2018*

[13] *Political Stability Index, The World Bank, 2017*

[14] *Indonesian court rejects appeal against election result, The Guardian, 2019*

2. Legal Environment and Competition Law

Executive Summary

Indonesia welcomes foreign investments, as government policies ensure that foreign and local businesses act together to upskill domestic companies. In 2016, a new presidential regulation, which is viewed as more liberalised and protective towards foreign investments, was published.

Mainland China and Hong Kong companies can choose to set up different types of business entities in Indonesia. For example, it is possible to set up a 100% foreign-owned enterprise such as a Limited Liability Company, among others. In addition, foreign investors can set up a representative office to explore opportunities to expand their manufacturing footprint in the country.

In order to boost imports and exports, Indonesia has recently amended its corresponding regulations. However, all products are still subject to licenses.

2. Legal Environment and Competition Law

Indonesia generally welcomes foreign investments, but only on its own terms: government policies try to ensure that foreign companies work together with locals in order to develop and upskill Indonesian companies (e.g. minimum local shareholding percentage). Law No. 25 of 2007 is the key law governing foreign direct and indirect investments. There are various industries listed which are closed or only open to investments under certain conditions. In 2014, further modifications of the Negative Investment List came into force under the Presidential Regulation No. 39/2014, however, the changes did not liberalise but rather tighten restrictions on foreign investments. Later that year, the new President Joko Widodo came into power, driving a pro-investment approach. Subsequently two years later, the Presidential Regulation No.44/2016 regulating restricted sectors for investments was published. The regulation is considered more liberal and protective towards foreigners.

There are still prohibitions and restrictions for foreign investors in many sectors (for more details, please refer to section 8 of this report), however, in the permitted sectors, foreign investors can generally own up to 100% of a company.

Indonesia's law only distinguishes between Indonesian and foreign companies and does not outline special laws for Mainland China or Hong Kong companies.

Indonesia's Negative Investment List Contains Three Categories of Closed or Restricted Businesses (Presidential Regulation No.44/2016):[1,2,3]

List 1

List of Business Fields that are Closed to Investment

Examples:

- Alcoholic beverage industry;
- Various areas of the industrial chemical industry; and
- Public museums.

List 2

List of Business Fields that are Open with Conditions: Reserved for or in Partnership with Micro, Small, and Medium-sized Enterprises (SMEs) and Cooperatives

Examples:

- Manufacture of jewellery articles of precious metal (reserved for partnerships);
- Retail sales through mail order and internet (reserved for SMEs); and
- Internet cafés (reserved for SMEs).

List 3

List of Business Fields that are Open Under Specific Conditions

Examples:

- Cargo land and domestic sea transportation (foreign capital ownership: max. 49%);
- Freight forwarding services (foreign capital ownership: max. 67%); and
- Trade sector: retail business for electronics, jewellery, textiles, cosmetics and food and beverage (100% domestic capital required).

I. Types of Legal Business Entities Available for Foreign Investment[1,4]

There are different structures to expand a business or a manufacturing footprint as an investor from Mainland China or Hong Kong to Indonesia. Law No. 25 of 2007 governs capital investments and classifies a business as foreign even if just 1% is foreign-owned. When considering to expand the manufacturing footprint to Indonesia, an investor has to define what kind of activities the company should carry out. If the business generates revenues, the legal entity needed is a limited liability company (Perseroan Terbatas Penanaman Modal Asing, PT PMA). In order to explore opportunities without conducting commercial activities, an investor from Mainland China or Hong Kong would usually choose a representative office. If an investor wants to do business in a foreign-restricted area, a specific arrangement with a local partner might be required.

The three main forms of doing business or expanding the manufacturing footprint to Indonesia are:

1. Foreign-owned Limited Liability Company (PT PMA)
2. Representative Offices
    - Foreign Representative Office
    - Foreign Trade Representative Office
    - Foreign Construction Service Representative Office
3. Local company under nominee arrangement

In addition to these three business types, it is possible to set up entities such as a public company or a permanent establishment. However, these types are not as common and therefore will not be discussed in detail. Also, in some cases it is required to set up a joint venture with a local partner, yet the joint venture would most likely be incorporated as a limited liability company and therefore will not be elaborated further.

Limited Liability Company (PT PMA)[4,5,6,7]

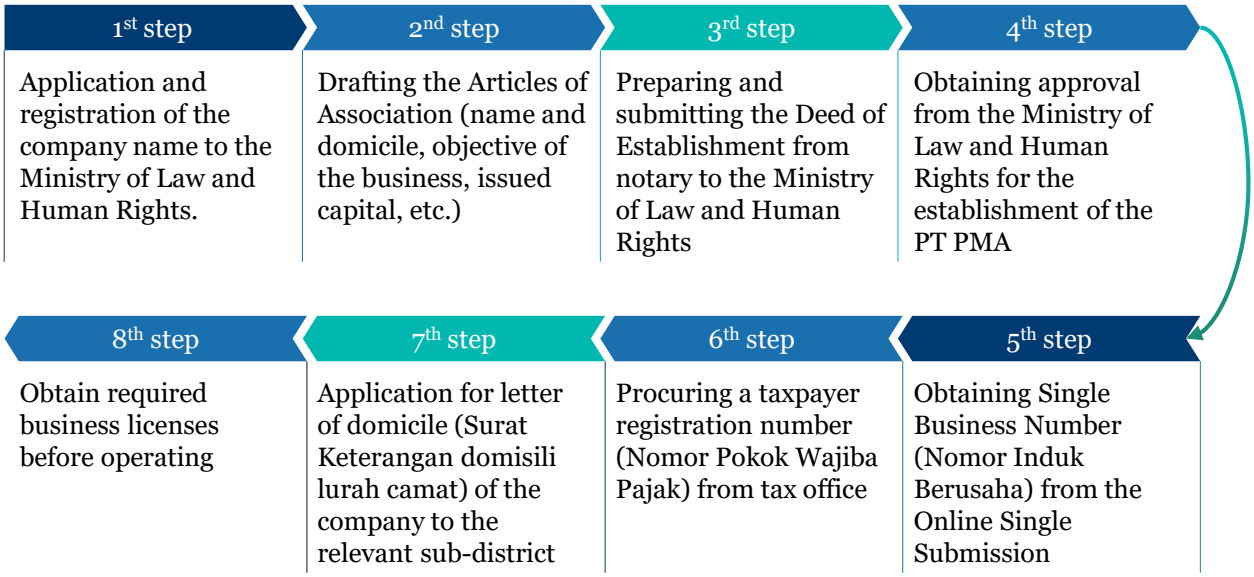
PT PMAs allow investors from Mainland China and Hong Kong to conduct sales activities and generate revenues and profits. PT PMAs can be 100% foreign-owned, however, there are many sectors that are restricted for foreign investors as they are carried out by the government or local companies only (for further information, please refer to section 8 of this report). PT PMAs are separate legal entities, which means that the Mainland China or Hong Kong business of an investor would not be impacted or liable for the company incorporated in Indonesia. A PT PMA requires a minimum of two shareholders that can either be organisations or individuals. The shareholders can receive payments or dividends as well as exercise various other rights listed under the Company Law 40/2007. In addition, a board of directors and a board of commissioners are needed, where at least one Mainland China or Hong Kong national is required. A PT PMA has to submit Investment Activity Progress Reports to the Indonesian Investment Coordinating Board (Badan Koordinasi Penanaman Modal, BKPM) periodically. Also, an employment report (Mandatory Manpower Report) has to be submitted to the Ministry of Manpower annually.

A foreigner who wants to expand a business to Indonesia as a PT PMA requires a minimum capital of IDR 10 billion (around USD 707,000) with a minimum paid-up capital of IDR 2.5 billion (around USD 177,000). For capital intensive industries, the paid-up capital can be higher. Indonesia sets the minimum capital requirements comparatively high in order to attract larger investments.

Registration Process for a PT PMA

The registration process is generally streamlined, however, under the Regulation No. 13 of 2017, investors in certain sectors have to obtain an Investment Registration (e.g. in the sectors associated with energy and infrastructure management). Companies that require an Investment Registration have to apply for it before preparing and submitting the Deed of Establishment as illustrated in the establishment process below (third step). The entire establishment process usually takes between 10 to 12 weeks.

The establishment process for a PT PMA can be summarised into eight steps:



Representative Office (RO)[4,6,9,10]

The RO is the easiest and fastest way for Mainland China or Hong Kong companies to establish a presence in Indonesia. It is the typical structure an investor would choose to get to know the market, collect information on investment opportunities or to promote export of goods and services. An RO is not allowed to engage in direct commercial or revenue generating activities, however, if the findings are promising, the investor can transform the RO into a limited liability company.

There are three different types of ROs in Indonesia: 1) Foreign Representative Office, 2) Foreign Trade Representative Office, and 3) Foreign Construction Services Representative Office.

Foreign Representative Office

As opposed to the PT PMA, the representative office of a foreign company (Kantor Perwakilan Perusahaan Asing) does not require capital investment. In addition, Mainland China or Hong Kong companies have 100% control over this entity. However, this type cannot be set up in all sectors and it can only be established if a parent company already exists abroad. The license to run a foreign RO is valid for three years and can be extended without limitations. Geographically, a foreign RO can only be established in the capital of an Indonesian province. A foreign RO has to submit an activity report to BKPM every six months.

Foreign Trade Representative Office

A Mainland China or Hong Kong company that wants to establish presence in Indonesia in the form of a manufacturing agent, selling agent or buying agent, could consider setting up a foreign trade representative office (Kantor Perwakilan Perusahaan Perdagangan Asing). This type can perform various business supporting functions, such as quality control, market research, the promotion of goods manufactured by the parent company abroad or the corresponding import to local companies in Indonesia. However, a foreign trade RO is restricted from conducting sales and trading. As opposed to the foreign RO, the foreign trade RO does not have geopraphic restrictions and can therefore be set up anywhere in the country, incorporated into an office building. In order to establish this type, a specific license (Surat Izin Usaha Perwakilan Perusahaan Perdagangan Asing) to perform activities related to trading has to be submitted to the BKPM. The permission is valid for one year and can only be renewed for a three-year period.

Foreign Construction Service Representative Office

Investors from Mainland China or Hong Kong that are engaged in construction activities have the option to set up a foreign construction service representative office (Badan Usaha Jasa Konstruksi Asing). The purpose of this type is to prepare and develop activities of future investments in Indonesia. According to the New Construction Law (Law No.2 of 2017), it is only allowed to be involved in construction projects that are either 1) complex, 2) at high-risk, or 3) hi-tech related. There are certain obligations that a company has to fulfil in order to run this business type: among others, it has to form a joint venture with a local limited liability construction company. This means that this business type is considered as an equivalent to a limited liability company that engages in the construction services. The validity is three years and may be extended.

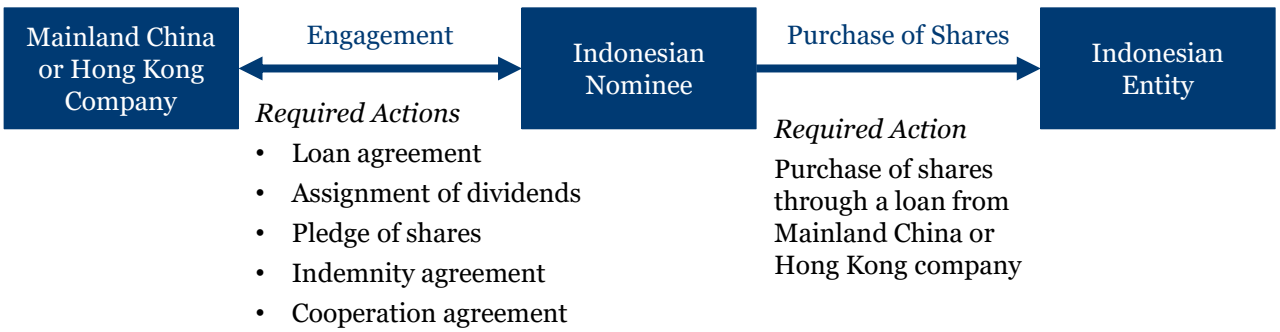
Registration Process for Representative Office

A foreign company that wants to set up a representative office in Indonesia needs to submit the Application Form for the Establishment of a Representative Office in Indonesia, together with other documents, such as a letter of appointment or the Articles of Association of the parent company. The establishment process usually takes between six to 12 weeks.

Local Company Under Nominee Arrangement[11]

A nominee arrangement is a setup where a company from Mainland China or Hong Kong uses a local Indonesian nominee as the registered shareholder on behalf of the real (Mainland China or Hong Kong) owner. As such, the company can be registered as an Indonesian limited liability company, while the foreign company can hold control. Investors often use this arrangement if the sector is restricted for foreigners or if the minimum required capital of IDR 10 billion for foreign investment is too high. It is also commonly used by entrepreneurs with time sensitive contracts, as the establishment process is easier than for foreign companies. However, under the Indonesian Investment Law, the owner of the shares who is stated in the Articles of Association is both, the beneficial and the legal owner. Therefore, it is important to have clear agreements with the local nominee shareholder as illustrated below. As such, the relations between the Mainland China or Hong Kong company and the Indonesian nominee are commercially governed by a loan agreement: the loan agreement states that the nominee is purchasing the shares in the company by using the loan provided by the Mainland China or Hong Kong company.

Concept and required agreements between a Mainland China or Hong Kong company with a local nominee:



II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[12,13,14,15,16]

In 1999, Indonesia passed law No.5 of 1999 concerning the ban on monopolistic practices and unfair business competition. The law came into force in 2000 and covers a wide range of competition issues.The Indonesia Competition Commission (Komisi Pengawas Persaingan Usah, KPPU) is responsible for the enforcement of the law and can therefore initiate investigations, examinations and administrative sanctions. The House of Representative published draft amendments of the initial law in 2017. Thereafter, the government of Indonesia has released a list of inventory issues which proposes significant changes to the draft amendments. As of the beginning of 2019, the process of amending the Indonesian Competition Law has still been ongoing.

The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong businesses that want to expand their manufacturing footprint to Indonesia.

Some of the main areas covered by the law include:

1. Abuse of dominant position
2. Mergers and acquisitions control
3. Anti-competitive agreements

In addition, the law outlines exceptions and sets penalty levels for infringements.

1. Abuse of Dominant Position

A dominant position is a situation where a business does not have any significant competitor with regard to market share or financial capabilities.

Businesses are prohibited from taking advantage of their dominant market position in order to 1) hamper other businesses to become their competitors, 2) restrict the market and technology development, or 3) impose trade terms with the intention to prevent and/or hamper the consumers from acquiring competitive products.

According to the competition law, businesses are in a dominant market position, if:

- One business or a group of businesses controls 50% or more of the market share on one type of good or service; or
- Two or three businesses or groups of businesses control 75% or more of the market share on one type of certain good or service.

2. Mergers and Acquisitions Control

Mergers and acquisitions are also governed under law No.5 of 1999, however, further requirements and regulations are listed in law No.57 of 2010. The law prohibits business actors from merging and consolidating business entities or acquiring shares of companies if these actions may cause monopolistic practices and/or unfair business competition.

The Indonesian Competition Commission has to be notified within 30 days after the transaction has taken place, if the following thresholds are met:

- The value of the assets of the combined businesses exceeds IDR 2.5 trillion (around USD 176 million) or IDR 20 trillion for banks (around USD 1,411 million); or
- The sales turnover of the combined businesses exceeds IDR 5 trillion (around USD 353 million).

3. Anti-competitive Agreements

The law also deals with anti-competitive agreements to prevent monopolistic practices and/or unfair business competition, such as:

- Oligopoly: agreements between businesses to jointly control production or marketing of products;
- Price fixing: price-fixing agreements between competing business actors;
- Area distribution: contract between business competitors on marketing areas or market allocation of the goods and/or services.

Other areas covered are boycotting, cartels, trust or vertical integrations. For more details please refer to chapter III of law No.5 of 1999.

B. Intellectual Property Protection Law on Trademarks[17,18,19]

A trademark is defined as any sign capable of being represented graphically in the form of drawings, logos, names, words, letters, numerals, colors arrangement, sounds or holograms or any combination thereof, which indicates that a certain good or service belongs to the owner of the trademark. Indonesia's overarching Intellectual Property regulation (including those on trademarks) is low compared to other countries (ranked 45th out of 50). The laws mentioned below apply in general and do not specify particular rules for Mainland China or Hong Kong companies considering to expand their manufacturing footprint to Indonesia.

The protection of trademarks is governed under the new law No.20 of 2016. Before that, a law from 2001 was in force. The new law includes various changes in order to improve the enforcement in practice: as such, it includes provisions designed to accelerate the examination process, it provides more clarity on preliminary injunctions and it increases criminal penalties. In 2018, Indonesia acceded to the Madrid Protocol on trademarks which simplifies the process for obtaining recognition of international trademarks. In Indonesia, the invalidation and cancellation process of a trademark is very complex and costly, therefore, it is recommended to track trademark publications in order to file oppositions if required. Once a trademark has been registered, the opposition proceedings need to be filed with the Court of Commerce, which has the reputation of being a very difficult process.

The application needs to be submitted to the Directorate General of Intellectual Property Rights. Online filing is possible, however, foreign applicants have to file the application via a local trademark agent. With the amendments of 2016, the registration process usually takes around eight months. A trademark registration is valid for 10 years and renewable for periods of 10 years.

Indonesia's government demonstrates commitment on improving the protection of trademarks, however, the effectiveness in practice has not yet been improved significantly.

C. Import/Export Regulations and Licenses[20,21,22]

Indonesia is generally committed to trade liberalisation and has recently amended its import and export regulations. One major change to boost import and export is the shift from border to post-border supervision, which means that the supervision is not made by the Directorate General of Customs and Excise in the customs territory anymore. According to the Ministry of Finance, this arrangement is expected to support the domestic investment climate, reduce dwelling time and national logistics costs. Imports and exports are regulated under the amended Customs Law (2006).

Import

Mainland China and Hong Kong companies that want to import goods in Indonesia have to register with Indonesia's trade department to obtain a customs identification number (Nomor Identitas Kepabeanan, NIK) as well as an importer identification number (Angka Pengenal Import, API).

In addition, it is required to obtain an import license. There are three different licenses:

1. API-U: general import license;
2. API-P: producer import license; and
3. API-T: limited import license that limits import to a particular industry and does not permit the importation of goods not related to that business sector.

As in most countries, an importer also has to file further documents, such as a bill of lading, a certificate of insurance, a packing list or a customs import declaration.

Goods prohibited or restricted from being imported include:

1. Prohibited: motorised vehicle tires, electric light bulbs, matches, certain types of textiles, fully assembled automobiles and motorcycles, radio and television sets, explosives, narcotics;
2. Restricted and subject to approval: fuel for vehicles, ships and aircraft.

Export

Exporting from Indonesia also requires Mainland China and Hong Kong companies to obtain a customs identification number. In addition, companies must already have a taxpayer identification number and one of the following business licenses: 1) Trade license from the Ministry of Trade; 2) Manufacturing license from the Ministry of Industry; 3) PT PMA license issued by the Investment Coordinating Board (BKPM); or 4) Exporter identification number.

Similar to the import regulations, an exporter has to file an export declaration form and submit it to the customs office together with further documents such as a bill of lading, insurance certificate, the packing list or the export permit.

Goods prohibited or restricted from being exported include:

1. Prohibited: some categories of rubber, scrap metal and antiques;
2. Restricted and subject to approval: textiles, plywood and coffee. In addition, certain basic commodities can only be exported if domestic demand has been met, such as flour, palm oil, sugar and petroleum.

D. Jurisdiction System on Business Related Matters[23,24]

The Indonesian legal system is based on the Dutch colonial law and civil law. International laws are not directly applicable in the Indonesian legal environment and have to be enacted in domestic law in order to have effect. The court structure in Indonesia is divided into three tiers:

1. District courts or the first instance court in each regional area (Article 25, Law No. 48 of 2009 concerning Judicial Power) which are further split into different courts:

   General courts hear criminal as well as civil cases. In addition, general courts have a separate chamber dealing with commercial disputes. This chamber has the power to hear cases around:

   1. Bankruptcy and suspension of debt payment under Law no. 37 of 2004;
   2. All intellectual property rights; and
   3. Indonesia Deposit Insurance Corporation under Law No. 24 of 2004.

   In addition, there are other courts (religious, military and administrative) dealing with specific cases;
2. The high courts and court of appeal: high courts function at provincial level and have the power to hear civil and criminal cases. In addition, they can hear appeals from the first instance courts, including the ones on commercial or business related matters;
3. The Supreme Court acts at national level and is the highest instance in the country. It oversees the lower instance courts and can hear appeals from the high courts.

Source:

[1] *Investing in Indonesia – Practical Law, Thomson Reuters 2019*

[2] *Investing in Indonesia, KPMG 2015*

[3] *Presidential Regulation Number 44 of 2016, BKPM 2016*

[4] *Doing Business in Indonesia 2018-2019, Mazars*

[5] *Number 13 of 2017, Investment Coordinating Board of Republic of Indonesia*

[6] *Business entities in Indonesia, Healthy Consultants Group PLC*

[7] *Number 40 of 2007, The Law of the Republic of Indonesia*

[8] *Benefits of Opening A Representative Office in Indonesia, Emerhub 2018*

[9] *Foreign Representative Office Establishment in Indonesia, Remidian & Partners 2019*

[10] *Foreign Investment in Indonesia, Indonesia-Investments*

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[12] *Number 5 of 1999, The Law of the Republic of Indonesia*

[13] *Antitrust and Competition in Indonesia, Baker McKenzie*

[14] *Cartel Regulation – Indonesia, Getting the Deal Through Jan 2019*

[15] *Number 57 of 2010, Government Regulation of the Republic of Indonesia*

[16] *Merger control in Indonesia: overview, Practical Law, Thomson Reuters 2019*

[17] *Indonesia - Protecting Intellectual Property, export.gov 2019*

[18] *Indonesia's New Trademark Law – An Overview of the Changes, Tilleke & Gibbins 2017*

[19] *Indonesia – SMD County Index, SMD Group*

[20] *Shift to Post Border to Boost Export-Import, Ministry of Finance 2018*

[21] *International trade in goods and services in Indonesia: overview, Thomson Reuters 2019*

[22] *Import and Export Procedures in Indonesia – Best Practices, ASEAN Briefing 2018*

[23] *Legal systems in Indonesia: overview, Thomson Reuters 2019*

[24] *Litigation and enforcement in Indonesia: overview, Thomson Reuters 2019*

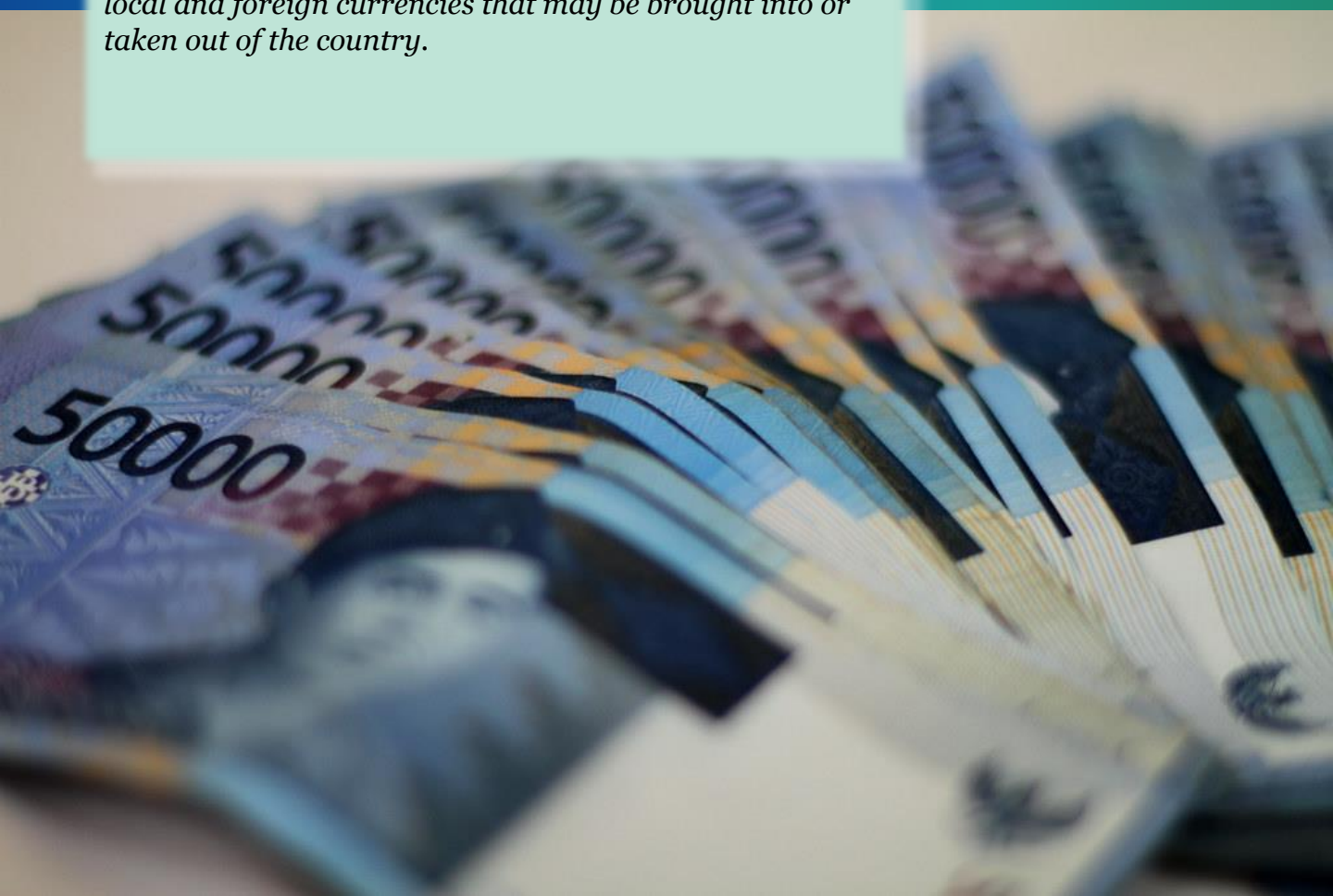
3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation for businesses are corporate income tax (CIT), value added tax (VAT), and luxury-goods sales tax (LST), among other specific business taxes.

Indonesia currently uses Indonesian Financial Accounting Standards (IFAS). The Indonesian Institute of Accountants (IAI) will maintain the current differences between International Financial Reporting Standards (IFRS) and the Indonesian Generally Accepted Accounting Principles (GAAP) for one year. Companies will need to use IFRS for their financial reporting in the future.

Indonesia adopts a managed float exchange rate regime by the Bank of Indonesia. Foreign direct investments (FDIs) are generally welcomed in Indonesia. However, there are restrictions on the amount of inbound and outbound of local and foreign currencies that may be brought into or taken out of the country.



3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

Under Indonesia's Income Tax Law, a company is treated as a resident of Indonesia for tax purposes by virtue of having its incorporation or its domicile in Indonesia.

A foreign company carrying out business activities through a permanent establishment (PE) in Indonesia will generally be treated as a resident taxpayer for tax purposes. Resident taxpayers have to settle their tax liabilities either by direct payments, third party withholdings, or a combination of both.

Indonesian tax residents are taxed on their worldwide income.

A. Corporate Income Tax (CIT)[1]

Tax Calculation

Taxable business profits in Indonesia are calculated from net profits on an accrual basis. This includes all revenues arising from/or in consequence of the business conducted during an accounting period (i.e. 12 months). Generally, all expenses incurred for the purpose of obtaining, collecting and maintaining taxable business profits are eligible for deduction.

Applicable Tax Rate

The standard CIT rate in Indonesia is 25%.

The rates vary depending on the types of taxable person. In particular, public companies and small enterprises enjoy certain tax benefits as shown in the following table.

Taxable Person	CIT Rate
Companies other than those listed below	25%
Listed companies with > 40% of shares traded on the Indonesian Stock Exchange	20%
Companies with an annual turnover below IDR 50 billion	12.5% on taxable income up to IDR 4.8 billion, and 25% on taxable income over IDR 4.8 billion
Companies with a gross turnover below IDR 4.8 billion *(Note)*	0.5%

Note: This regime (Government Regulation No.23 issued on 8 June 2018) only applies for a maximum period of three years for companies. Companies that obtain tax holiday or income tax allowance cannot benefit from the final tax regime.

Passive Income[1]

Passive income (including interests, royalties and dividends) are subject to withholding tax in accordance to Article 23 and 26 (PPh 23/PPh 26):

Taxable Income	Type of Taxpayer	Withholding Tax Rate
Interests	Resident Corporation	15%
	Non-resident taxpayer	20%
Royalties	Resident Corporation	15%
	Non-resident taxpayer	20%
Dividends	Resident Corporation *(Note)*	0%
	Resident Corporation – standard	15%
	Non-resident taxpayer	20%

Note: Dividends received from an Indonesian company by a limited liability company incorporated in Indonesia (Perseroan Terbatas, PT), a cooperative, or a state owned company, are exempt from income tax if the below two conditions are met:

• The dividends are paid out of retained earnings; and

• For PTs and state-owned companies, the company earning the dividends holds at least 25% of the paid-in capital in the company distributing the dividends.

If the conditions are not met, the dividends are assessable to the company earning the dividends at the ordinary tax rate together with the company's other income.

Deductible Expenses[1,2]

Some of the key CIT deductible expenses for the manufacturing industry include:

- Financing cost: regulation PMK-169 stipulates that a single debt to equity ratio of 4:1 to obtain full deductibility of financing costs (i.e. the amount of debt allowable is limited to four times the equity amount); and
- Depreciation: must be based on historical cost of an asset acquired. Assets with beneficial life of more than one year are categorised and depreciated from the month of acquisition either through straight-line or declining-balance method. The rates for each category and method are shown in the table below.

Asset Type *(Note)*	Depreciation	
	Straight-line	Declining-balance
Category 1 (Assets with a beneficial life of 4 years): Assets example including: computers, printers, scanners, furniture, office equipment, furniture and equipment constructed of wood/rattan, equipment for the semiconductor industry, etc.	25%	50%
Category 2 (Assets with a beneficial life of 8 years): Assets example including: heavy vehicles for transportation, warehousing, and communications, telecommunications equipment, equipment for the semiconductor industry, tools for cellular telecommunication services, etc.	12.5%	25%
Category 3 (Assets with a beneficial life of 16 years): Assets example including: machines for textile, heavy equipment, docks and vessels, etc.	6.25%	12.5%
Category 4 (Assets with a beneficial life of 20 years): Assets example including: heavy construction machinery, locomotives, railway coaches, heavy vessels, docks, etc.	5%	10%
Building Category	5% On assets in the permanent building category with a useful life of 20 years	N/A
	10% On assets in the non-permanent building category with a useful life of 10 years	

Note: More comprehensive lists of the assets included in each category are set out in Ministry of Finance (MoF) regulations.

Losses and Consolidation[1]

Tax losses can be carried forward for a maximum of five years to deduct against future profits. There is no claw-back provision. Each company is taxed independently, without any form of group relief or relief by consolidation.

Tax Governance

The Directorate General of Taxes (Direktorat Jenderal Pajak, DJP) is the main agency responsible for formulating and implementing taxation policies. The DJP operates under the Ministry of Finance. For more information regarding the DJP, please refer to the Ministry of Finance official website (www.kemenkeu.go.id).

Tax Filing[1]

Indonesia operates a self-assessment based tax system. Thus each legal entity is obliged to self-assess, settle and submit a CIT return on a regular basis (monthly and annually):

Type of Tax	Monthly Payment Deadline	Monthly Filing Deadline	Annual Filing Deadline
CIT	15th of the following month	20th of the following month	End of the 4th month after the tax year end
Employee or Other Withholding Tax	15th of the following month	20th of the following month	N/A
Value Added Tax (VAT) and Luxury-goods Sales Tax (LST)	Before the VAT return filing deadline	End of the following month	N/A

Double Taxation Agreement (DTA) with Hong Kong[3]

Indonesia has entered into a DTA with Hong Kong, which has been in effect since 28 March 2012.

The table below illustrates the various tax rates applicable to the different sources of income as detailed in the Indonesia/Hong Kong DTA:

Category		Rate
Dividends	Portfolio	10%
	Substantial Holdings	5%
Interest		10% or 0% *(Note)*
Royalties		5%
Technical Fees		5%

Note: Interests derived from certain government bodies are exempt from tax.

B. Value Added Tax (VAT), and Luxury-goods Sales Tax (LST)[1]

Value added tax (VAT) is applicable to all goods and services used for production, trading, and consumption in Indonesia. Imported goods are subject to VAT, and VAT must be paid at the time of delivery of taxable goods or services.

VAT Filing and Payments

In Indonesia, VAT collection is based on the accrual principle, whereby VAT must be collected at the time of delivery of taxable goods or services, i.e. when the risk and ownership of goods have been transferred and that the income can be reliably measured or estimated (regardless of whether the transaction has been paid for or not).

Companies are required to file VAT returns on a monthly basis, with payment and filing due no later than the last day of the month following the taxable delivery.

VAT Rates

VAT is calculated as output VAT minus input VAT.

Taxable Business Activities	Tax Rate
• Standard rate	10% *(Note 1)*

• Services connected to movable goods utilised outside of the Customs Area comprising:
  ○ Freight forwarding services on export-oriented goods;
  ○ Toll manufacturing services; and
  ○ Repair and maintenance services.
• Services connected to immovable goods located outside of the customs area in the form of consultation services for construction
• Other services where the output is utilised outside of the customs area and utilisation is based on a request from an overseas recipient. These services are to comprise:
  ○ Technology and information services (include computer system analysis services, computer system design services, IT security services, contact centre services);
  ○ Inter-connection, satellites and/or data connectivity services;
  ○ Research and development services;
  ○ The rental of transportation equipment (airplanes and ships) for international flight or shipping activities;
  ○ Trading services which assist in finding domestic sellers to procure goods for export purposes; and
  ○ Certain consultation services, among others accounting services, financial audit services, tax services.
	0%
	(Note 2)

Note 1: The VAT law allows the government to change the VAT rate between a range of 5% to 15%. However, since the enactment of the VAT law in 1984, the government has never changed the VAT rate. Please refer to Ministry of Finance (MoF) for updated specified tax rates.
Note 2: The 0% VAT refers to 0% VAT on output VAT, but these goods are still eligible for input VAT credits.

Luxury-goods Sales Tax (LST)

Some goods such as motor vehicles and luxury residences, in addition to VAT, are subject to LST upon import or delivery by the manufacturer to another party at rates currently ranging from 10% to 125%.

C. Transfer Pricing Provisions[1]

In Indonesia, transactions between related parties must be consistent with the arm's length principle. If the arm's length principle was found not to be applied, the DJP has the authority to recalculate the taxable income or deductible costs.

For companies aiming to expand their manufacturing footprint to Indonesia, it is advised to keep a record of the specific transfer pricing documentation. Under the General Tax Provisions and Procedures (Ketentuan Umum dan Tata Cara Perpajakan, KUP) Law, the government may request specific transfer pricing documentation to prove the related party transactions and the arm's length nature of the transaction. These documents may also be requested during tax audits by the Indonesian Tax Office (ITO).

Major points of the required transfer pricing disclosures include:

- Nature and value of transactions with related parties;
- Transfer pricing methods applied to those transactions and rationale for selecting such methods; and
- Whether the company has prepared transfer pricing documentation.

The tax law also allows the DJP to enter into Advance Pricing Agreement (APAs) with taxpayers and/or another country's tax authority on the future application of the arm's length principle on the same/similar transactions. Once agreed, an APA will typically be valid for a maximum of three tax years.

D. Statutory Auditing Requirements and Accounting Standards[4]

Audit Requirements

All juristic business entities must prepare financial statements each year. The financial statements must be audited by an independent certified auditor, and thereafter submitted to the Revenue Department and the Commercial Registrar each accounting year.

Five types of limited liability companies (publicly listed companies, banks and financial institutions, companies issuing debt, state-owned companies and companies with assets of at least IDR 50 billion) must publish audited financial statements that have been approved by the general meeting of shareholders. Annual reports should be prepared in accordance with generally accepted accounting principles in Indonesia.

Accounting Standards

The standard-setting body in Indonesia is the Financial Accounting Standards Board (Dewan Standar Akuntansi Keuangan, DSAK) under the Indonesian Institute of Accountants (Ikatan Akuntan Indonesia, IAI). Indonesia's approach to International Financial Reporting Standards (IFRS) adoption is to maintain its national Generally Accepted Accounting Principles (Indonesian Financial Accounting Standards, IFAS) and minimise the differences between IFRSs and IFASs gradually.

IAI has committed to maintaining the existing differences between IFRS and Indonesian GAAP for only one year so far. As a result, new standards issued by International Accounting Standards Board (IASB) should be adopted by businesses in Indonesia within one year.

Under Indonesian law, both public and private companies must comply with accounting standards issued by the DSAK-IAI.

II. Banking & Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)[5]

Banking Account Setup Requirements

Both locally and foreign incorporated companies can open business bank accounts in Indonesia. There are mainly three types of accounts commonly used: checking accounts, savings accounts and deposit accounts.

Technically, there are no limitations on the types of business accounts foreign companies can open, but in practice, companies which have a foreign shareholder are required to maintain a bank account with a bank that is licensed to handle foreign currencies (known as Foreign-Exchange Banks or Bank Devisa). However, the process, requirements and strictness for a company to open a bank account differ between different banks.

General Requirements for All Limited Companies

In Indonesia, businesses with any % of foreign ownership are considered foreign companies. This means that, as long as a company has foreign shareholders, it is considered a foreign-owned company. Most foreign companies in Indonesia are PT PMAs (Perseroan Terbatas Penanaman Modal Asing) which stands for a limited liability company with foreign direct investment. Local companies are known as PT (Perseroan Terbatas).

Most banks require the PT/PT PMAs registration to be completed in order to set up a bank account. Once the registration is completed, additional documents are also required by the bank for the process:

#	Documents to be Provided when Opening a Bank Account for Limited Companies *(Note)*
1	Tax Identification Number (Nomor Pokok Wajib Pajak, NPWP)
2	Business License issued by the Investment Coordinating Board (Badan Koordinasi Penanaman Modal, BKPM) or Regional Investment Coordinating Board (Badan Koordinasi Penanaman Modal Daerah, BKPMD)
3	Company Registration Certificate (Tanda Daftar Perusahaan, TDP)
4	Deed of Establishment (Akta Pendirian)
5	Identity documents of authorised person(s) such as ID/passport/permits

Note: The documents described are for reference only as requirements vary between commercial banks. It is advised to check with the desired commercial bank on the exact documents required before vising the bank.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[6]

Foreign Currency

Inbound

Starting in 2018, Bank Indonesia only allow banks and licensed money changers to bring in foreign bank notes worth more than IDR 1 billion, or equivalent. If an individual carries the equivalent of more than IDR 1 billion into Indonesia, customs will have the power to confiscate the money. In addition, authorities also require cash worth more than IDR 100 million to be declared when arriving in Indonesia.

Outbound

Similar to the inbound of foreign currency, outbound amount exceeding IDR 1 billion, or equivalent, are prohibited. In addition, authorities also require cash worth more than equivalent of IDR 100 million to be declared when departing Indonesia.

Declaration Requirement

Any person bringing in/taking out of Indonesia an amount exceeding the equivalent of IDR 100 million in foreign currency is required to declare such funds at Customs.

Local Currency

Inbound

The maximum limit of IDR that can be brought in to Indonesia without authorisation is IDR 100 million. Amount more than that must be declared.

Outbound

Similar to the inbound of local currency, the maximum limit of IDR that can be brought from Indonesia to other countries without authorisation is also IDR 100 million. Amount more than that must be declared.

Declaration Requirement

Any person bringing in/taking out of Indonesia an amount exceeding IDR 100 million is required to obtain an approval from Bank Indonesia or External Affairs.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

Policy on Foreign Exchange Rate

A managed float exchange rate regime is adopted by Indonesia. Bank Indonesia adopts the inflation targeting framework, in which inflation is the primary monetary policy objective, while adhering to the free floating exchange rate system. Instead of just pegging the exchange rate to a particular level, Bank Indonesia also operates an exchange rate policy designed to minimise excessive rate volatility.

In order to keep inflation at the government prescribed level, Bank Indonesia also holds power to conduct monetary policy through the establishment of monetary targets (such as money supply or interest rates).

Three-year Exchange Rate Trend for HKD to IDR[7]

Date	HKD/IDR Rate
30/03/2016	1,707.62
30/03/2017	1,714.86
30/03/2018	1,749.17
30/03/2019	1,814.37

D. List of Banks from Foreign Investments[8,9]

Bank Indonesia's main functions include: regulatory and supervisory authority for the banking and payment systems, and monetary functions. On the other hand, the Indonesian Financial Services Authority (Otoritas Jasa Keuangan, OJK) acts as the supervisory body for financial institutions (which includes Indonesian banks and domestic branch offices of foreign banks) further to Law No. 21 of 2011.

For companies intending to expand their manufacturing footprint into Indonesia, there are in total 116 banks in Indonesia which 104 are conventional commercial banks and 12 are Sharia Commercial Banks.

List of Selected Foreign Banks[10]

	Foreign Banks
Bangkok Bank	Bangkok Bank PCL
	Bank Of America, National Association
	Bank Of China Limited
citibank	Citibank, N.A.
	Deutsche Bank AG.
	Industrial Commercial Bank of China
J.P.Morgan	JPMorgan Chase Bank, National Association
	PT Bank HSBC Indonesia
	Standard Chartered Bank
MUFG	The Bank of Tokyo-Mitsubishi UFJ Ltd.
RBS	The Royal Bank of Scotland N.V.

For a full list of all banks in Indonesia, please refer to the latest OJK's Indonesia Banking Directory (ojk.go.id/en/kanal/perbankan/data-dan-statistik/Direktori-Perbankan-Indonesia-Baru/Documents/INDONESIA%20BANKING%20DIRECTORY%202017%20BUKU%20I.pdf)

Source:

[1] *Indonesian Pocket Tax Book 2019, PricewaterhouseCoopers*

[2] *Indonesia Tax Summary, PricewaterhouseCoopers*

[3] *Comprehensive Double Taxation Agreement – Vietnam, Inland Revenue Department of the Government of the Hong Kong Special Administrative Region*

[4] *Indonesia: Business Environment, Nordea*

[5] *Opening a bank account in Indonesia, Cekindo*

[6] *Indonesia Customs, Currency & Airport Tax regulations details, IATA*

[7] *Bloomberg*

[8] *Regulation and Monitoring, OJK*

[9] *Financial System Stability, Bank of Indonesia*

[10] *Indonesia Banking Directory 2017, OJK*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Indonesia has established labour laws providing guidance such as maximum working hours, minimum wages and welfare to protect employees. Moreover, workers' religious rights are well protected in Indonesia.

Despite the abundance of labour supply in the country, skilled labour is still scarce. In recent years, the Indonesian government has made efforts to promote vocational education in order to train a skilled workforce, but the impact is yet to be seen.

With the aim to foster knowledge and technology transfer, in Indonesia, foreign workers can only be employed under fixed-term contracts. In addition, foreign workers are prohibited from assuming certain top positions in the companies. Foreign workers are also required to obtain a work permit for legal employment in Indonesia, subject to certain exemptions.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations of Local Labour Employment

A. Contracts and Protection Towards Employees[1,2,3,4,5]

The Indonesian employment conditions are set out in the Labour Law (Law No. 13 of 2003), the Industrial Relations Dispute Settlement Law (Law No. 2 of 2004), the Labour Union Law (Law No. 21 of 2000), and other relevant regulations.

In general, these laws and regulations apply equally to both Indonesian and foreign employees.

Minimum Legal Working Age

The minimum age for employment is 15 under normal working conditions and 18 under hazardous working conditions, such as operating dangerous machinery or equipment (e.g. knitting and weaving machines, boilers and lifts) and handling harmful chemicals.

Children between 13 and 15 can be employed to perform light work. However, they cannot work more than three hours a day and at night. In addition, a written permission from their parents is needed to employ them.

Labour Contract

In Indonesia, employment can be contracted in writing or verbally for permanent positions. However, a fixed-term contract must be in writing or it will considered as a permanent contract. To avoid legal disputes, it is best to have a labour contract in place for any employment relationship.

All written labour contracts should be in Bahasa Indonesia; in case of bilingual contracts, the Indonesian version prevails in construing the contract.

There are two types of labour contracts in Indonesia:

- Permanent contracts: contracts without an expiration date and applicable to any job position; and
- Fixed-term contracts: contracts with a maximum term of two years, and can be renewed for up to two years. They can be used for seasonal jobs or jobs which will be completed in a certain period of time (not exceeding three years), e.g. seasonal workers in garment industry and workers working on research and development of a new product.

Probationary Period

New permanent workers can be subject to a probationary period for no longer than three months. During the probationary period, workers shall be paid at least at minimum wage. However, fixed-term workers cannot be subject to probation.

Apprenticeship

The minimum age of apprenticeship in Indonesia is 18. Children aged 14 or above can join apprenticeship only as a part of their school's curriculum or government-approved training programmes.

Outsourced Recruitment

Outsourced recruitment is only allowed for workers engaging in non-core business activities such as janitors, security guards, etc.

Salary Payment

The salary must be denominated and paid in IDR for both Indonesian and foreign employees. Cash payment must constitute at least 75% of the wages paid, the remainder can be paid in the form of housing, transport and/or food allowance.

Enterprise Rules and Regulations

Companies with at least 10 employees (and no collective labour agreements) must establish written enterprise rules and regulations to define the rights and obligations of employers and employees, the working environment, the grounds of disciplinary actions and code of conduct.

If applicable, the employer must consult with the company's labour union when writing the rules and obtain the endorsement of the Ministry of Manpower (MOM) or an appointed official. The enterprise rules and regulations are valid for a maximum of two years and must be renewed when expired.

Termination of Employment

In general, employment termination must be mutually agreed between employers and employees, except for retirement of employees, expiration of fixed-term contracts and or voluntary resignation by employees.

Although unilateral dismissal of employees by employers is permitted, employers are required to 1) negotiate with employees and/or trade unions to avoid termination and 2) if the negotiation fails, obtain a termination permission from the Industrial Relations Dispute Settlement Institution (RDSI).

Valid and Invalid Grounds for Unilateral Termination by Employers

The law describes some usual valid and invalid grounds for unilateral termination. However, the final decision of whether a termination is allowed is subject to the RDSI's discretion.

Valid Grounds for Termination	Invalid Grounds for Termination
Disciplinary violations of enterprise's rules and regulations and/or collective labour agreements.	Absence from work due to mandatory religious services.
Organisational restructuring, e.g. merger, change of ownership etc.	Participation in trade union activities or serving as a management member in a trade union.
Closure of business or bankruptcy.	Marital status and/or pregnancy.
Absence from work for 5 consecutive working days or more written explanation and without responding to employer's written summon twice.	Absence from work due to illness for a period of up to 12 consecutive months, with doctor's certificate.

Severance Payment and Long Service Award

Permanent employees laid off by employers must be compensated with severance payments and (if applicable) long service awards. For employees who resigned, the eligibility of both payments depends on the enterprise's rules and regulations.

Fixed-term employees are not entitled to severance payment. If fixed-term labour contract is terminated by either employer or employee before the expiration, the terminating party must compensate the other party by the amount equal to employee's salary for the remaining periods of employment.

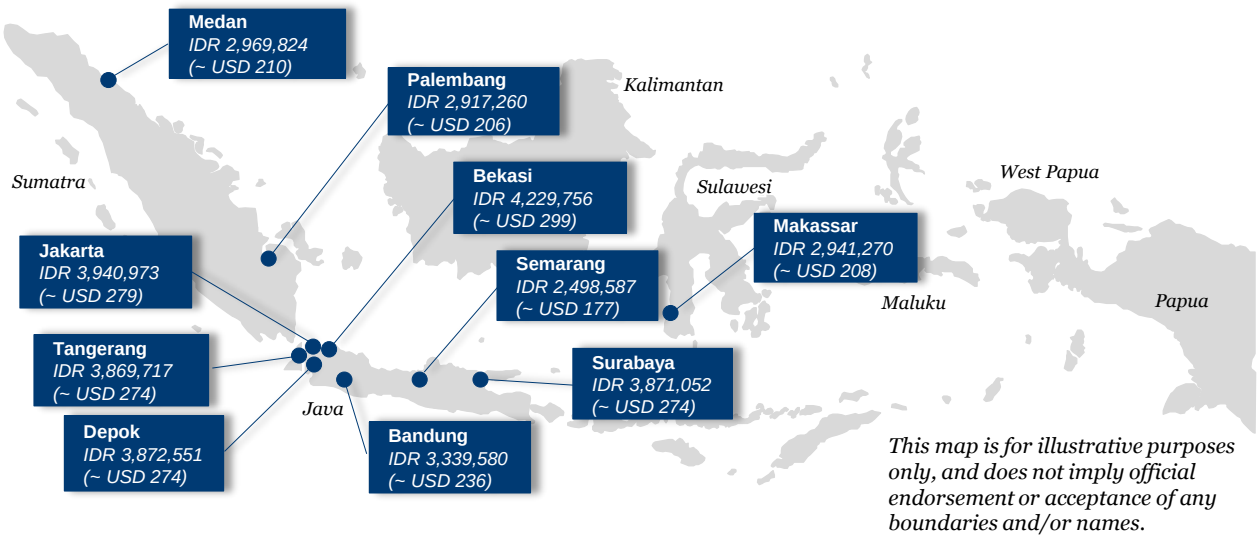
The following tables stipulate the legal entitlement of severance payment and long service award.

Severance Payment	
Tenure of Service (x)	**Entitlement** (No. of month of salary)
Less than 1 year	1
1 year ≤ x < 2 years	2
2 years ≤ x < 3 years	3
3 years ≤ x < 4 years	4
4 years ≤ x < 5 years	5
5 years ≤ x < 6 years	6
6 years ≤ x < 7 years	7
7 years ≤ x < 8 years	8
8 years or more	9

Long Service Award	
Tenure of Service (x)	**Entitlement** (No. of month of salary)
3 years ≤ x < 6 years	2
6 years ≤ x < 9 years	3
9 years ≤ x < 12 years	4
12 years ≤ x < 15 years	5
15 years ≤ x < 18 years	6
18 years ≤ x < 21 years	7
21 years ≤ x < 24 years	8
24 years or more	10

B. Minimum Wage Level[6]

In Indonesia, the minimum wage is reviewed every year based on the previous year minimum wage, the country's economic growth and inflation (Government Regulation Number 78 of 2015). In addition, the minimum wage varies across regencies and cities. The map below highlights the monthly minimum wage in the top 10 most populated cities in Indonesia.



C. Maximum Working Hours and Days[2]

The maximum number of standard working hours is 40 hours per week:

- For five-day workweek: maximum of eight working hours daily;
- For six-day workweek: maximum of seven working hours daily.

Employees are entitled to at least 30 minutes rest break for every four hours of continuous work.

Overtime

Employers must obtain a written consent from employees to make them work overtime.

Overtime is limited to three hours per day or 14 hours per week. This restriction does not apply to overtime performed on a weekly rest day or a public holiday. The employer is also required to provide food and drinks to workers.

Except for managerial roles, employers must compensate workers for overtime work as follows:

Overtime Pay = **Overtime Rate** *(refer to the following table)* x **Monthly Wage** *[includes salary and fixed allowance]* x 1/173

The table below shows the overtime rate corresponding to different conditions:

Type of Workweek	Working Day of Overtime Work	Number of Overtime Hours	Overtime Rate
All	Weekday	First hour	1.5x
		Subsequent hours	2x
5-day workweek	Weekly rest day/ public holiday	First 8 hours	2x
		9th hour	3x
		10th – 11th hour	4x
6-day workweek	Weekly rest day/ public holiday on normal working day	First 5 or 7 hours *(Note)*	2x
		Subsequent hour	3x
		Last hour	4x

Note: An employee is subject to a overtime rate of 2x for the first five hours if overtime work happens on the shortest working day.

D. Mandatory Welfare[1,2,3,4,6]

All local and foreign employees who work in Indonesia for more than six months must be enrolled in the social and healthcare security programmes and must be registered with the Badan Penyelenggara Jaminan Sosial (BPJS).

National Social Security Programme

The BPJS Ketenagakerjaan covers work accident protection, death insurance, old age saving and pension.

- Work accident protection includes medical services and cash compensation for the insured worker.
- Death insurance provides lump sum cash compensation, education scholarship for the insured worker's heirs and covers funeral expense if he passed away due to reason other than work accidents.
- Old age saving is a lump sum retirement benefit.
- Pension provides stable income to the insured worker after retirement.

National Healthcare Security Programme

The BPJS Kesehatan covers medical services (e.g. medical check-ups, outpatient and inpatient services) for the insured workers, his spouse and legitimate children (up to five) who are under 21 (or 25 for those who are still under full-time education).

Contribution Basis

The contribution base for social and healthcare security is the insured worker's monthly wages (base salary and other fixed allowances). The following table summarises the contribution basis and contribution percentage for employees and employers under social and healthcare security programmes.

Security Programme	Covered Areas	Max Contribution Cap *(Note 1)*	Employee Contribution	Employer Contribution
National Social Security	Work accident protection	No cap	0%	0.24% - 1.74% *(Note 2)*
	Death insurance		0%	0.3%
	Old age saving		2%	3.7%
	Pension	IDR 8,512,400	1%	2%
National Healthcare Security		IDR 8,000,000	1%	4%

Note 1: The max contribution cap for pension and healthcare are valid as of May 2019 but subject to regular review by BPJS. For updated contribution cap, please refer to the official website of BPJS (www.bpjs-kesehatan.go.id/bpjs/home)

Note 2: The contribution rate for work accident protection varies depending on the risk rating of a company. In general, companies involved in sewing products are taxed at 0.24%, companies involved in toy manufacturing are taxed at 0.54%, companies involved in footwear, t-shirt, sock and knitting products are taxed at 1.27%.

Other Statutory Rights of Employees

Other statutory and benefits for employees in Indonesia include:

- Holiday entitlement: from the second year of employment, all employees are entitled to 12 days of paid leaves per year. In addition, there are around 10 public holidays every year;
- Sick leave: all employees are entitled to paid sick leaves without limit if they have a medical certificate. For the first four months, employees should be paid 100% of their monthly wage, 75% from the fifth to the eight month, 50% from the ninth to the 12th month and 25% afterwards;
- Maternity rights: female workers are entitled to 90 days of maternity leave before labour and another 90 days after childbirth. They receive 100% of their monthly wage during the leave and their medical expense are reimbursed;
- Religious holiday allowance: from the second month of employment, all workers receive one month's wage as religious holiday allowance for every 12 months' continuous employment. If they work for less than 12 months, they can receive the prorated amount of the allowance. The allowance is given seven days before the most important religious celebration of the worker's religion, e.g. Idul Fitri for Muslims, Christmas for Christian and Catholics, Vesak for Buddhists and Chinese New Year for Confucians. However, it is common practice to pay the allowance to all workers before Idul Fitri; and
- Other statutory leaves: the Labour Law permits paid leaves for various personal commitments, including marriage and bereavement etc.

Besides the abovementioned statutory rights, an employer must ensure occupational safety and hygiene (e.g. provision of toilets in accordance with the number of workers, provision of personal protective equipment at no cost etc.). Companies with 100 workers or above are required to establish and apply an occupational safety and health management system, which includes various risk management policies, employee's roles and responsibilities and implementation details.

E. Labour Law Governing Authorities, Enforcements, and Restrictions[2,6,8,9,10,11]

Governing Authorities

- The Ministry of Manpower (MOM): the MOM is the government body which formulates labour legislations and implements national labour policies in Indonesia.
- Badan Penyelenggara Jaminan Sosial (BPJS): the BPJS is responsible for social security policies development, harmonisation of social security programmes implementation, and social security funds monitoring. There are two independent bodies under the BPJS, namely BPJS Ketenagakerjaan and BPJS Kesehatan, which are respectively responsible for managing social security and healthcare security programmes.

Labour Law Enforcements

- Labour Law enforcement is mainly dealt by the subordinating directorates of the MOM, e.g. the Directorate General of Labour Inspection, the Directorate of Working Conditions Inspection, the Directorate of Occupational Safety and Health Inspection and the Directorate of Law Enforcement on Labour Inspection. The main roles of these directorates are to enforce the country's labour laws through formulating standards and guidelines, compliance inspections and provision of evaluation services.
- The Industrial Relation Court hears and issues decisions on employment-related complaints. If the litigant parties are not satisfied with the outcome, they can submit an appeal to the Supreme Court.

Restrictions on Foreign Employment

In Indonesia, foreign workers must be employed under fixed-term contract. In addition, they are prohibited from assuming certain positions listed in the Decree No. 40 of 2012, e.g. CEO *(Note)*, positions related to human resources, occupational safety specialists etc.

Moreover, in order to develop a local Indonesian expertise, companies hiring foreign employees must comply with strict requirements. For example, at least one Indonesian worker must be employed for every foreign employee hired in order to facilitate technology and knowledge transfer.

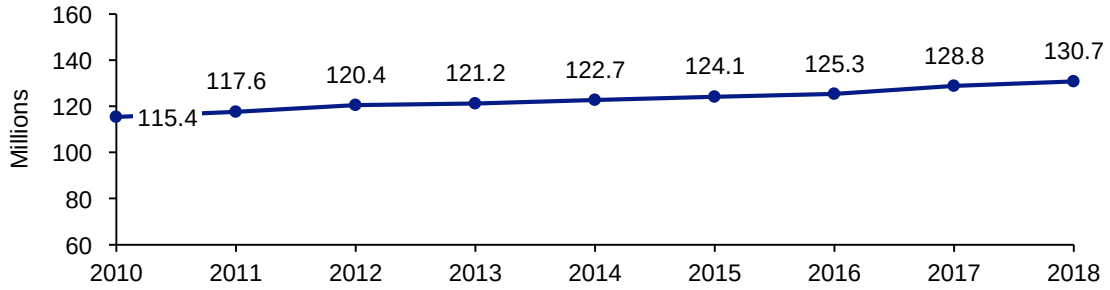
Foreign workers are in general forbidden by law to be employed by more than one employer in Indonesia. Only foreign workers working as non-shareholder directors or commissioners, working in vocational training, digital economy or the oil and gas sector are exempt from this rule.

Note: Under the Indonesian Company Law, the chief officer of a company is "President Director" while "CEO" of a company has no legal meaning. The MOM clarified that President Director, together with the Board of Directors and senior officers, are still open to foreign nationals.

II. Local Labour Supply Market Condition

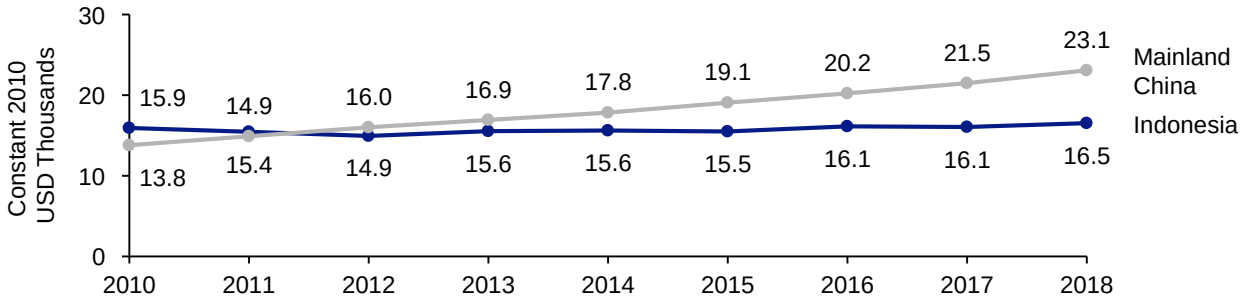
A. Supply Situation for Total Labour Force[12,13]

Indonesia Total Labour Force (2010 – 2018)



The estimated total labour force was around 130.7 million in 2018. The supply of labour has been steadily increasing since 2010. As of August 2017, 48% of the employed population was employed in the service sector, followed by 31% in the agricultural sector and 21% in the manufacturing and construction sector. Since 2010, the labour force has been shifting from working in the agricultural sector to the services, manufacturing and construction sectors. The ratio of population working in the manufacturing and construction sector increased by 3% from 2010.

Indonesia Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)

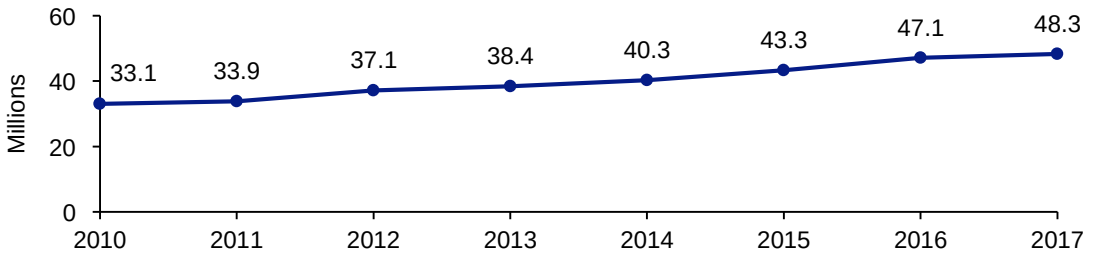


Mainland China's industry labour productivity grew at a higher rate (around 6.6%) than Indonesia's (around 0.5%) between 2010-2018. Indonesia's industry labour productivity was around 29% lower than Mainland China's in 2018. The country's productivity ranks fifth among the ASEAN countries, behind Brunei, Singapore, Malaysia and Thailand.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply of Educated Employees

Estimated Employed Population with Higher Education in Indonesia (2010 – 2017)[14]



The estimated employed population with higher education (defined as employed population who completed high school and beyond) was around 48.3 million in 2017, approximately 38% of the total employed population. However, only around 12% of the total employed population went through tertiary education, which is still relatively low.

C. Government Support on Employee Training[15,16,17,18]

In order to enhance Indonesian workers' skills and competencies, the government develops the Roadmap on Development of Education and Vocational Training 2017 – 2025 (Roadmap). It focuses on establishing policy frameworks targeted at vocational education training (VET). The Roadmap also identifies six VET priority areas: manufacturing (i.e food & beverage, textiles, automotive and electronics), digital economy (i.e. e-commerce) and healthcare.

In the Roadmap, VET institutes are categorised into three types, each of which satisfies different training needs:

- Vocational and pre-professional high schools (SMK): provide education for operating level workers in line with industry 4.0;
- Polytechnic institutions (POLITEKNIK): provide education for workers with white collar jobs; and
- Community training centres (BLK): provide trainings for workers who want to acquire skills within a short period of time and require upskilling and reskilling due to automation and economic crisis.

Moreover, the country also implemented a pilot National Apprenticeship Programme in DKI Jakarta and its surrounding areas between 2017 and 2019. The programme aims to alleviate skills mismatch and promote the transition from school to work by apprenticeship, and will be replicated in other provinces if it succeeds in improving the employment outcome of vocational training.

The Indonesian government also incentivises manufacturing companies to invest in employees' trainings. The government will provide 200% tax relief over the next five years for initial investments in vocational education. For example, if a manufacturing company cooperates and works with vocational high schools to provide trainings or apprenticeship activities at a cost of IDR 1 billion, the company will be entitled to deduct IDR 2 billion from its taxable income over the next five years.

D. Labour Unionisation and Related Government Regulations[1,2,6]

The Labour Law, the Labour Unions Law, and the Industrial Relations Dispute Settlement Law regulate all the activities of trade unions in Indonesia. All employees are free to form trade unions if there are at least 10 members in a union. However, a worker can only join one union in a company/factory.

All trade unions must register with the local government agency designated by the MOM. By law, registered trade unions are granted the rights to negotiate and enter into collective labour agreements, resolve industrial disputes and strikes.

- Union fee: trade unions shall manage their own budget and collect the union fee directly or indirectly from their members. Indirect collection of union fees (i.e. deduction from workers' wages by employers) needs written consent from the union members. The list of consent members must be provided to the employer.
- Federations and confederations: trade unions can form and join union federations, which consist of at least five trade unions. Union federations can form and join confederations, which consist of at least three federations.
- Bipartite Cooperation Body (BCB): companies with at least 50 employees must form a BCB with at least three worker representatives and three employer representatives and register the BCB with the local labour agency. The BCB serves as a forum for bilateral communications between the employer and employees. Both parties must meet at least once a month and the minutes of their meetings must be submitted to the local labour agency.

- Collective Labour Agreements (CLAs): a company can only have one CLA which applies to all employees. The terms of the CLA must be at least as favourable as the law, otherwise those less favourable conditions will be null and void, and the legal requirements will supersede. The CLA must be written in Bahasa Indonesian, signed by both the employers and the trade union representatives, and registered with the MOM. It is valid for a maximum of two years with a possible one year extension. After, re-negotiations must be undertaken.
- Strike: workers have the right to strike in Indonesia, but it should be a last resort to settle labour disputes. Thus strikes should only occur when 1) the employer fails twice within a 14-day period to respond to the trade union's written request to negotiate or 2) employers and employees cannot reach a consensus during negotiations. Workers are required to give a seven-day written notice to the employer and the local labour office with all the details of the strikes. The notice shall be signed by trade union or by workers' representatives.

E. Work Permits and Visa[1,19,20,21,22]

Work Permits

The MOM issued new regulations in late 2018 to update requirements and procedure to hire foreign workers. Work permit is not a single document but a set of two (i.e. RPTKA and Notification) in Indonesia. Employers can apply for the required documents online at the TKA Online system (www.tka-online.kemnaker.go.id/). The requirements for obtaining the Indonesian work permit are as follows:

- Foreign manpower utilisation plan (RPTKA): Employers must obtain the MOM's approval for their RPTKA, which sets out information such as the number of foreign employees to be hired by the company. The RPTKA's validity is supposed to be equal to the foreign employee's term of employment, however, in practice the MOM decides unilaterally the validity length of the RPTKA;
- Notification: employers must also obtain from the Directorate General a document called "Notification" which grants companies the right to hire a foreign employee. Like the RPTKA, the Notification is supposed to remain valid during the entire foreign worker's employment period, but usually its validity is decided by the MOM;
- Compensation for the Use of Foreign Manpower (DKP-TKA): when both the RPTAK and the Notification are approved/obtained, employers are required to pay the DKP-TKA. Companies need to pay USD 100 per month for each position held by a foreign employee.

However, if the foreign employee is a director or a commissioner and owns shares in the company, his employment is exempt from being included in the RPTKA, and the company is not required to obtain the "Notification" or pay the DKP-TKA.

Visas

Foreign employees must hold a valid visa to legally stay and/or work in Indonesia. The common types of visas held by foreign employees are provided as follows:

- Limited Stay Visa (Visa Tinggal Terbatas, VITAS): After the issuance of the RPTKA, Notification and settlement of DKP-TKA, the employer should apply for a VITAS on behalf of its foreign employee with the Directorate General of Immigration. The foreign employee will obtain the VITAS from an Indonesian embassy or consulate in his country. The VITAS's validity is the same as the Notification, subject to the maximum stay of two years;

- Limited Stay Permit (Izin Tinggal Terbatas, ITAS): ITAS can be applied concurrently with VITAS. ITAS has a maximum validity of two years and is renewable for an additional of four years at most. ITAS shall be issued as a sticker to the foreign employee's passport at the immigration inspection gate;
- Business Visa: there are multiple entry and single entry Business Visas. Holders are allowed to stay in the country for a maximum of 60 days. A business visa should suffice if the foreign employee holds a position of director or commissioner, does not reside in Indonesia, and visit the country only for business purposes. However, it is advised to consult the labour authorities in advance for this situation.

Travelling to Indonesia

Hong Kong residents are permitted to stay up to 30 days in Indonesia without a visa.

F. Religious and Cultural Concerns or Considerations[23,24,25]

Religion

Indonesia is the world's largest Muslim country with more than 85% of its population declared Muslim. Indonesian labour laws require employers to respect the workers' religion and protect their rights to honour their religious obligations. For example, employers must provide adequate opportunity for workers to pray (e.g. usually 5 times a day for Muslims) and allow employees to be absent from work due to religious rituals. Workers are also entitled to an annual religious holiday with a cash allowance.

Despite the religious freedom protection stated in the Constitution, studies indicate that religious intolerance towards minorities (e.g. Ahmadis) has been growing in Indonesia. For example, in 2017, an Indonesian NGO, the Setara Institute, reported that acts of religious intolerance increased from 236 acts to 270 between 2015 and 2016. Thus employers should pay extra attention in handling potential conflicts among their Indonesian workers.

Culture

Indonesia experienced a period of anti-Chinese riots before 1990s. Although in recent year ethnic Chinese have been better embraced by the Indonesian society, they are still experiencing discrimination and prejudices. For example, there were months of racially charged demonstrations in 2017 against Purnama, former Jakarta's governor, who is ethnic Chinese. Ethnic Chinese business owners should carefully assess the impact of the anti-Chinese sentiment when they consider business expansion to Indonesia.

In establishing business relationships, personal relationships are key to a successful deal in Indonesia and the level of closeness with Indonesian professionals may take precedence over the offer.

Source:

[1] *Indonesia Labour Laws 2019, PersolKelly*

[2] *Labour Law Guideline Indonesia, BetterWork Indonesia*

[3] *Doing business in Indonesia 2018 - 2019, Mazars*

[4] *Doing business in Indonesia, PwC and HSBC Commercial Banking*

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[9] *OECD Development Pathways Social Protection System Review of Indonesia, OECD*

[10] *The Effect of Decree 40: Foreigners Are Banned from the Human Resources Arena in Indonesia, SSEK Indonesian Legal Consultants*

[11] *Indonesia: Indonesian Employment Law Update: Permits For Foreign Workers, SSEK Indonesian Legal Consultants*

[12] *Total Labour Force (Indonesia), The World Bank*

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[18] *Indonesia continues to improve skills development through industry - vocational education and training partnership, ILO*

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[22] *Visa-free access or visa-on-arrival for HKSAR Passport, Hong Kong Immigration Department*

[23] *Religious Intolerance in Indonesia, Congressional Research Service*

[24] *The Chinese Indonesians with long memories and escape plans in case racial violence flares again – despite signs of tensions easing, South China Morning Post*

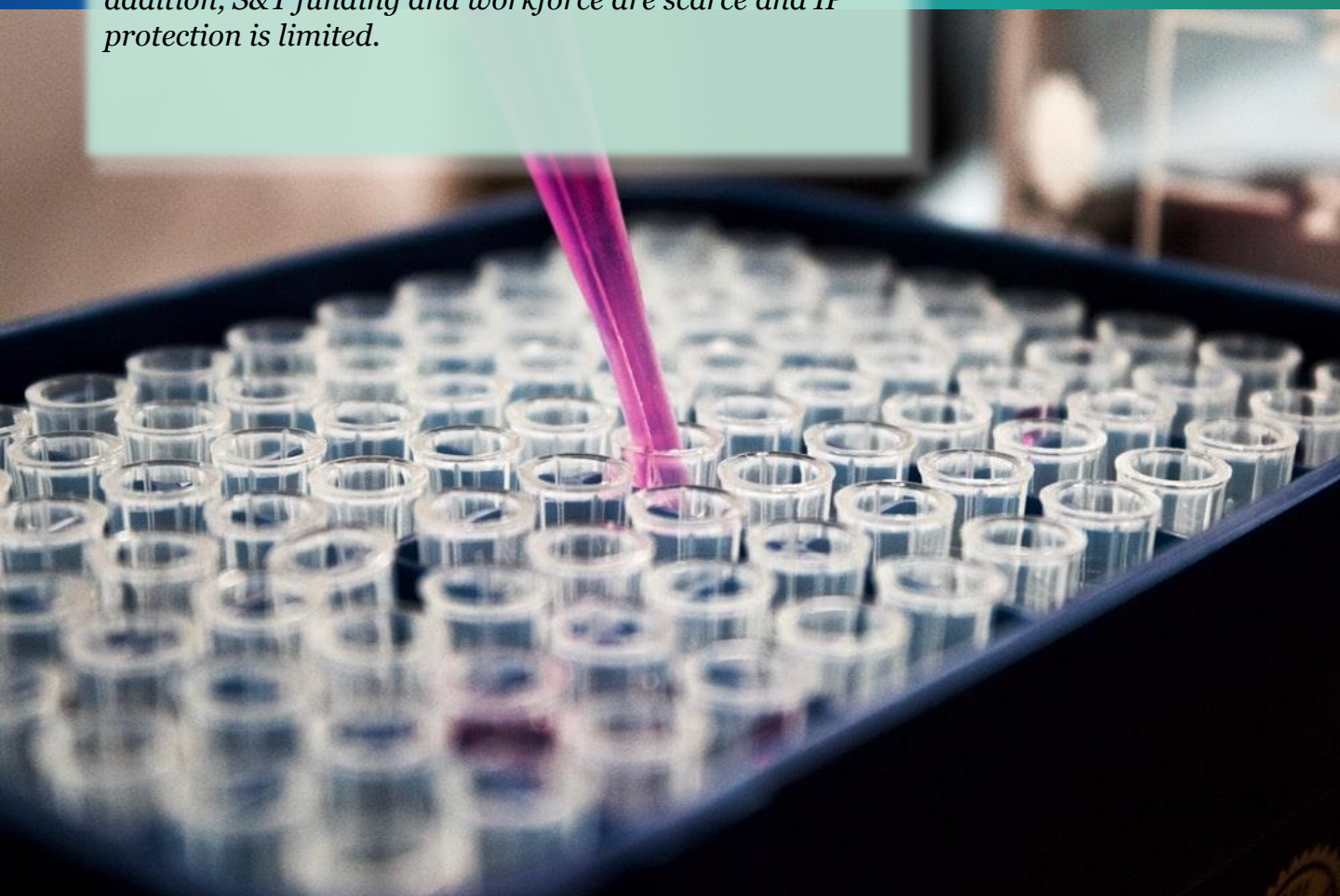
[25] *The Cultural Atlas, IES (2019)*

5. Research and Development Environment

Executive Summary

Indonesia is implementing the Masterplan for Acceleration and Expansion of Indonesia Economic Development to guide the country's development over the 2011 - 2025 period. One of the three main objectives of this plan is to strengthen science and technology (S&T) by improving S&T infrastructure, training a skilled workforce, supporting value-adding industries and increasing intellectual property (IP) protection.

However, the development of the country's S&T ecosystem is currently facing major hurdles. The government is behind schedule on its target of building 100 Science Techno Parks, universities' research and development (R&D) has a low impact and the private sector involvement is limited due to the lack of targeted incentives. In addition, S&T funding and workforce are scarce and IP protection is limited.



5. Research and Development Environment

I. The Science and Technology (S&T) in Indonesia

Indonesia's 2025 Vision is to "transform the country into a developed nation, through high, inclusive, and sustainable economic growth". In order to do so, the government designed a masterplan to frame Indonesia's economic development. In this plan, one of the key levers is S&T.

A. Policy and Trends in S&T[1]

Indonesia's government is implementing the Masterplan for Acceleration and Expansion of Indonesia Economic Development (MP3EI) from 2011 to 2025. The plan details three main strategies that should allow the country to reach the 2025 Vision, one of which is focused on strengthening Science and Technology.

Main Strategies of the MP3EI

S&T in the MP3EI

In the MP3EI, Indonesia identified S&T as a main driver of sustainable economic growth. The objective of the government is to increase the country's economic competitiveness through innovation. S&T development is therefore bound to support Indonesia in its transition from an industry-based to an innovation-driven economy. To realise the transition, Initiatives 1-747 of the MP3EI list out strategies and objectives to foster the S&T ecosystem. The main objectives are to:

- Improve S&T infrastructure to meet international standards (e.g. develop research and development (R&D) infrastructure and regional innovation clusters);
- Support S&T human resources (HR) development (e.g. improve quality and flexibility of HR, enhance researchers' remuneration);
- Improve industrial value-added products (e.g. support small and medium-sized entarpirses and develop research funding in order to double exports for creative industry products); and
- Increase intellectual property rights protection (e.g introduce incentive and regulation systems that support innovation).

This initiative will focus on promoting innovation in basic industries (i.e. food, energy, medicine, and water), in creative industries (i.e. information and communications technology) and strategic industries (i.e. defence and transportation). To fund the strategy, the government is aiming to have the S&T budget equal to 3% of the gross domestic product (GDP) by 2025.

Outlook[2,3]

Despite this major policy, Indonesia still has limited S&T capabilities. According to the Global Competitiveness Report 2018, the country ranked 68th out of 140 countries on the innovation capability pillar, behind Malaysia (30th), Thailand (51st) and the Philippines (67th). The country's lowest scores were recorded in the R&D expenditure criteria (112th), patent application (99th) and trademark applications (97th). According to the latest data available (from 2013), Indonesia's R&D expenditures were less than 0.1% of its GDP. However, Indonesia was ranked high in the multi-stakeholder collaboration (25th) and state of cluster development (28th) criteria.

B. S&T Related Organisations

The Ministry of Research, Technology & Higher Education (Ristekdikti)[4]

The ministry is in charge of drafting and implementing policies related to S&T and higher education in order to achieve the objectives set out in the National Medium Term Development Plan (RPJM 2015-2019). The Ristekdikti vision is to improve higher education quality and to promote Science, Technology and Innovation (STI) to support Indonesia's economic competitiveness. To achieve this vision, the ministry has three major missions:

- Foster higher education quality, relevancy and access to train a qualified workforce;
- Improve STI capabilities to help industries upgrade their products; and
- Develop, oversee and regulate the S&T framework.

Another mission of the ministry is to coordinate private and public universities, and other national agencies working in the fields of nuclear energy (i.e. BAPETEN and BATAN), aeronautics (LAPAN), and standardisation (BSN). In addition, the ministry manages two important S&T agencies: the Indonesian Institute of Science (LIPI) and the Agency for the Assessment & Application of Technology (BPPT).

The Indonesia Institute of Science (Lembaga Ilmu Pengetahuan Indonesia, LIPI)[5]

The LIPI is a research institute that assists the government in organising the S&T and R&D ecosystems, and provides advice concerning S&T related policies. Its other missions are: to conduct R&D activities (through its multiple centres), develop the scientific community, encourage S&T consciousness among the population, and foster cooperation with national and international agencies. The institutes mainly focus on research in:


Advanced Materials


Energy and Transportation


Innovation of Technology


Technology, Information and Communications

Agency for the Assessment & Application of Technology (Badan Pengkajian dan Penerapan Teknologi, BPPT)[6]

The BPPT is a leading national research institution which focuses on innovation and technology to improve national public services and to increase Indonesia's economic competitiveness. The agency carries out research activities in four major fields:


Agro-industry and Biotechnology


Information Technology, Energy, and Materials


Industrial Technology Design and Engineering


Natural Resources Technology

II. The Infrastructure of Science and Technology

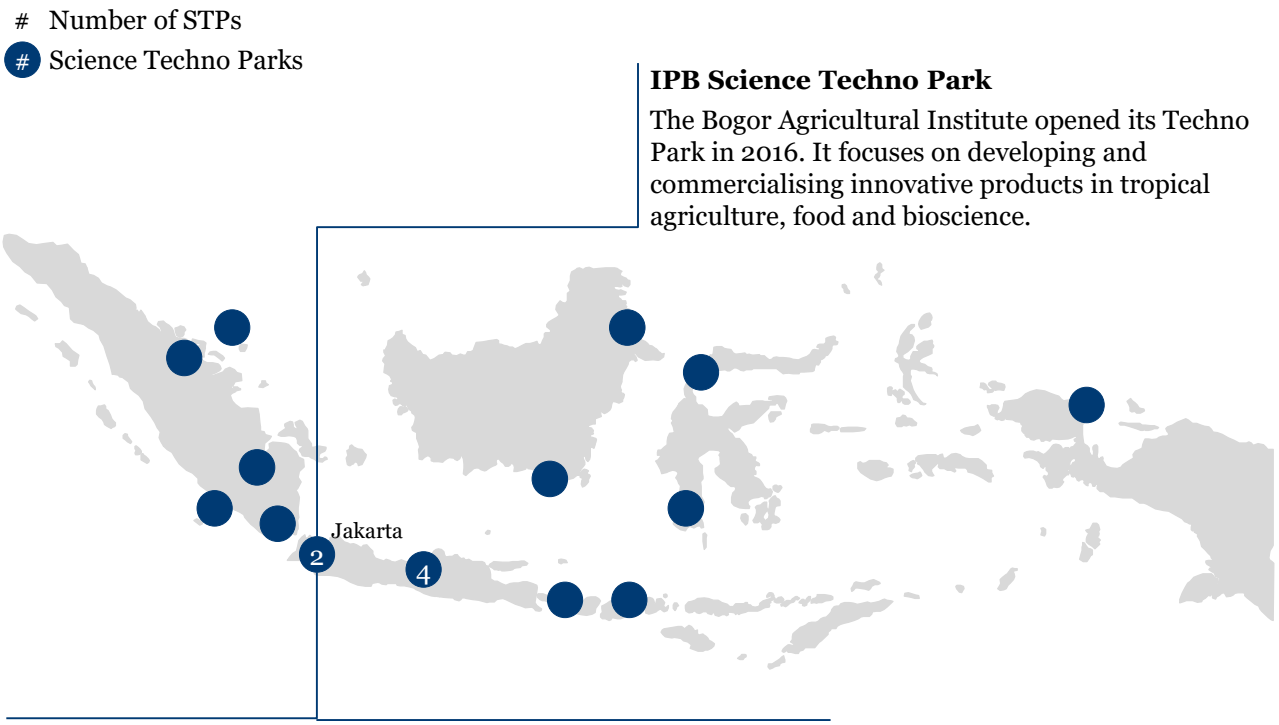
Indonesia tries to foster S&T collaboration between the government, universities, and private businesses. To do so, the country has adopted the Science Techno Park (STP) model which creates a centre of excellence where different stakeholders can exchange knowledge.

A. Government R&D Institutes and/or Funding Agencies[7,8]

Between 2015 and 2019, one of the Indonesian government's priorities is to build 100 STPs to improve the country's productivity and competitiveness in fields such as agriculture, manufacturing or renewable energies. The STPs are research, development and innovation centres, incubators of new products and technologies, and collaboration spaces for government, universities and private businesses. Currently, there are 18 STPs with three others being developed in 2019. This figure is well below the target and is mainly due to the lack of scientists in the country involved in the programme.

For more information please visit the 100 Science Techno Park homepage (stp.ristekdikti.go. id/new/stp)

Location of Indonesia's Science Techno Parks



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

B. University-based R&D Institutes[9,10]

Apart from the government, universities are important players in the R&D field. According to the 2019 QS Asia University Rankings, Indonesia has nine universities ranked in the top 300, indicating a low/moderate research and teaching quality. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The first Indonesian institution is ranked 57th, with two other institutions ranked in the top 100. The ranking implies that R&D carried out in Indonesian universities has quite a low impact in the S&T international scene.

University (ranking)	Research Fields in the University
Universitas Indonesia (57th)	The University hosts a total of 14 faculties. They conduct research in fields including: • Computer Sciences • Engineering (e.g. industrial, mechanical or chemical) • Mathematics and Natural Sciences (e.g. biology, chemistry or physics) • Environmental Sciences
Bandung Institute of Technology (73rd)	The University hosts 7 research centres, of which 5 are related to S&T: • Bioscience and Biotechnology • Cultural and Environmental Products • Nanoscience and Nanotechnology • Information and Communications Technology • New and Renewable Energy
Gadjah Mada University (74th)	The University focuses on research areas that have been prioritised by the Indonesian government such as food security, energy, health, transportation, engineering, etc.

C. Private Business Firms (Research Centres)[11]

Private sector participation in the Indonesian's R&D activities is still limited. In 2017, private companies invested around IDR 6 trillion (around USD 0.4 billion) which represented only 20% of the total R&D expenditure of the country. As a comparison, Thailand's private business participation in R&D is around 80%. This low figure can be explained by the lack of targeted incentives, relevant policies, and poor private sector awareness of the importance of R&D.

D. Infrastructure Availability for Foreign Investments

Attracting foreign investors for R&D does not appear to be a priority of the MP3EI. There is no specific R&D infrastructure availability for foreign investment highlighted by the ministries. For more details on infrastructure availability and foreign investments, please refer to sections 7, 8, and 9 of this report.

III. Priority Areas in Indonesia (major exports)[12,13]

Indonesia's export and economy strongly rely on natural resources. In 2018, Indonesia's top five exports were:

Top Five Exports	% of Total Exports (in 2018)
Mineral Fuels (including oil)	23.3%
Animal or vegetable fats and oils	11.3%
Electrical machinery (equipment and parts)	4.9%
Vehicles (other than railway)	4.2%
Rubber	3.5%

The majority of products exported from Indonesia are low-tech and do not require much Research and Development. The country is struggling to upgrade its exports from low to high-tech products. In 2018, hi-tech products (e.g. products with high R&D intensity, such as in aerospace, computers or pharmaceuticals), only represented around 6% of total manufactured exports compared to almost 30% in Vietnam or Malaysia.

IV. Funding for S&T and R&D

Government Funding[14,15]

The Indonesian government is increasing its budget dedicated to R&D activities. In 2019, President Joko Widodo announced a total amount of R&D funding of IDR 26 trillion (around USD 1.8 billion) which represents around 0.16% of the country's GDP. This is the greatest amount allocated to R&D in Indonesia's history. Prior to this, the highest amount was only around 0.09% of the GDP.

The 2019 R&D budget is allocated to several ministries and national agencies to help them develop their research activities. Around 10% of this budget is destined for the Ristekdikti, which will then give out grants to universities.

Indonesia Science Fund (ISF)[16]

The ISF is the country's first independent research funding organisation. It was created in 2016 to provide multiyear grants, as previously, scientists had to rely on yearly grants that fluctuated according to the annual budget. The ISF awards competitive grants with a maximum amount of IDR 1.5 billion/year (around USD 100,000), for a maximum period of three years to Indonesian researchers. Some of the ISF focus areas including: 1) Materials and computational sciences; 2) Water, food and energy 3) Life, health and nutrition; and 4) Archipelago, marine and bio-resources.

V. Human Resources for S&T[17,18,19,20]

S&T manpower development is one of the main missions of the MP3EI. Having a highly skilled workforce is important to strengthen the country's S&T capabilities and achieve greater economic competitiveness. As of 2019, Indonesia is lacking both researchers and an S&T trained workforce.

The number of researchers is estimated to be between 25,000 and 50,000 (or a ratio of 100 to 200 for every one million people), and a possible target would be to increase this figure by five times, and reach 250,000 researchers. Therefore, the country ranked among the lowest ASEAN countries on the criteria "Researchers, FTE/million population" of the 2019 Global Innovation Index. The country ranked 86th out of 126 countries worldwide.

In addition, the Ristekdikti has stated that the country will need a total of 113 million S&T skilled workers by 2030 to achieve a sustainable economic growth. This would require a doubling over the next 10 years of the current S&T skilled workforce, as Indonesia only had 55 million skilled workers in 2019. According to the ministry, the sectors requiring the most workers would be the manufacturing, infrastructure and agro-business industries. This would be a challenging mission for the country as out of all its tertiary graduates, only 19% graduate in science and engineering *(Note)*.

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Supports in Testing and Certification[21]

The Indonesian government does not provide specific support in testing and certification to S&T companies. However, the Ristekdikti manages the National Standardisation Agency of Indonesia (Badan Standardisasi Nasional, BSN), which can provide guidance on the needed certifications in the country. This agency is also involved in drafting national standards and in promoting international recognition of certification results and laboratory tests conducted in Indonesia.

VII. Intellectual Property Policy[22]

Intellectual property (IP) rights are an important factor to consider when entering a country. Some countries have difficulties implementing a strong framework to protect IP rights which can cause serious damages to the companies. Each year the Global Innovation Policy Center publishes a worldwide ranking which analyses eight IP protection related topics: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, membership and ratification of international treaties.

According to the 2019 IP Index published by the Global Innovation Policy Center, Indonesia's IP protection is very low. Globally, the country is ranked 45th out of 50 analysed countries. Regionally it is also underperforming when compared with other Asian countries. Overall, Indonesia scored 29%, which is below the Asian average of 52% (for reference, the top five world economies have an average of 92% on the index). Despite improvements over the years, substantial weaknesses still persist in Indonesia's IP protection:

- Lack of clarity around requirements and implementation of IP protection;
- Low participation in international IP treaties;
- High uncertainty for rights holders around implementation of technology transfer related IP;
- Important barriers affecting IP assets' licencing and commercialisation;
- Copyright environment is affected by high levels of piracy; and
- Biopharmaceutical patents do not conform to international standards.

Source:

[1] *Indonesia for Acceleration and Expansion of Indonesia Economic Development 2011-2015, ASEAN Briefing*

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[16] *Indonesia Science Fund homepage*

[17] *Breaking with the past, no more negligence in research, The Jakarta Post 2018*

[18] *Youth science camp seeks to counter shortage of researchers in Indonesia, The Jakarta Post, 2017*

[19] *Indonesia focuses on polytechnics amid staggering skills gap, The Jakarta Post, 2019*

[20] *Global Innovation Index 2019, INSEAD*

[21] *Badan Standardisasi Nasional homepage*

[22] *GIPC IP Index, Global IP Center, 2019*

6. Supply Chain Environment

Executive Summary

Indonesia's economy is heavily reliant on exporting its many natural resources, such as palm oil, rubber, timber, metals, and coal. However, with weak infrastructure and poor connectivity between the many islands making up Indonesia, transport cost and time are high, thus lowering productivity and hurting margins for investors. A complex customs process also complicates trade in the country.

To transform Indonesia into a transport and logistics hub in the region, the Indonesian government has invested heavily into logistics infrastructure, with over USD 29 billion budgeted for numerous projects in air, sea, road, and rail transport in 2019 alone.

6. Supply Chain Environment

I. Industry Profiles in Indonesia

Breakdown of 2018's Top 10 Exports[1,2,3,4]

Indonesia's major sectors by gross domestic product (GDP) in 2017 are service (around 45%), industry (around 41%) and agriculture (around 14%).

In Indonesia, the service sector mainly includes financial services and tourism. The major industries are timber, textiles, cement, electronics, and chemicals. The primary products dominating the agricultural industry are rubber, palm oil, rice, sugarcane, coffee and tea, tobacco, and spices.

In 2018, Indonesia's total global shipments amounted to USD 180.2 billion of which over 60% were contributed by its top 10 exports.

Product Groups *(Note)*	Value	% of Total Exports
1. Mineral fuels including oil	USD 42.0 billion	23.3%
2. Animal or vegetable fats and oils	USD 20.3 billion	11.3%
3. Electrical machinery, equipment, and parts	USD 8.9 billion	4.9%
4. Vehicles other than railway, and parts and accessories	USD 7.6 billion	4.2%
5. Rubber and related products	USD 6.4 billion	3.5%
6. Machinery	USD 5.9 billion	3.3%
7. Iron and steel	USD 5.8 billion	3.2%
8. Precious stones and metals	USD 5.6 billion	3.1%
9. Ores, slag, and ash	USD 5.3 billion	2.9%
10. Footwear, and related products	USD 5.1 billion	2.8%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to the following link: www.censtatd.gov.hk/trader/hscode/index.jsp

Agriculture is still a major sector of the Indonesian economy. Due to large scale plantations, particularly for palm oil production, agriculture uses 30% of the total land area of the country.

Indonesia is the world's largest palm oil producer. With over 40 million tonnes produced in 2018, it accounted for around 50% of the global production. In addition, rubber is also an important industry in Indonesia. With 34% of the global exports, the country was the world's second largest rubber exporter behind Thailand.

II. The Key Supported Industries in Indonesia[5]

Under the Masterplan for Acceleration and Expansion of Indonesia Economic Development (MP3EI) adopted in 2010, the Indonesian government aims to create six Economic Corridors (Sumatra, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggra, and Papua-Kepulauan), each specialised in a few specific industries. These industries include agriculture, food and beverage, mining, energy, information and communications technology (ICT), and logistics. The MP3EI aims to transform Indonesia into a developed nation, and a global leader in the above industries. This section will focus on agriculture, food and beverage, and ICT.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations

Agriculture

Agriculture is a major industry in Indonesia, with palm oil, and rubber being the most important commodities. The country has been the largest palm oil producer in the world since 2007.

The MP3EI aims to improve the productivity of both the palm oil and rubber plantations. Currently, Indonesia's palm oil productivity is 3.8 tonnes/Ha, far below the potential productivity of 7 tonnes/Ha. Similarly, around 80% of the rubber in Indonesia is produced by small individual holders who still use traditional methods of production, resulting in around 30% less productivity than larger private companies or state-owned enterprises (SOEs).

Improved logistics infrastructure will also reduce costs, travel time, and therefore increase productivity in the downstream industries of the palm oil and rubber value chain.

Food and Beverage

The food and beverage (F&B) industry is a major contributor to Indonesia's GDP (around 6.3%), and the largest employer among the manufacturing industries.[6] According to the National Statistical Agency (Badan Pusat Statistik, BPS), the F&B industry in Indonesia has over 6,000 large and medium-sized companies, and over 1.6 million micro and small-sized producers, employing a total of over 4 million workers.

One of the major issues in the F&B industry is that the import duties on the end products are lower than those of the raw materials. This leads to companies preferring to import end products, rather than develop the local F&B processing industry. This issue is further compounded by the fact that Indonesia currently does not provide sufficient raw materials for the F&B industry, forcing businesses to import most of the necessary ingredients at expensive rates.

Information and Communications Technology

The information and communications technology (ICT) will be an important industry of the future for Indonesia. The current ICT infrastructure in Indonesia is relatively weak, ranking 111th out of 176 countries in the International Telecommunication Union (ITU)'s Development Index, and seventh among its ASEAN peers.

However, the ICT infrastructure is improving rapidly, with 55% of the population having access to the internet in 2017. The government aims to further expand broadband access through the Palapa Ring project, which involves the construction of an optic fibre network to increase internet penetration. The project is split into the West, Central, and East sections. The West section, which serves the most populous regions of Java and Sumatra, has been completed, but the Central and East sections serving the poorer regions are yet to be fully operational.

III. Key Raw Materials Sourcing Platforms/Channels[7]

Major online B2B sourcing platforms in Indonesia include IndoTrading, eWorldTrade, and Ralali.

The annual Trade Expo Indonesia is a B2B trade fair that showcases Indonesia's products, ranging from manufacturing and mining to agricultural products. It is held every October at the Indonesia Convention Exhibition (ICE) in Greater Jakarta. The fair is mainly aimed at boosting exports, and has many activities held alongside the fair, such as trade, tourism and investment forums.

IV. Procurement Situation (local and oversea) of Raw Materials

A. Hurdles or Problems Encountered

Indonesia is a country with great investment potential, especially given its advantageous position in Southeast Asia, its large population, and its abundance of natural resources such as coal, metals, and timber. However, some major hurdles pose issues to foreign investors wishing to do business in Indonesia:

- Weak infrastructure and logistics facilities increase the time and costs required for both imports and exports;
- High import tariffs on raw materials hurt investors' margins (e.g. in the F&B industry); and
- Use of traditional methods in many industries lead to relatively low productivity.

According to a 2019 report by the World Bank, Indonesia is ranked 73rd in the world in terms of ease of doing business, and is ranked sixth out of the ASEAN countries (Hong Kong is ranked fourth in the world in the same report). Indonesia ranks comparatively well in getting credit (44th), protecting minority investors (51st), and resolving insolvency (63rd).

B. Efficiency of Customs and Clearance Process[8]

Indonesia applies two systems of tariffs classification. The eight-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Indonesia and the other ASEAN countries, whilst the six-digit Harmonised Commodity Description & Coding System (commonly known as the HS Code) applies for trade with non-ASEAN countries. All imported and exported goods into/from the country must be categorised using the HS Code.

All the goods imported are liable for customs duty, value added tax, and Article 22 income tax. Some goods may additionally be liable for luxury-goods sales tax. Any goods arriving from other ASEAN countries may benefit from preferential rates according to the ASEAN Free Trade Agreement.

Both individual and corporate importers must register with the Directorate General of Customs and Excise and obtain a Customs Identification Number (Nomor Identitas Kepabeanan, NIK). Importers must then obtain an Importer Identification Number (Angka Pengenal Importir, API) in order to be allowed to import. Exporters must also obtain an NIK, and will require a taxpayer identification number (Nomor Pokok Wajib Pajak, NPWP), an appropriate business license from the relevant authority, and an Exporter Identification Number (Angka Pengenal Ekspor, APE). For further information regarding API and APE, please refer to Section 2.

Custom Clearance Process[9]

Step 1:

Goods imported or exported are subject to customs declaration. A Customs Declaration Form must be filled in and submitted to the Customs officer at the Customs Inspection Gate.

Step 2:

Goods shall be assessed by the customs officers at the checkpoint. The importer must provide a list of containers imported to the Customs officer either manually or electronically

Step 3:

All duties/customs taxes imposed on imported goods will need to be computed and paid in advance before the goods can be released (customs duty, value added tax, Article 22 income tax, and luxury-goods sales tax if applicable).

Step 4:

Upon approval by the Customs Authority, the imported goods may be released from the customs area.

The following table shows the supplementary documents needed for customs declaration:

	Import and Export Goods
1	Invoice
2	Packing list
3	Certificate of insurance
4	Bill of lading
5	Customs import/export declaration
6	Import/export permit
7	Certificate of origin (for exporting)
8	Any other product specific required documents

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[10,11,12,13,14]

Indonesia has the potential to be a major Southeast Asian transportation and logistics hub as it benefits from strategic access to the Malacca Strait and other major international shipping lanes. However, the country's infrastructure are aging, coverage and connectivity are poor, and logistics costs are high, preventing Indonesia from becoming a top ASEAN hub. Since he took office in 2014, Joko Widodo's administration has made upgrading the country's infrastructure a national priority, with numerous projects in air, sea, road, and rail transport.

Airports

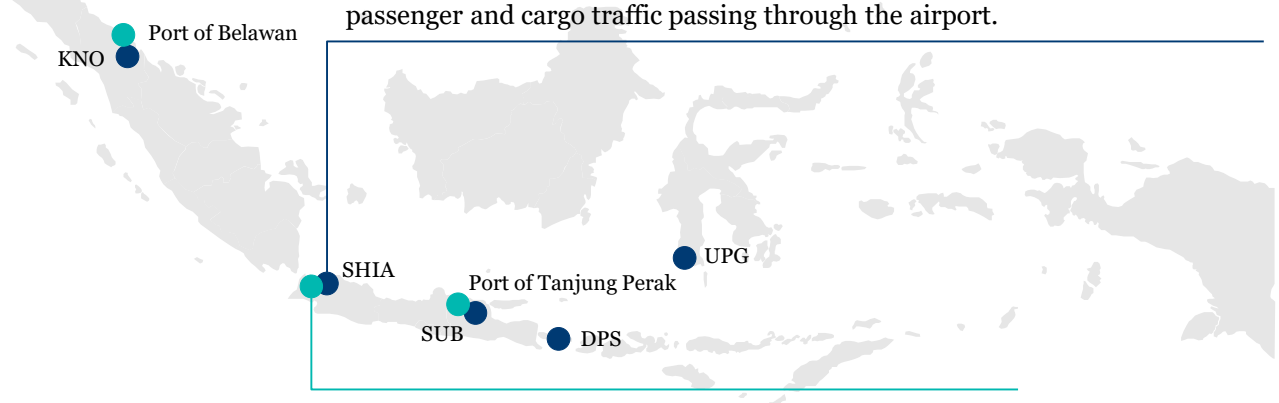
Indonesia has a total of 297 airports, with 28 of them being international airports. However, only 19 of these have scheduled international flights. The two largest airports in the country are Jakarta's Soekarno-Hatta Airport and Bali's Ngurah Rai, which together handled a total of over 14 million international passengers, and 190,000 tonnes of international cargo in 2018.

Seaports

Indonesia has 97 commercial seaports, which are mostly managed by the Indonesia Port Corporations I-IV (IPC). As an island nation, seaports are extremely important to Indonesia's trade, and the government has accordingly enacted the Sea Toll Road program. This programme aims to modernise the maritime infrastructure, reduce time and costs, and improve connectivity between the Indonesian islands.

Location of Major Airports and Seaports

International Airports
Ports



Soekarno-Hatta International Airport (SHIA)

Jakarta's Soekarno-Hatta Airport was in 2018 the world's 18th busiest airport and the busiest in Southeast Asia, according to Airports Council International. It handled nearly 50% of Indonesia's international passenger departures and more than 80% of the international outbound cargo. Plans for a new passenger terminal and cargo village are being considered to handle the increasing passenger and cargo traffic passing through the airport.

Tanjung Priok Port

Tanjung Priok Port is located on the outskirts of Jakarta, and handles over half of Indonesia's international cargo traffic (i.e. more than 6 million TEUs in 2017). The port is currently undergoing an expansion process which should increase its capacity to 18 million TEUs per year.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Highways

Indonesia's road network is 524,000 kilometres long, with over 40 toll roads totalling around 1,000 km in length.

However, Indonesia still has a huge problem with traffic jams, with Jakarta and Surabaya ranking in the top five worst cities for roads according to the Castrol's Stop-Start Index. In response, the government has planned to construct 1,500 km of toll roads by 2024, and over 4000 km more by 2030. This project will also provide better logistics access for industrial areas, special economic zones, as well as new ports and airports.

Railways

The rail network in Indonesia is over 5,000 km in length, and was mostly built during the Dutch colonial era. Today, railways in Indonesia are mostly managed by the state-owned PT Kereta Api.

To remedy its poor railway infrastructure, the government has planned many expansion projects, with 415 km of railways expected to be built in 2019. The largest of these railway projects is the Jakarta-Bandung high-speed rail project, which is a joint project with Mainland China, and a major part of China's Belt and Road Initiative (BRI). Half of the track is expected to be completed by the end of 2019.

In addition, the Jakarta Mass Rapid Transit (MRT) system opened in March 2019. This MRT system is the first subway system in Indonesia. The system is expected to help ease the traffic issues in and around Jakarta.

B. Key Logistics Hubs[15]

The current infrastructure in Indonesia is aged and lagging behind its ASEAN peers. According to the Asian Development Bank, Indonesia's spending on infrastructure are below Asian average. Every year, the country spends around 3% of its GDP on infrastructure, compared with 5% in developing countries and 7% for Vietnam and Mainland China.

However, President Joko Widodo has made upgrading Indonesia's infrastructure a national priority. He has planned over 200 National Strategic Projects, which are already under construction. In 2019 alone, the government has budgeted over USD 29 billion for infrastructure projects, such as toll roads, railways, bridges, dams, airports, and housing.

The largest infrastructure programmes in Indonesia are the Jakarta MRT which opened in March 2019, the Tanjung Priok Port expansion, and the Jakarta- Bandung high-speed rail project. Ultimately, the infrastructure projects aim to improve connectivity between the many islands in Indonesia, and bring the country on par with its ASEAN peers.

C. Logistics Information Tractability and Transparency[16]

Indonesia has relatively poor logistics performance as compared to other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Indonesia was ranked 46th out of 160 countries for the overall LPI, a large improvement from the 2016 result (ranked 63rd out of 160). Indonesia ranked fifth among the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Among these categories, Indonesia performed relatively better in Tracking and tracing (39th) and Timeliness (41st), but is hampered by bad rankings in Customs (62nd) and Infrastructure (54th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Indonesia, Central Intelligence Agency*

[3] *Indonesia Oilseeds and Products Annual 2019, USDA Foreign Agricultural Service*

[4] *Indonesia, Observatory of Economic Complexity*

[5] *Masterplan Acceleration and Expansion of Indonesia Economic Development 2011-2025, Coordinating Ministry for Economic Affairs*

[6] *F&B contribution to GDP steadily increases despite slow growth, Jakarta Post, Jul 2019*

[7] *Trade Expo Indonesia 2019, PT Debindomulti Adhiswasti*

[8] *Import and Export Procedures in Indonesia – Best Practices, Dezan Shira & Associates, Mar 2018*

[9] *Customs Declaration, Embassy of the Republic of Indonesia in Washington DC*

[10] *Operator starts design process for Soekarno-Hatta International Airport's Terminal 4, Jakarta Post, Jun 2018*

[11] *Ports in Indonesia ready to expand, ITE Transport & Logistics, Sep 2017*

[12] *Transportation Statistics 2017, Ministry of Transportation*

[13] *International Air Traffic Indonesia 2003-2017, Badan Pusat Statistik*

[14] *Indonesia plans to construct 4,479 km toll roads by 2030, Jakarta Post, May 2019*

[15] *Will Indonesia's infrastructure bottleneck ever be unclogged?, Euromoney, Sep 2018*

[16] *World Bank's Logistics Performance Index (LPI)*

7. Infrastructure

Executive Summary

Infrastructure development has been identified as one of the core strategies to increase Indonesia's competitiveness and thus achieving economic growth.

Industrial estates offer fundamental manufacturing facilities, preferential business licensing processes and government incentives to foreign investors. There are currently 89 industrial estates in the country and various incentives have been put in place to attract foreign investments. Most of these industrial estates are located in Java Island.

There are 245 National Strategic Projects which aim to develop and enhance the country's infrastructure in areas like roads and bridges, railways, water and sanitation, electricity, port and information technology. They will be developed through various government and Public Private Partnerships (PPP) funding schemes.

7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates

There are currently 89 industrial estates covering a total gross area of over 50,000 hectares (ha) across Indonesia. Industrial estates offer fundamental manufacturing facilities, preferential business licensing processes and government incentives to foreign investors. Most of industrial estates are located in or next to Special Economic Zones (SEZs) with relatively established infrastructure and logistics facilities. Industrial estates in SEZs can also take advantage of any additional preferential taxation and customs policies in the SEZs. Thus, many foreign investors consider industrial estates as their preferred destination for setting up a manufacturing footprint in Indonesia.

In Indonesia, industrial estates are developed and operated by private and/or state-owned enterprises (Badan Usaha Milik Negara, BUMN). Some of them are co-developed by local and foreign companies, e.g. a Mainland Chinese state-owned enterprise, Guangxi State Farm Group, and an Indonesian company, PT Sentrabumi Palapa Utama jointly developed Kawasan Industri Terpadu Indonesia China.

Support and Incentives[1,2,3,4,5,6,7]

When considering establishing in Indonesia's industrial estates, it is important to assess the availability of utilities, the transportation network around the estate, and the incentives provided by the government.

Utilities

Industrial estates are generally equipped with electricity and water supply, drainage systems, wastewater systems, and telecommunications network facilities. Some more established industrial estates even offer commercial services (e.g. banking services), residential areas or recreational areas.

Transportation

Most of the industrial estates are clustered near SEZs and major cities like Jakarta and Batam. Therefore, they benefit from a privileged access to established transportation links and hubs such as roads, railways, ports, and airports.

Government Incentives

Industrial estates offer both tax and non-tax incentives:

- Tax incentives: the applicable tax incentives depend on the location of the estate. Some examples of incentives are tax holidays and value added tax (VAT) allowances, preferential corporate income tax (CIT) rates or preferential regional taxes rates.
- Non-tax incentives: certain businesses can benefit from a fast-track investment licensing service, or can be exempt from filling an environmental analysis of their factories (if the operator of the industrial estates has already done the analysis).

For further details on incentives regarding industrial estates, please refer to the official website of the Ministry of Industry (www.kemenperin.go.id/?) and section 9 of this report.

Industrial Estates' Location and Regional Implications[1,7,8]

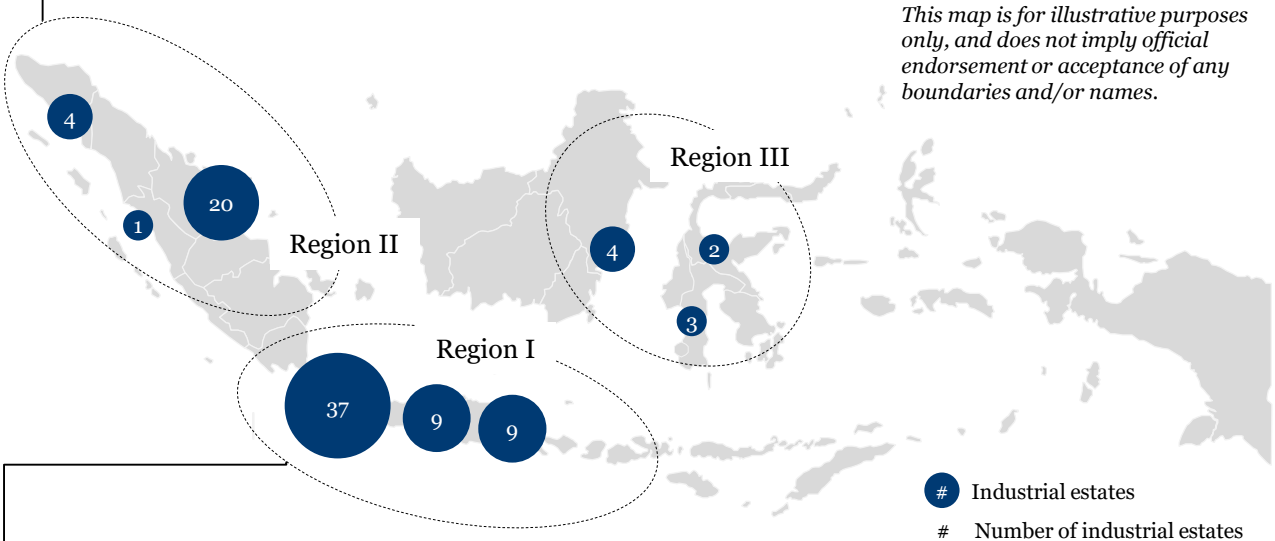
Indonesia's industrial estates are classified into four different Industrial Development Zones (Wilayah Pengembangan Industri, WPI) depending on their location:

- Developed WPI: in Java (Region I in below map);
- Developing WPI: in Southern Sulawesi, Eastern Kalimantan, parts of Northern Sumatra and Southern Sumatra (Region II & III in below map); and
- Potential WPIs: in Northern Sulawesi, Western Kalimantan, Bali and Nusa Tenggara (collectively known as Potential WPI I), as well as Papua and West Papua (collectively known as Potential WPI II). There are no industrial estates currently under development in these two areas.

For a detailed list of industrial estates, please refer to Appendix 1.

Developing WPI (Region II & III)

- Number of industrial estates: 34.
- Key industries: heavy manufacturing industries (e.g manufacturing of stainless steel, mining) and natural resources based (e.g. agriculture, mining).
- Tax incentives available: 1) VAT and import duty exemption on the purchase of machines and equipment used to produce VAT eligible outputs; 2) income tax facilities.
- Overview: developing WPI are rich in natural resources but infrastructure are generally less developed for manufacturing industries. The government has been accelerating the development of the region's logistics facilities, such as highway, seaports and airports, around industrial estates to improve the overall efficiency of the logistics system.



Developed WPI (Region I)

- Number of industrial estates: 55.
- Key industries: hi-tech based (e.g electronics, automotive), consumer focused (e.g. automotive, food processing), or labour-intensive manufacturing industries (e.g. textile and footwear).
- Tax incentives available: 1) VAT and import duty exemption on the purchase of machines and equipment used to produce VAT eligible outputs; 2) income tax facilities; 3) CIT reduction of 10% to 100% due for a period of five to 15 years from the start of production.
- Overview: this region holds the most established and largest number of industrial estates in the country. Businesses can enjoy the benefits of an abundant workforce and established infrastructure. However, the workforce is expensive on Java (with the highest minimum wages in the country), and land prices in the region are high.

Foreign Direct Investment (FDI)[9,10,11]

Indonesia has been an attractive destination for FDI due to its advantageous geographical location, rich natural resources and large labour force. In 2018, the country received around USD 29.3 billion FDI, 58% of which was directed at Java (developed WPIs), and 16% at Sumatra (developing WPIs). However, this figure represents an 8.8% decrease compared with 2017, due to the political uncertainty arisen from the presidential election in 2018.

According to the Indonesia Investment Coordinating Board, in terms of FDI value, basic metal industry attracted around USD 2.2 billion, followed by chemical and pharmaceutical industry with around USD 1.9 billion and machines and equipment industry with around USD 1.3 billion. However, in terms of the volume of projects, the food and beverage industry tops the list.

Cost of Usage[1,2]

Businesses and investors are typically charged with three main types of fees:

1. Cost of land and building (lease or sale, depending on the industrial estates);
2. Utilities fee, including water, gas, electricity and telecommunications; and
3. Service charge, charged by the industrial estate operators.

The land and buildings in industrial estates can be sold or leased. Usually, the land price depends on factors such as location, provision of utilities, transportation links, proximity and access to raw materials etc. Industrial estates in developed WPIs have the highest cost of usage due to their proximity to major industrial and business centres (e.g. Jakarta and Surabaya), well-developed transportation networks (e.g. the largest seaport in the country, Port of Tanjung Priok and double-track railway for cargo transfer in Java), as well as their established infrastructure within the estate.

For more details on prices of specific sites, please refer to the official website of each industrial estate.

Outlook[7]

The development of industrial estates is at the centre of the Indonesian government's strategy to attract FDI. Currently, most of the manufacturing activities are concentrated on Java. However, the government is pushing for an Indonesia-centric development by encouraging the establishment of industrial estates outside Java.

The government's national strategic projects already include the development of industrial estate outside of Java. These industrial estates will be mostly focused on natural resources based industries and mineral processing. Supporting infrastructure, such as electricity, natural gas and water supply, industrial water and solid waste treatment facilities, telecommunications facilities, roads or seaport, will be developed within and around the industrial estates.

B. Land or Building for the Major Industrial Estates

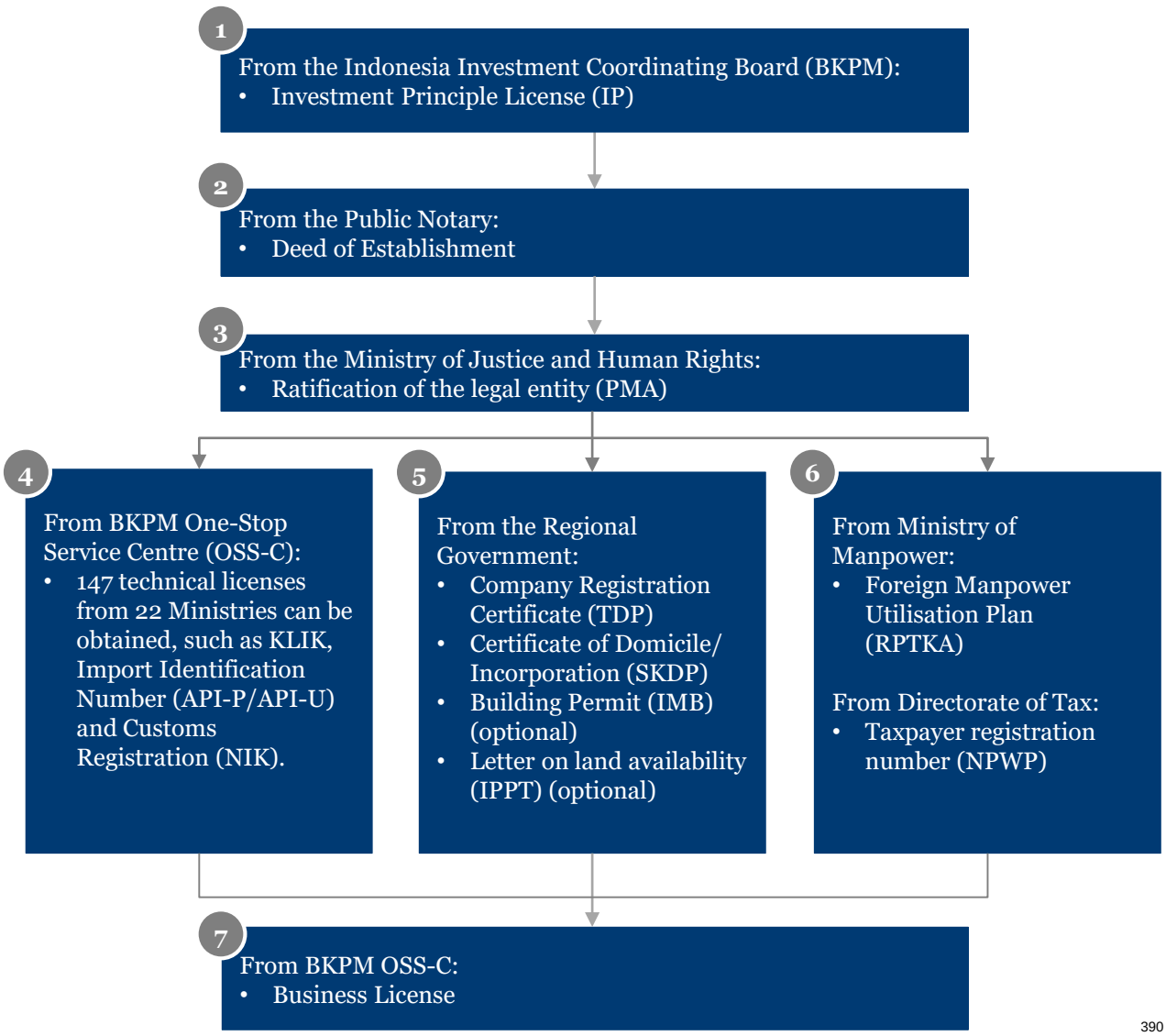
Availability for Foreign Ownership[2]

Mainland China and Hong Kong factory owners can purchase land and buildings in Indonesia via a Foreign Investment Limited Liability Company (PT PMA). Most industrial estates offer a simplified land acquisition process for investors. Some of them may even offer a three-hour express service for qualified investors to obtain all required documents, including company incorporation, construction permit and investment license, etc.

Application Procedures for Setting up Business Operation in Industrial Estates[12,13,14]

Standard Procedures for All Industrial Estates

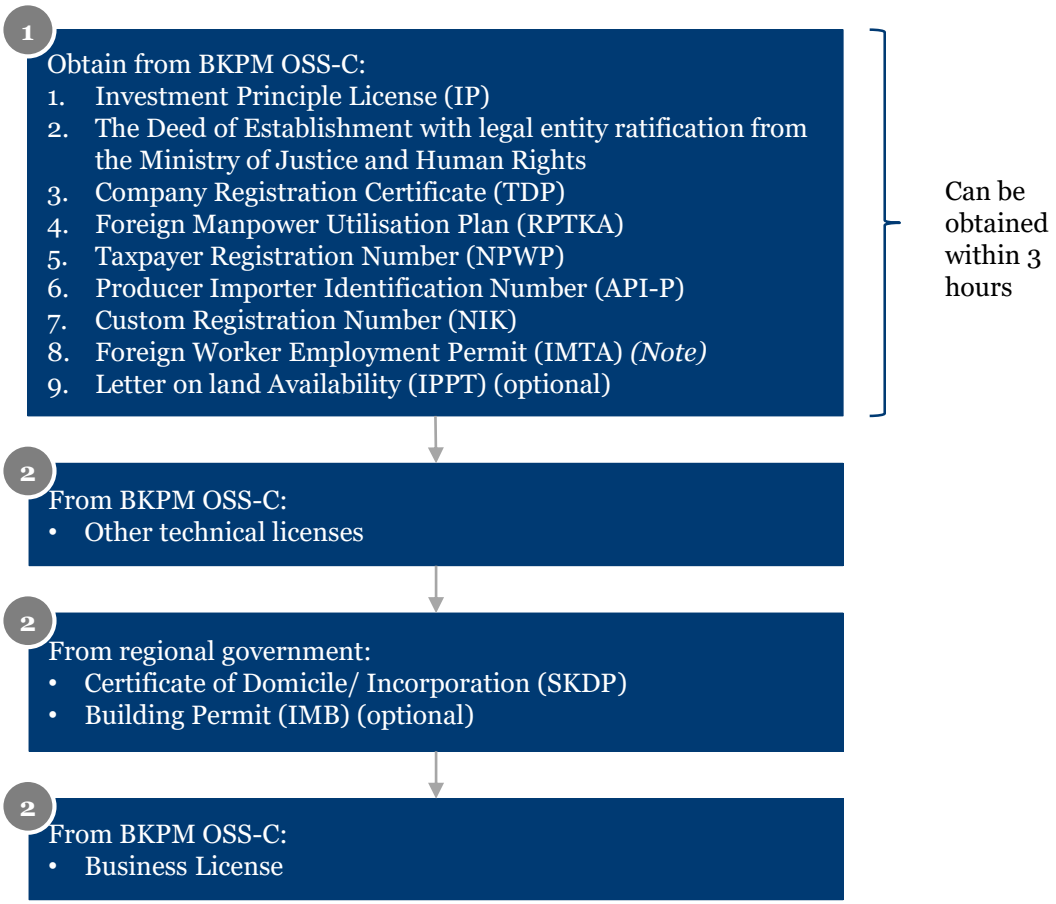
The Fast-track project construction facility (KLIK) allows investors with a Capital Investment Registration (Pendaftaran Investasi, PI) to start construction immediately with this license, while the investor can obtain the other licenses in parallel with construction work, such as the Building Permit (Ijin Mendirikan Bangunan, IMB). As of 2018, there are 32 industrial estates that have been set up by the government that can benefit from this process. Please refer to the official website of each individual industrial estate for their eligibility.



Three-hour Investment Express Service for Designated Industrial Estates

This service is part of the Indonesian government's second economic policy package, and aims to cut the time of company registration and business licensing procedures to only three hours. The permits issued by this service ensure the investors can start a new company, work legally in Indonesia, and import capital goods for production.

- Criteria for express service:
    1. At least IDR 100 billion investment; or
    2. Employ at least 1,000 local workers.
- Eligible Industrial Estates: Please refer to the official website of each individual industrial estate for their eligibility.
- Under the Three-hour Investment Express Service, the procedures for setting up business operation in industrial estates are as follows:



Note: IMTA is not required under the new requirement. A new document called "Notification" supersedes the IMTA. However BKPM has not announced whether the "Notification" will be issued in the three-hour Investment Express Service.

II. Potential Infrastructure Shortfall[15,16]

In the World Economic Forum's 2018 Competitiveness Report, Indonesia ranked 71st out of 140 countries for the quality of its infrastructure, below other Southeast Asian peers like Malaysia (32nd) or Thailand (60th). The country ranked especially low in the road connectivity criteria (120th), electrification rates (98th), and exposure to unsafe drinking water (92nd). In addition, the country has:

- Low railroad density with only 2.5km of railroad/km² (82nd on railroad density criteria)
- Poor quality roads (75th on road quality criteria); and
- Non reliable water supply (75th on reliability of water supply criteria).

The Indonesian government has identified poor coordination between stakeholders and lack of financing as the two major causes of infrastructure shortfall. To overcome these obstacles, the government has taken steps to foster the development of infrastructure across the country, including establishing the Committee for Acceleration of Priority Infrastructure Delivery (Komite Percepatan Penyediaan Infrastruktur Prioritas, KPPIP), Economic Policy Packages and Public Private Partnerships (PPP) schemes.

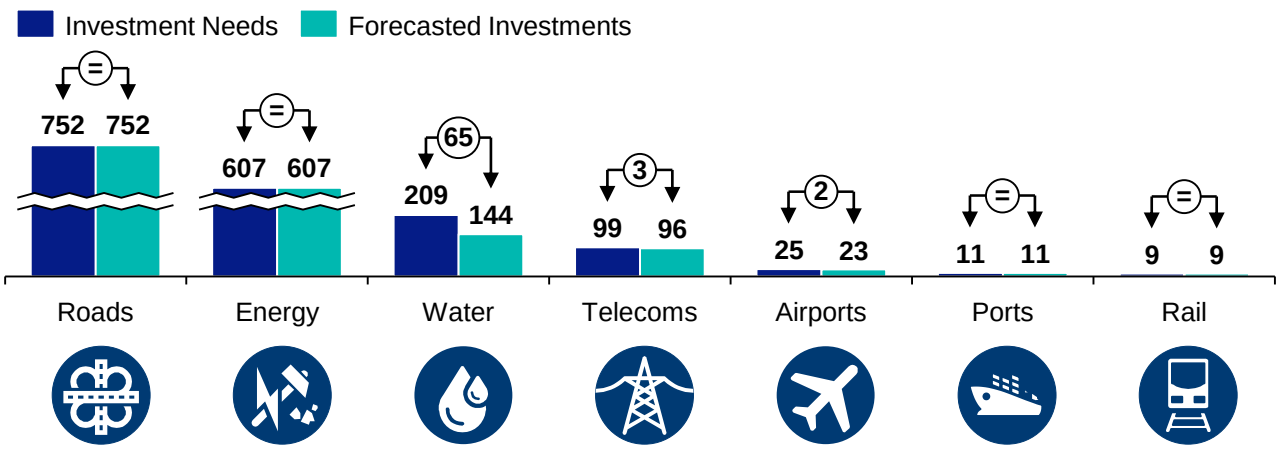
III. Latest and Upcoming Major Local Infrastructure Projects and Spending[15,16,17,18,19,20,21]

The development of infrastructure has been identified as one of the core strategies to increase Indonesia's competitiveness leading to economic growth.

In 2014, the government formed the KPPIP to accelerate the construction of priority infrastructure and promote quality upgrades. In addition, Indonesia has identified 245 National Strategic Projects (NSP), which cover areas such as roads and bridges, railways, water and sanitation, electricity, port and information technology. These construction/upgrade projects will receive the support of various government and PPP funding schemes. Furthermore, in 2015, the Indonesian government established Economic Policy Packages which aim to improve policies, regulations, and funding of infrastructure development, in order to accelerate the infrastructure delivery and quality in the country.

According to the G-20's Global Infrastructure Outlook, from 2016 to 2040, around USD 1.7 trillion will be needed to finance all infrastructure projects in the country (see chart below for sector breakdown). Over the period it is forecasted that Indonesia's public and private sectors will invest USD 1.6 trillion, therefore covering over 95% of the country's needs. Only water infrastructure will face a great investment gap, of USD 65 billion.

Indonesia's Infrastructure Investment Needs 2016-2040 per Sector (in USD billions)



Transportation

Air

Indonesia has 297 airports, 28 of which are international airports. There are three types of airport projects in the NSP, including revitalising old airports, building new airports, and expanding existing airports (e.g. a new terminal at Jakarta's Soekarno-Hatta International Airport).

Ports

Indonesia is strategically located near major shipping lanes. Thus, the development of ports is important in providing Indonesian exporters with low cost access to international trade. In the NSP there are 10 initiatives concerning the construction, development, or expansion of seaports and inland waterways. Most of the sites are located outside Java, and near SEZs and/or industrial estates, including North Sumatera, Sulawesi, and even West Papua. This is in line with the government's initiative of developing logistics facilities outside Java.

Rail

The construction of Indonesian railway is mainly focused on the inter-city railway to provide an efficient solution to traffic congestion issues in major cities such as Jakarta, Bandung or Surabaya. There are 15 projects in the NSP pipeline. One of the most significant is the Jakarta-Bandung High Speed Train, which will cut the journey between the two cities from the three to five hours required currently to only 45 minutes.

Roads

There are currently 88 toll and non-toll road projects ongoing in the country. The government plans to develop around 4,500 km of toll roads by 2030, in addition to the 1,500 km toll road projects that are to be completed by 2024. As roads remain the most frequently used means of transport on land, their development is essential in stimulating the country's logistics system and connecting remote areas.

Utilities

Power

Indonesia faces increasing pressure on electricity supply due to population growth and growing industrial operations. The NSP thus includes nine electricity infrastructure projects, such as the development of power plants (fueled by coal or natural gas) and electricity transmission line, mainly in Java and Sumatra. Moreover, in order to tackle the urban waste issue and provide extra electricity supply, the government is planning to construct waste-to-energy power plants in major cities like Jakarta, Medan, and Surabaya.

Water

Unstable water supply and the lack of sewage infrastructure in both residential and industrial areas are identified as key infrastructure deficiencies in Indonesia. The Indonesian government has planned eight Drinking Water Supply System (Sistem Penyediaan Air Minum, SPAM) projects across the country, mainly in less developed and upcoming industrial areas with PPP funding. The Indonesian government has also secured a USD 100 million loan from the World Bank for the USD 600 million National Urban Water Supply Project, which aims to provide access to the improved water sources for the population and strengthen the operational performance of water service providers in underserved urban areas.

On the other hand, while Jakarta has continually grown as the industrial centre of the country, the sewerage system of the city has not caught up with the increasing amount of wastewater produced. This makes Jakarta being the second worst capital city in Southeast Asia in terms of sanitation with a wastewater treatment coverage ratio of 4%. In order to rectify this condition, the government has been undertaking the Jakarta Sewerage System Project to achieve 75% wastewater treatment coverage in 2022.

The government is also planning a new tsunami warning system. Indonesia often experiences earthquakes and tsunamis, such as the 2018 Sulawesi earthquake that left over 2,000 dead and thousands of homes destroyed. Indonesia has lacked a proper operational tsunami warning system since 2012, and a new system will give citizens more time to prepare for the natural disasters.

Telecommunications

While mobile broadband adoption is high (95.7% of Indonesian have a mobile-broadband subscription), fixed-broadband is not as common in the country with only 2.3% of population having a fixed-broadband Internet subscription, and only 25.5% of population having access to the internet. This is mainly due to high lease rate for broadband access. In an attempt to increase broadband availability to the population, the Indonesian government has commenced the Palapa Ring Broadband Project. The project will build optic fibre networks around Indonesia, to provide affordable and well-distributed broadband access throughout the country. The project is expected to complete by 2019 and aims to connect at least 70% of urban population and 49% of rural population to the internet.

For the complete list of National Strategic Projects, please refer to the official website of the Committee for Acceleration of Priority Infrastructure Delivery (KPPIP) (www.kppip.go.id/en).

Funding Infrastructure Through Public Private Partnership (PPP)

The Indonesian government has long been recognising the importance of private participation in infrastructure funding, as well as knowledge and experience sharing in construction, operation and management of the infrastructure facilities. The government continues to evaluate and strengthen the policy to support PPP. For example, the National Development Planning Agency (BAPPENAS), which is responsible for PPP planning and implementation, issues the PPP Book every year to provide information on infrastructure investment availability.

According to BAPPENAS, public resources can only fulfil around 40% of the total infrastructure funding needs for 2015-2019. Approximately 35% of the funding gap is expected to be fulfilled through cooperation with private investors under PPP schemes and ongoing projects.

IV. Availability of Natural Resources[21,22,23,24,25,26,27,28]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• Around 70% of Indonesia's total land area is covered by forests, half of which is allocated for production purposes. • Indonesia is one of the world's largest exporters of tropical timber products, which are produced from logging activities in natural forests and thus causing serious deforestation in the past two decades. The key timber products exported include plywood, pulp and paper, furniture and handicrafts. • In order to rectify the deforestation trend and preserve the natural forests, the Indonesian government will enact a permanent ban on issuing forest-clearing permits for plantations and logging.
Agriculture	• The agricultural sector in Indonesia accounts for roughly 14% of the GDP and involved around 31% of the total labour force in 2017. • Indonesia is the largest palm oil producer in the world. • Common agriculture products and important agricultural exports include: cocoa, rubber and coffee.
Fishing / Aquaculture	• Indonesia is the world's second largest seafood producer. • There are over 3,000 species of bony fishes and more than 850 sharks, rays, and chimaeras found in the country's water system.
Livestock	• The biggest population of livestock in Indonesia is poultry followed by goat, dairy cattle, and beef cattle. • The absence of pork production reflects the preference of the Muslim dominated population.
Water Resources	• Due to the abundant rainfall in the country, Indonesia holds around 6% of the total freshwater resources of the world. • The supply of fresh water is mainly concentrated on Kalimantan, Papua and Sumatra, which together account for 84% of the country's freshwater reserves.
Minerals	• Indonesia is one of the world's major producers of tin, ferroalloy, copper, nickel and aluminum. These mineral resources are produced for both export and domestic use. • Indonesia also produce precious stones, as well as gold and silver.
Coal, Oil and Fossil Fuels	• Coal briquettes are the single largest export category of Indonesia which represent 10% of the total exports. • Indonesia is the largest oil producer in Southeast Asia and produces around 775,000 barrels per year. However, Indonesia is a net importer of oil as the domestic supply cannot satisfy the country's increasing demand of oil. • Indonesia is also one of the top five major exporters of liquid natural gas in the world and holds 1.53% of the world's gas reserves. • However, over 70% of the local consumption of the more widely used fuel, liquefied petroleum gas, is still imported.
Renewable Energy	• Indonesia holds 40% of the world's geothermal resources, equivalent to 28.6 gigawatt of power generation potential. • The government targets to raise the share of renewable energy in the country's energy mix to a minimum of 23% by 2025, equivalent to 16,714 megawatt of renewable energy.

Source:

[1] Indonesia Industrial Estate Directory, EU-Indonesia Business Network (EIBN)

[2] Introduction to the Indonesian Market – Selected Sectors & Special Economic Zones, EU-Indonesia Business Network (EIBN)

[3] Indonesia Industrial Estate Directory 2015/2016 – A Guide for Investors, Industrial Estate Association of Indonesia (HKI)

[4] Investment Project, Republic of Indonesia National Council for Special Economic Zone

[5] Indonesia: Regulation to Encourage Investment in Industry, Library of Congress

[6] Indonesia Corporate Tax Credits and Incentives, PwC Worldwide Tax Summaries

[7] Indonesia Targets 18 Industrial Zones Operate in 2019, the Insider Stories

[8] Regulation Number 142 Of 2015 On Industrial Estate, the Government Of The Republic Of Indonesia

[9] FDI Realization based on sector: January - December 2018, Indonesia Investment Coordinating Board

[10] FDI Realization in Indonesia based on location: January - December 2018, Indonesia Investment Coordinating Board

[11] Research Report January 2019 - Starting the Big Political Year, Indonesia-Investments

[12] Establishment & Registration Of Business, National Single Window for Investment

[13] Frequently Asked Question on Investment, Indonesia Investment Coordinating Board (BKPM)

[14] BKPM Reforms On Investment - 3 Hour Investment Services, Indonesia Investment Coordinating Board (BKPM)

[15] The Global Competitiveness Report 2018, World Economic Forum

[16] Progress of Infrastructure Development in Indonesia, Committee for Acceleration of Priority Infrastructure Delivery (KPPIP)

[17] National Strategic Projects, Committee for Acceleration of Priority Infrastructure Delivery (KPPIP)

[18] Global Infrastructure Outlook 2017, G20

[19] Public Private Partnerships Infrastructure Projects Plan In Indonesia, National Development Planning Agency

[20] Prioritizing A National High Capacity Backbone Network, Director General Of Posts And Telecommunications

[21] National Urban Water Supply Project, the World Bank

[22] The World Factbook, CIA

[23] Indonesia's Pertamina gets extra 225,000 bpd crude locally as govt cuts imports, Reuters

[24] RI pushing LNG exports amid excess, the Jakarta Post

[25] The Observatory of Economic Complexity, the MIT Media Lab

[26] Water Resources, PT Sarana Multi Infrastruktur (SMI) Insight 2017

[27] Indonesia Fisheries, The Nature Conservancy

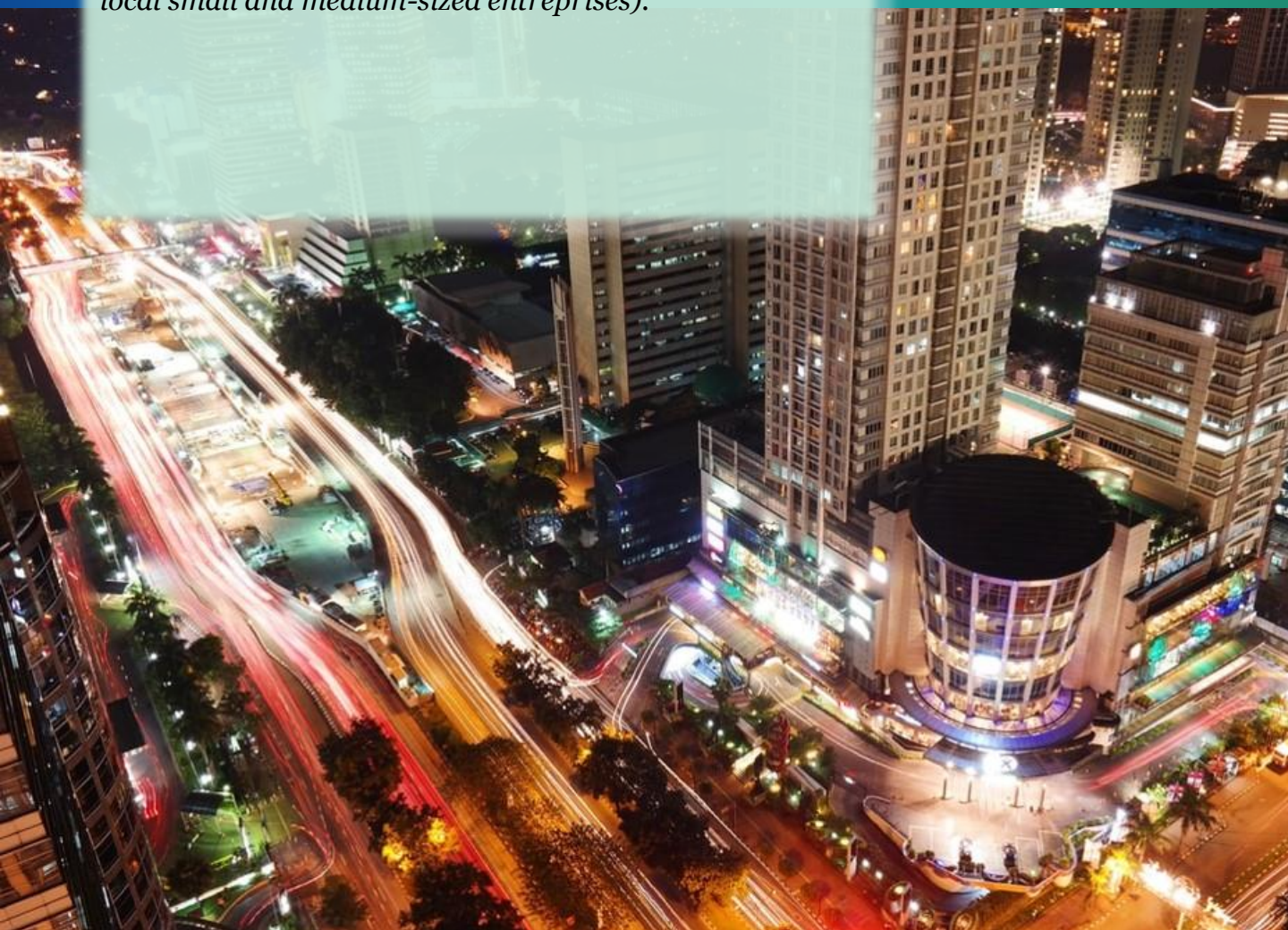
[28] Indonesia - All about the Indonesia-EU Voluntary Partnership Agreement, the EU FLEGT Facility

8. Types of Industries Encouraged by the Local Government

Executive Summary

Indonesia aims at becoming a developed country by 2025. To meet this target, the government is implementing the Masterplan for Acceleration and Expansion of Indonesia Economic Development (MP3EI), which identified sectors such as industry, energy or mining, among others, as main economic growth drivers. In an effort to attract additional foreign investments, the government also defined a list of Pioneer Industries. Investment projects in theses industries will be granted financial incentives.

However, under the Negative Investment List (DNI) some business activities are restricted or prohibited for foreign investors. The DNI stipulates sectors that are closed or opened under certain conditions (e.g. partnership with local small and medium-sized entreprises).



8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries

Masterplan for Acceleration and Expansion of Indonesia Economic Development (MP3EI)[1]

The MP3EI has been developed to guide Indonesia's transition from a developing to a developed country over the 2011-2025 period. The final target for 2025 is to reach a gross domestic product (GDP) between USD 4.0 and 4.5 trillion (compared with USD 1.1 trillion in 2019) and a GDP per capita between USD 14,250 and 15,500 (USD 4,193 in 2019). To drive the country's development, the government identified eight majors sectors in which investments should be prioritised:

Agriculture (e.g. palm oil, rubber, cocoa, animal husbandry)

Mining (e.g. coal, nickel, coper, bauxite)

Energy (e.g. oil and gas, timber)

Industry (e.g. F&B, textile, steel)

Telecommunications (e.g. Information and Communications Technology, ICT)

Strategic Areas (e.g. defence, Jabodetabek area, Sunda Straits area)

Tourism (e.g. transportation equipment, shipping)

Marine (e.g. fishery)

Pioneer Industries[2]

The Ministry of Finance (MOF) defines Pioneer Industries as sectors focusing on new technologies, producing value-added products and having a strategic value for Indonesia. Investments projects in Pioneer Industries can be granted financial incentives. The list of Pioneer Industries is as follows:

Agricultural processing

Machinery and Robotics manufacturing

Electronics parts manufacturing

Transport vehicles manufacturing

Energy and Metals

Chemicals & Pharmaceuticals

Digital economy

Economic infrastructure

For more information on Pioneer Industries, please refer to the following MOF publication (www.foresight-id.com/wp-content/uploads/2018/12/MOF-150-PMK-010-Year-2018.pdf).

II. Business Activities that Foreign Participation may be Prohibited or Restricted From[3]

The Investment Law, enacted in 2007, regulates Foreign Direct Investment (FDI) in Indonesia. Attached to the law is the Negative Investment List (Daftar Negatif Investasi, DNI) which stipulates business activities that are prohibited or restricted for foreign investors. The DNI provides three lists of business areas that are closed or conditionally open:

1. Business areas that are closed to both domestic and foreign investments;
2. Business areas that are reserved for or subject to partnership with local micro, small, medium-sized enterprises (SMEs) and cooperatives; and
3. Business areas that are open to foreign investments under certain conditions.

The following tables contain some examples of the current DNI and are non-exhaustive.

List I: Business Areas that are Closed to Both Domestic and Foreign Investments

Sector	Business Area
Industry	• Alcoholic beverages (e.g. liquor, wine or malt beverages) • Chemical (e.g pesticide, industrial chemicals, ozone depleting substances, Chloral alkali making industry or chemical weapons)
Transportation	• Motor vehicles testing • Operation of land transportation terminals for passenger • Provision of air navigation services • Telecommunications aid for ship navigation
Communication and Information	• Management and operation of radio frequency spectrum and satellite orbit monitoring stations
Others	• Agriculture/forestry/fishery/marine affairs activities (e.g. hunting or harvesting endangered species or utilization of sea corals for jewellery) • Education and culture (e.g. operation related to public museums) • Tourism (e.g. operation related to gambling and casinos)

List II: Business Areas that are Reserved for or Subject to Partnership with Local Micro, Small, Medium-sized Enterprises and Cooperatives

Sector	Business Areas	Conditions
Industry	• Specific food processing industry • Garment and fabric • Kitchenware equipment industry • Maintenance and repair of motorcycles	Reserved for SMEs
	• Construction materials • Wooden goods; • Component and spare parts for motors; and • Manufacture of jewellery articles	Subject to partnerships
Public Works	• Construction services • Business services or construction consultancy services	Reserved for SMEs
Communications and Information	• Radio and television community broadcasting agency • Home and building cable installation • Internet cafés	Reserved for SMEs
Trade	• Retail sales through mail order and internet	Reserved for SMEs
Others	• Agriculture/forestry/fishery/marine affairs activities (e.g. beverage plantation, cotton planation) • Tourism (e.g. travel agents, tour guides)	Reserved for SMEs or partnerships

List III: Business Areas that are Open to Foreign Investments Under Certain Conditions

The most common conditions for those businesses are:

- Foreign ownership limitation ranging from 30% to 95% (in some cases investors from ASEAN countries will benefit from a higher limit than other foreign investors);
- Required 100% Indonesian ownership;
- Additional ministerial approvals required; and
- Special licensing requirements.

Sector	Business Areas	Conditions
Industry	• Automobile Maintenance and repair	Maximum foreign capital ownership of 49%
	• Lead smelting	Subject to the recommendation from the Ministry of Environment (MOE) and the Ministry of Industry (MOI)
	• Crumb rubber	Requires specific license from the MOI and regulated sourcing of raw materials
Energy and Mineral Resources	• Oil and Gas operations, construction services or supporting services • Power plant related operations	Different foreign capital ownership limitations
Transportation	• Land/sea/multimodal transportation; • Provision of harbor facilities or airport services	Maximum of 49% foreign capital ownership
	• Freight forwarding services	Maximum of 67% foreign capital ownership
	• Loading and unloading of goods services/cargo handling	Maximum 67% for foreigners, 70% for ASEAN investors
Trade	• Jewellery, textile or other specific retail business • Games and toys in stores retail business	Required 100% domestic capital ownership
Banking and Finance	• Investment finance; venture capital or insurance	Maximum of 80-85% foreign capital ownership

The 2016's DNI is scheduled to be updated in 2019 and should allow full foreign ownership in 25 industries. For further changes and information, please consult your independent legal advisor for updated revisions.

For more details on the DNI, please refer to Regulation 44 (www.indonesia-investments.com/upload/documents/Negative-Investment-List-May-2016-Indonesia-Investments.pdf).

Source:

[1] *The Ministry of National Development Planning Agency, Master Plan Acceleration and Expansion of Indonesia Economic Development, 2011*

[2] *The Minister of Finance of the Republic of Indonesia, The granting of corporate income tax deduction facility*

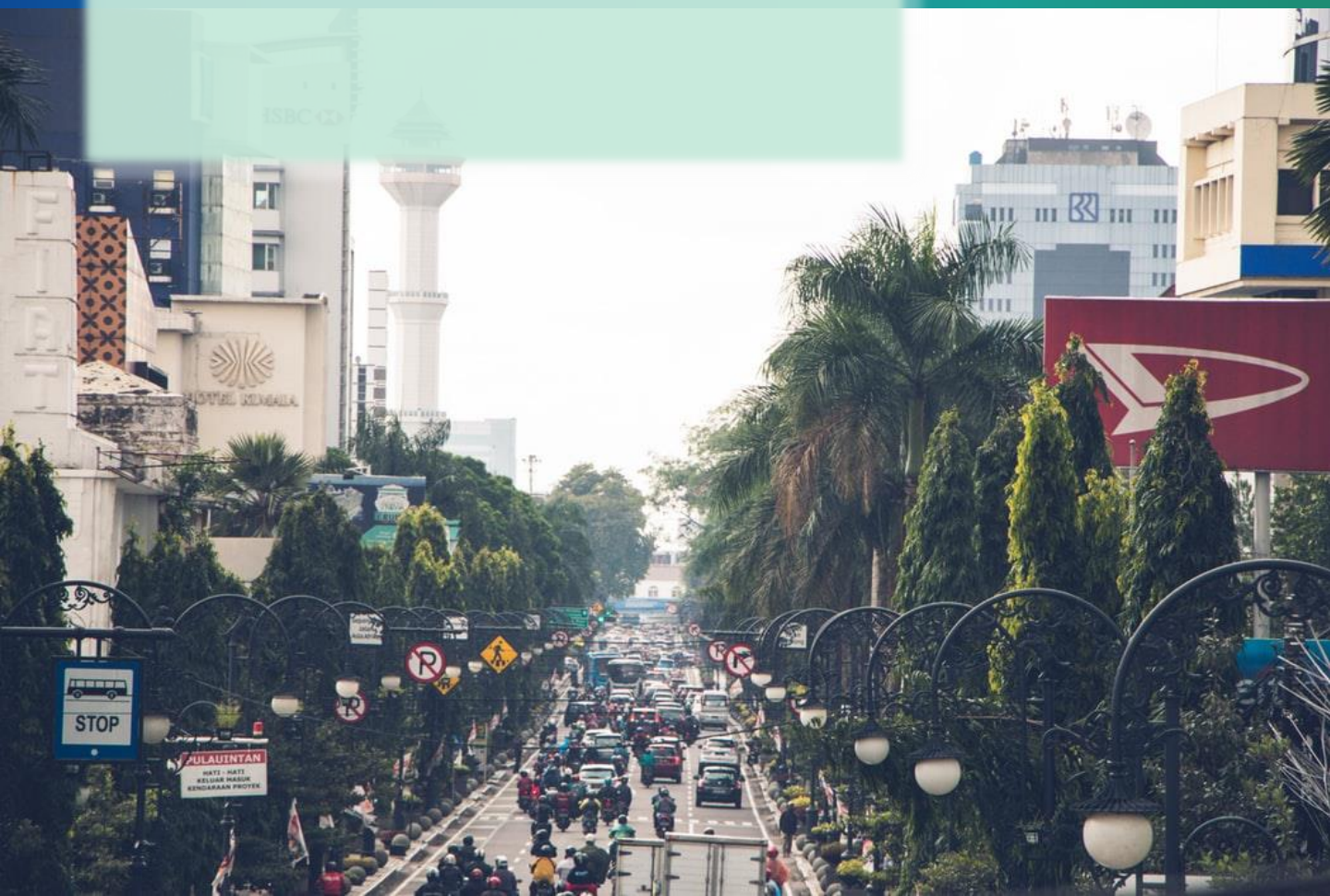
[3] *Badan Koordinasi Penanaman Modal, Presidential Regulation No. 44 of 2016 - Lists Of Business Fields That Are Closed To And Business Fields That Are Open With Conditions To Investment, 2016*

9. Key Government Incentives

Executive Summary

The Pioneer Industry classification lists out several industries such as machinery, electronics or transport vehicles manufacturing, among others, which are granted governmental incentives. Companies investing in the above industries can mainly benefit from Corporate Income Tax (CIT) exemptions.

To facilitate Indonesia's industrial growth and attract Foreign Direct Investment (FDI), the government is developing 12 Special Economic Zones (SEZs), of which six are currently operational. In addition, investors can choose to locate their manufacturing operations in 89 industrial estates across the country. Both SEZs and industrial estates provide multiple financial and non-financial incentives.



9. Key Government Incentives

I. Eligibility on Incentive Programmes For Foreign Investments[1]

Pioneer Industries

The Indonesian Investment Coordinating Board (Badan Koordinasi Penanaman Modal, BKPM) is responsible for implementing investment policy and facilitating domestic and foreign investments in the country. As such, it is in charge of granting incentives to the investments projects targeting the Pioneer Industries described in section 8.

General Criteria

To be eligible for incentives, the company must:

- Be incorporated in Indonesia, and commit to a capital investment in a Pioneer Industry of at least IDR 100 billion (around USD 7 million);
- Fulfill the debt to equity ratio stipulated by the Ministry of Finance in Regulation No.150/2018;

Incentives[2]

A company that invests in Pioneer Industries is eligible for a tax holiday on its corporate income tax (CIT), under the conditions described below.

Category	New Capital Investment Amount	Tax Holiday	Tax Holiday Period
I	Between IDR 0.1 trillion and 0.5 trillion (USD 7 - 36 million)	50%	5 years
II	Between IDR 0.5 trillion and 1 trillion (USD 36 -72 million)	100%	5 years
III	Between IDR 1 trillion and 5 trillion (USD 72 - 360 million)	100%	7 years
IV	Between IDR 5 trillion and 15 trillion (USD 360 - 1,100 million)	100%	10 years
V	Between IDR 15 trillion and 30 trillion (USD 1.1 - 2.1 billion)	100%	15 years
VI	More than IDR 30 trillion (More than 2.1 billion)	100%	20 years

Additional CIT reduction is granted for the following two years after the expiry date of the above tax holiday:

Category I: 25%: CIT reduction

Category II – VI: 50% CIT reduction

II. Scope of Special Economic Zone Schemes and Geographical Location[3]

Special Economic Zones (SEZs)

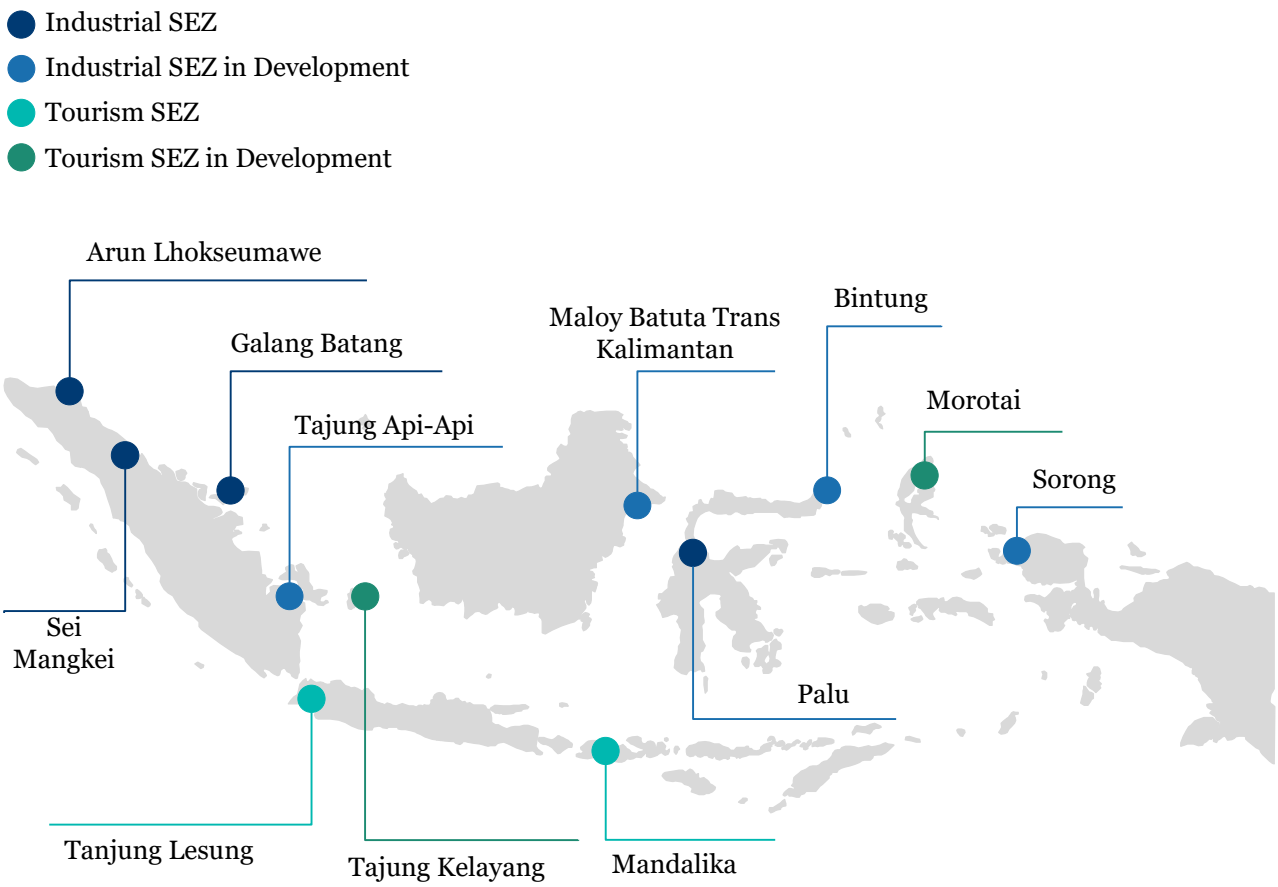
The Indonesian government is setting up two different types of Special Economic Zones (SEZs).

- Industrial SEZs are tailored for value-added manufacturing activities. Each SEZ supports a different industry such as oil and gas, mining, metal processing, agro processing or logistics.
- Tourism SEZ designated for tourism and its related economic activities.

There are currently 12 SEZs across the country, out of which six are operational (four industrial and two tourism). The other six are still under development.

Industrial SEZs generally have access to infrastructure networks such as roads, ports, airports and railways. This allows Indonesia to attract foreign investors in the country and foster the production of value-added products, and develop import and export activities.

SEZ Location in Indonesia



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Investment Procedures

To initiate construction in SEZs, a company must undergo the following procedures:

After construction is completed, the company may submit the master list of capital goods and fiscal incentives (e.g. corporate income tax, import duty) for commercial operations.

Investment Incentives Available in Special Economic Zones

Businesses operating in the Industrial SEZs are eligible for various tax incentives (non-exhaustive).

Tax Holiday on CIT for Main Activities

Investment Amount	Tax Holiday	Tax Holiday Period
Below IDR 0.5 trillion	Rate decided by the MOF	5 to 15 years
Between IDR 0.5 trillion and 1 trillion	Up to 100%	5 to 15 years
More than IDR 1 trillion	Up to 100%	10 to 25 years

Tax Allowance for Other Activities

1) Reduction of net taxable income up to 30% of the amount invested in the SEZ; 2) Accelerated depreciation or amortisation; 3) Tax-loss can be carried forward up to 10 years.

Other

1) Customs exemptions; 2) Differed import duties; 3) Non financial incentives such as easier licensing.

For more information, please visit the SEZ official website (kek.go.id/fasilitas-dan-insentif)

III. Other Local Government Support Funding Schemes, Including Both Local and Foreign Investments[4]

Industrial Estates

The purpose of industrial estates is to accelerate domestic and foreign direct investments growth, facilitate industrial activities, encourage environmental friendly industrialisation, provide well-established industrial land with adequate supporting infrastructure, and to encourage regional development.

To date, there are 89 industrial estates across the country. There are over 9,950 manufacturing companies operating in the industrial estates.

For more details on Indonesia's industrial estates, please refer to section 7 of this report. For a full list of industrial estates, please refer to Appendix 1.

Incentives[5,6,7]

The tax incentives available for industrial estates' tenants in Indonesia are similar to the SEZs, including:

- CIT reduction of 10% to 100% for five to 15 years from the start of commercial production;
- Income tax facilities similar to inbound investment incentives under the income tax concessions;
- Value added tax (VAT) exemption on the imports and purchase of machines and equipment used to produce VAT eligible goods; and
- Import duty exemption on the imports of machines and materials used to produce goods or render services, etc.

Moreover, the government also provides non-tax incentives for businesses located in industrial estates. Selected non-fiscal incentives include:

- Exemption on the factory's environmental analysis (if the operators of the industrial estates have already done the analysis); and
- Acceleration and simplification of investment licensing services (for more details, please refer to section 7 of this report).

For more details on tax and non-tax incentives, please consult the local tax authorities and the operators of individual industrial estates.

Source:

[1] *Incentives, Badan Koordinasi Penanaman Modal*

[2] *Indonesia releases new tax holidays, Ernst & Young, December 2018*

[3] *Special Economic Zones, Republic Of Indonesia National Council For Special Economic Zone*

[4] *Indonesian Industrial Estates Association*

[5] *Indonesia Corporate Tax Credits and Incentives, PwC Worldwide Tax Summaries*

[6] *Indonesia: Regulation to Encourage Investment in Industry, Library of Congress*

[7] *ASEAN in Focus: Prospects for Production Bases in Indonesia, HKTDC Research, 2017*

10. Environmental Requirements

Executive Summary

In Indonesia, Ministry of the Environment and Forestry (MOEF) is the main body taking the responsibility for environmental protection in Indonesia. The Law on Environmental Protection and Management is the primary environmental law in Indonesia. Any foreign businesses wishing to invest or do business in Indonesia must abide by the Law.

Factories in Indonesia may encounter environmental hurdles or problems, such as historical pollution and license requirements.

There are environmental organisations and agencies in Indonesia that can provide relevant environmental supporting services to those companies requiring assistance.

10. Environmental Requirements

I. Environmental Laws and Regulations in Indonesia[1]

In Indonesia, the Ministry of the Environment and Forestry (MOEF) is the main body responsible for environmental policy and standards enforcement and administration.

Indonesia enacted the Law on Environmental Protection and Management which is the fundamental law regarding the environmental management. The law is enacted based on the consideration that national economic development should be on the basis of sustainable and environmentally friendly principle, and on the fact that decreasing environmental quality has threatened the life of human and other creatures. Climate change is also a concern of this law as rising global warming has caused degraded environmental quality.

A. The Main Environmental Protection Administrations in Indonesia

Ministry of the Environment and Forestry (MOEF)[2,3,4]

The MOEF is tasked with the following responsibilities：

- Coordinate activities related to environmental management;
- Formulation and implementation of policy in the environmental management area;
- Management over hazardous waste facilities and disposal and issuing waste disposal licenses;
- Compliance monitoring and supervision;
- Inquiry on and investigation of environmental criminal cases; and
- Provide technical guidance.

For the organisational structure of MOEF, several directors under minister of MOEF are separately responsible for pollution control and environmental degradation, waste, hazardous waste, and hazardous substance management, law enforcement and environmental and forests, etc.

In Indonesia, there are also other institution established to deal with specific environmental protection issues. For example Regional Environmental Management Agency is responsible for protecting the environmental on regional level.

B. The Main Environmental Legislation in Indonesia

Law on Environmental Protection and Management[5]

The Law on Environmental Protection and Management is the fundamental law on environmental protection in Indonesia covering the area of planning, exploration, protection, conservation and controlling. The purpose of this law is to increase the environmental quality and create a way of environmentally sustainable development. It stipulates the responsibility of the government to protect the natural resources and control environmental pollution and damage, regulate legal actions and legal relations between persons and/or other legal subjects, and establish the fund system to preserve the environment. It also stipulates that for the activity and business with substantial impact on the environment, an environment impact assessment is required for obtaining the licenses to conduct the corresponding activity and business.

Pollution Control

Environmental pollution and /or damage shall be controlled in the framework of preserving the environmental function. The control over the environmental pollution and/or damage shall cover the aspect of prevention, mitigation and restoration. And the control should be done by the government, regional governments and personnel in charge of businesses and/or activities.

Penalties

Anybody intentionally committing action causing damages to the quality of ambient air, water, sea water, etc., that surpassed standards/criteria shall be subject to imprisonment for three years at the minimum and ten years at the maximum, as well as a fine amounting to three billion rupiah at the minimum and ten billion rupiah at the maximum.

Government Regulation of the Republic Indonesia Regarding Environmental Impact Assessment[6]

Environmental Impact Assessment (AMDAL)

AMDAL is the process of studying the significant impact of a proposed business or activity on the environment, which is required as part of the decision-making process.

In Indonesia, every business and/or activity that may rise to significant environmental impacts must prepare an AMDAL. The AMDAL document is reviewed by an AMDAL appraisal commission and, based on the commission's recommendation, the Minister, Governors or Regents/Mayors decides on the environmental feasibility or infeasibility of the business and/or activity.

Environmental Management and Monitoring Program (UKL-UPL)

Every business and/or activity that is not required to prepare an AMDAL must have an UKL-UPL. Governors or Regents/Mayors are required to stipulate the kinds of businesses and/or activities that must have a UKL-UPL. Businesses and/activities not required to have either an AMDAL or a UKL-UPL are obliged to prepare a statement of readiness to manage and monitor the environment.

Other Environmental Laws and Regulations

Indonesia has also issued environmental laws such as Law on Rubbish Management, Law on Meteorology, Climatology and Geophysics, Act on the Basic Provisions for the Management of the Living Environment, etc. In addition, emissions and disposal of air and noise pollution, water pollution, soil pollution, wastes and hazardous materials are clearly regulated by the relevant laws, regulations, and standards. There are corresponding penalties for violation of such laws and regulations.

A detailed list of environmental laws and regulations in Indonesia can be found in Appendix 2.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China Have Issued with Indonesia

China and the Association of Southeast Asian Nations (ASEAN) have made a series of statements and plans to further enhance the environmental cooperation, such as Joint Statement of China and ASEAN Leaders on Sustainable Development, China-ASEAN Environmental Protection Cooperation Strategy 2016-2020 and so on.

Details of the statements are listed in the following table:

Main Environmental-Related Joint Announcements and Statements[7,8]

Statements	Impact	Detail
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clause 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clause 45, 47, 53, 54

D. The Main Environmental Permits in Indonesia[9,10]

Indonesia has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Environmental License

Every business or activity with an AMDAL or UKL-UPL requirement is required to hold an environmental license. An environmental license will only be issued by the Minister of Environment/ Governor/Regent/Mayor after receiving or reviewing an AMDAL or UKL-UPL recommendation.

Environmental licenses are a pre-condition to the acquisition of activity or business licenses from different Ministries. If an environmental license is revoked, all licenses subsequently obtained as a result of the environmental license, such as any activity or business licenses, will also be revoked.

Wastewater Discharge Permit

In Indonesia, a wastewater discharge permit must be obtained from the MOEF before discharging effluent to the environment , with varying application criteria for different regions.

II. Environmental Situations in Indonesia

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period		Operation Period
Historical Pollution Issues	**License Requirements**		**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	AMDAL/ UKL-UPL	Wastewater Discharge Permit	Each industry has different pollutants, and will require appropriate monitoring and environmental protection equipment.

Before Land Acquisition: Historical Pollution Problems

Soil and groundwater of the targeted land may have been polluted by the previous land users. Companies may be impacted by the environmental risks caused by historical pollution if such issues were not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help with systematically identifying the environmental risks and responsibilities before corporate investment, acquisitions and mergers, or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. Processes as below:

- Supporting agency selection: Companies may hire a capable third party service to conduct any EDD necessary.
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction.
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope.
- Results: The EDD provider will identify potential significant environmental risks in a report.

EDD Case

SLP Environmental Consultants were appointed to conduct Phase 1 Environmental Due Diligence Assessments for a portfolio of prime beach front land holdings located in South East Bali, Indonesia.

The client was considering the acquisition of the sites and as part of the transaction risk management process required an assessment as to whether their were any potential environmental liabilities associated with the ownership of any of the study sites. The assessments also included an appraisal of the existing infrastructure, utilities and services as well as coastal hazard concerns such as erosion and tsunami risk. As a result, the transaction was completed successfully.

For a list of organisations/agencies providing EDD services in Indonesia, please refer to Section 10.III.A

Pre-construction Period : AMDAL/ UKL-UPL[11]

Resolutions

AMDAL

According to the Government Regulation of the Republic Indonesia Regarding Environmental Impact Assessment, an AMDAL document must be prepared by a certified AMDAL consultant.

AMDAL Processes

- Supporting agency selection: Hiring a certified third-party consultant to conduct an AMDAL;
- Document compilation: The AMDAL document consists of the Terms of Reference, an Environmental Impact Statement (ANDAL) and an Environmental Management and Monitoring Plan (RKL-RPL) ;
- Submission: The enterprise shall submit the AMDAL to the relevant approving commission for evaluation, which is established at the relevant level of government;
- Review and Approval: The commission will forward its results of evaluation to the MOEF, and the relevant governor or the relevant regent / mayor will issue the final approval. It will take approximately 125 business days including the time needed for public feedback.

Resolutions

UKL-UPL

There is no specific certification requirements for agencies preparing UKL-UPL.

UKL-UPL Processes

- Document compilation: A UKL-UPL has a prescribed form, which includes the activities plan, the environmental impact analysis and the environmental management and monitoring program;
- Submission: The enterprise shall submit the UKL-UPL to the MOEF;
- Review and Approval: The relevant governor or the relevant regent / mayor will issue the final approval, and the process should take about 14 business days. However, the length varies and often takes longer.

Types of projects/activities with AMDAL/ UKL-UPL requirement for the key industries can be found in Appendix 3.

AMDAL/ UKL-UPL Case

In 2006, a mining company acquired a gold and silver mine in Northern Sumatra, Indonesia. This company needed to meet the requirement set out in Indonesian AMDAL framework for the commencement of construction. Therefore the mining company engaged a third-party professional organisation to conduct AMDAL. They collected data from air quality to socio-economic criteria and followed strict processes of public engagement as required by AMDAL. Followed by the submission of the AMDAL and environmental monitoring and management plans, they also submitted Terms of Reference for the project which was reviewed and approved by the relevant authorities. Consequently the AMDAL approved was granted and the construction was commenced on schedule.

For a list of organisations/agencies providing AMDAL/ UKL-UPL services in Indonesia, please refer to Section 10.III.B.

Pre-construction Period: Wastewater Discharge Permit

All factories involved in discharging wastewater into the environment need one wastewater discharge permit, and will not be allowed to operate if the necessary permit is not obtained.

Resolutions

Wastewater Discharge Permit

- The company can either apply themselves or hire a third party to help with obtaining the permit; and
- Related Department: The local Department of Environment.

For a list of local organisations/agencies supporting with wastewater treatment in Indonesia, please refer to Section 10.III.C and D.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emission: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

Pollution Control Department is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimizing the manufacturing process.

For a list of organisations/agencies providing environmental monitoring and related services in Indonesia, please refer to Section 10.III.C.

Environmental Pollution Case

In Indonesia, the textile factories of PT Kahatex, PT Insan Sandan Internusa and PT Five Star Textile had been releasing untreated wastewater into Cikijin River. High levels of heavy metals have been found in the area, such as: Chromium, Copper, Arseninc, lead and Cobalt, far exceeding the safety standards.

As a result, the factories' operation licenses were revoked, and the factories had to pay for the remediation.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Indonesia

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

"✓" indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/ Emission Standards Between Indonesia and Mainland China

Please refer to the below legend for the understanding of all the comparison tables in this section.

For the Mainland China and Indonesia standards (except for electronic industry and textile industry), values in brackets refers to the limitation of effluent discharged into which refers to the water sources serving tap water supply. Besides, the limitation also applies for the wastewater in which the BOD content is less than 1,500 mg/L and COD less than 3,000 mg/L before treated discharged into any other water, and the values outside the brackets refers to the limitation of effluent discharged into water sources not serving tap water supply. Besides, the limitation also applies for the wastewater in which the BOD content is more than 1,500 mg/L and COD more than 3,000 mg/L before treated discharged into any other water.

For the Mainland China and Indonesia standards in the electronic and textile industry, values are the limitation of effluent discharged into environment directly.

↓" indicates the requirement of Mainland China is stricter than Indonesia.

"↑" indicates the requirement of Indonesia is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Indonesia.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial area. There are no official specialised requirements/standards for non industrial area in Indonesia at the moment, i,e. residential area. If there is plan to build or operate factories in such area, it is recommended to confirm with local environmental department for specific regional requirements.

Electronics (Part 1/5)

The water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	pH		6.0-9.0	6.0-9.0	=
		Total suspended solids		60	50	↓
		COD		110	80	↓
		BOD_5		50	-	N/A
		Mercury		0.002	-	N/A
		Ammonia nitrogen	Special electronic materials	10	10/20[c]	=/↑
			Electrical units		5	↓
			Printed circuit boards		20	↑
			Semiconductor devices		10	=
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Total nitrogen	Display device and photoelectron components	-	20/30[c]	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	0.6	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Zinc	Special electronic materials	5	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron components		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.1	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Arsenic	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display device and photoelectron components		0.5	=
			Electron terminals products		-	N/A
		Total cyanide	Special electronic materials	-	0.2	N/A
			Electrical units		0.2	N/A
			Printed circuit boards		0.2	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Phenol		0.5	-	N/A
		Fluoride	Special electronic materials	10	10	=
			Electrical units		10	=
			Printed circuit boards		10	=
			Semiconductor devices		10	=
			Display device and photoelectron components		10	=
			Electron terminals products		-	N/A
		Oil and grease		10	-	N/A
	Air pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Noise level limits in industry area		Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Emission Standard of Pollutants for Electrical Industry[15], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Garment & Clothing

The water pollutants and air pollutants were the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Indonesia[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, and colour)	pH	6.0-9.0	6.0-9.0	=
		Total suspended solids	50	50	=
		COD	150	80	↓
		BOD_5	60	20	↓
		Colour	-	50[c]	N/A
		Ammonia nitrogen	8.0	10	↑
		Total nitrogen	-	15	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine dioxide	-	0.5	N/A
		AOX	-	12	N/A
		Sulfide(as S)	0.3	0.5	↑
		Aniline	-	Not be detected	N/A
		Oil and grease	3.0	-	N/A
		Hexavalent chromium	-	Not be detected	N/A
		Total chromium	1.0	-	N/A
		Phenol	0.5	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise level limits in industry area	Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[17], Integrated Emission Standard of Air Pollutants[18], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

c. *The method of measuring Colour in China is dilution method, and the value refers to the dilution factor.*

Watches & Jewellery

The water pollutants and air pollutants from washing process and air pollutants from polishing process were the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Indonesia[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	400 (200)	150 (70)	↓ (↓)
		COD	300 (100)	150 (100)	↓ (=)
		BOD_5	150 (50)	30 (20)	↓ (↓)
		Ammonia nitrogen	10 (5)	25 (15)	↑ (↑)
		Cyanide	0.5 (0.05)	0.5 (0.5)	= (↑)
		Hexavalent chromium	0.5 (0.1)	0.5 (0.5)	= (↑)
		Oil and grease	20 (10)	15 (10)	↓ (=)
		Petroleum	-	10 (5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise level limits in industry area	Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Integrated Wastewater Discharge Standard[19] Integrated Emission Standard of Air Pollutants[18], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

Toys & Games

The water pollutants from the washing process, the air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Indonesia[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	400(200)	150 (70)	↓ (↓)
		COD	300(100)	150 (100)	↓ (=)
		BOD_5	150(50)	30 (20)	↓ (↓)
		Ammonia nitrogen	10(5)	25 (15)	↑ (↑)
		Sulfide	1.0(0.5)	1.0 (1.0)	= (↑)
		Cyanide	0.5(0.05)	0.5 (0.5)	= (↑)
		Hexavalent chromium	0.5(0.1)	0.5 (0.5)	= (↑)
		Oil and grease	20 (10)	15 (10)	↓ (=)
		Petroleum	-	10 (5)	N/A
		Phenol	1.0(0.5)	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise level limits in industry area	Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Integrated Wastewater Discharge Standard[19] Integrated Emission Standard o Air Pollutants[18], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

Hi-tech (Part 1/4)

Water pollutants from the chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards between Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	pH		6.0-9.0	6.0-9.0	=
		Total suspended solids		60	50	↓
		COD		110	80	↓
		BOD_5		50	-	N/A
		Mercury		0.002	-	N/A
		Ammonia nitrogen	Special electronic materials	10	10/20[c]	=/↑
			Electrical units		5	↓
			Printed circuit boards		20	↑
			Semiconductor devices		10	=
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components	-	20/30[c]	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 2/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Copper	Special electronic materials	0.6	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices			
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	5	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron components		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 3/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Hexavalent chromium	Special electronic materials	0.1	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display device and photoelectron components		0.5	=
			Electron terminals products		-	N/A

Hi-tech (Part 4/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Indonesia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Total cyanide	Special electronic materials	-	0.2	N/A
			Electrical units		0.2	N/A
			Printed circuit boards		0.2	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A
		Phenol		0.5	-	N/A
		Fluoride	Special electronic materials	10	10	=
			Electrical units		10	=
			Printed circuit boards		10	=
			Semiconductor devices		10	=
			Display device and photoelectron components		10	=
			Electron terminals products		-	N/A
		Oil and grease		10	-	N/A
	Air pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Noise level limits in industry area		Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Emission Standard of Pollutants for Electrical Industry[15], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, total suspended solids, and other organic substances in the wastewater. Indonesia has introduced Regulation of the Ministry Regulation No. 5 of 2014[12], which includes a series of standards covering wastewater for the specific industry such as milk processing industry, sugar industry, etc.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12] of Indonesia also includes a series of standards covering wastewater for the specific industry such as basic oleochemical industry, terephthalate industry, etc.

For both food & beverage and chemicals & plastics industries, Mainland China has established special standards focusing on specific industry as well. Please refer to the corresponding standards according to the specific industry.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Indonesia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Indonesia[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	400(200)	150 (70)	↓ (↓)
		COD	300(100)	150 (100)	↓ (=)
		BOD_5	150(50)	30 (20)	↓ (↓)
		Ammonia nitrogen	10(5.0)	25 (15)	↑ (↑)
		Sulphide	1.0(0.5)	1.0 (1.0)	= (↑)
		Formaldehyde	-	2.0 (1.0)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise level limits in industry area	Day-night 70	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Indonesia Standard: Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12], Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[13], and Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits[14].*

b. *Mainland China Standard: Integrated Wastewater Discharge Standard[19] Integrated Emission Standard of Air Pollutants[18], and Emission Standard for Industrial Enterprises Noise at Boundary[16].*

III. The Main Local Supporting Organisations / Agencies in Indonesia

Indonesia has mandatory environmental license system. To ensure environmental compliance and to maintain a good relationship with the public, the investor should pay attention to the environment survey, license application and must meeting the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environmental related supporting services.

A. Environmental Due Diligence Services in Indonesia

Agency/ organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Sustainability Strategy; • Environmental and Social Impact Assessment; • Sustainability-related Supply Chain Consulting; and • Governance, Risk & Compliance, etc.	+62 21 521 2901
SLP Environmental Consulting	• Environmental, Health & Safety (EHS) Compliance Auditing; • Environmental Due Diligence; and • Environmental, Social and Governance (ESG) Performance Assessment, etc.	+ 66 (0) 2168 7016 (ASEAN Headquarters)
PT Hatfield Indonesia	• Environmental Due Diligence; • Environmental Management and Monitoring; and • Environmental / Social Impact Assessments, etc.	+62 251 832 4487

B. AMDAL/UKL-UPL Supporting Services in Indonesia

Agency/ organisation	Service Coverage	Contact
Unilab Perdana	• Contamination Testing; • Laboratory Calibration; and • UKL-UPL Monitoring Report, etc.	+62 31 841 5839
Indonesia Environment & Energy Center	• Environmental Impact Assessment; • Environmental Management; • Environmental Engineering & Technology; and • Environmental Rules & Laws, etc.	+62 21-837 086 79 / 80
ACCURA	• AMDAL; • UKL-UPL; and • Enterprise Resource Planning, etc.	+62 81 1778 8804

C. Environmental Monitoring / Waste Management Services in Indonesia

Agency/ Organisation	Service Coverage	Contact
Ganeca Environmental Services	• Air Quality Monitoring; • Mine-Closure Planning; and • wastewater Treatment Plant and Sewerage System Design, etc.	+62 22 750 1959
ESC	• Environmental, Social, Health and Economic Impact Assessments; • Site Remediation & Management; • Waste Management; and • Air Quality & Noise Management, etc.	+62 21 5790 1344
Unilab Perdana	• Contamination Testing; and • Laboratory Calibration, etc.	+62 31 841 5839

D. Pollutants Treatment Services in Indonesia

Agency/ Organisation	Service Coverage	Contact
Ganeca Environmental Services	• Environmental Impact Assessment; • Air Quality Monitoring; • Mine-Closure Planning; and • wastewater Treatment Plant and Sewerage System Design, etc.	+62 22 750 1959
PT. Swing Indonesia	• Design and Construction of Wastewater Treatment Facilities; • Water Treatment Plant; and • Pump Station, etc.	+62 21 5972 8299 / 8396
Biosystems Group (BSG)	• Design and Construction of Water Treatment; • Desalination Equipment Applications; and • Pump Station, etc.	+62 (0) 361 281 969
PT. Amanaid	• Design and Construction of Wastewater Treatment Facilities; • Water Treatment Plant; and • Replacement and Maintenance Service, etc.	+ 62 361 430 902
SGS Indonesia	• Repack of Dangerous Waste and Products; • Waste Reconditioning; and • Waste Care, etc.	+62 21 29780600

Source:

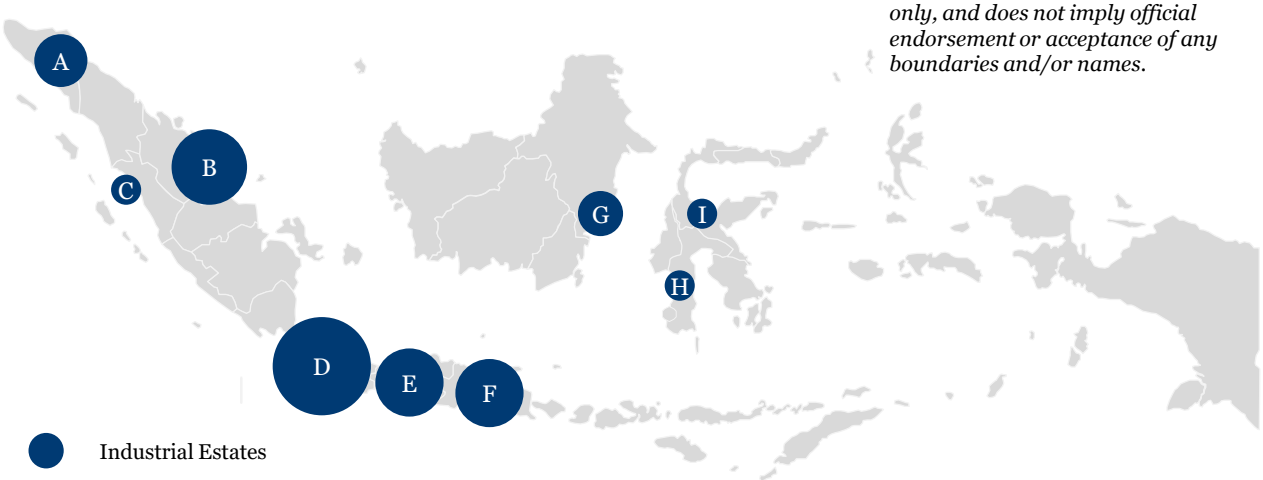
[1] *No.32/2009 on Environmental Protection and Management, 2009*
[2] *Environmental Compliance and Enforcement in Indonesia Rapid Assessment, 2008*
[3] *Industrial Pollution Prevention and Control Policies and Law, 2015*
[4] *Indonesia :Environment & Climate Change Law, Kristianto P.H. and Maurice J.R 2019*
[5] *No. 32/2009 on Environmental Protection and Management, FAO 2019*
[6] *Government Regulation of the Republic Indonesia Regarding Environmental Impact Assessment, 1993*
[7] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*
[8] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*
[9] *Legal Guide to Investment in Indonesia, Allens 2014*
[10] *Wastewater Management and Resource Recovery in Indonesia, ARCOWA 2018*
[11] *Environmental Licenses, BKPM 2019*
[12] *Ministry Regulation No. 5 of 2014 on Quality of Waste, 2014*
[13] *Ministry regulation No.41 of 1999 Air Pollution Control, 1999*
[14] *Ministerial Decree of the Minister of Environment No.48 of 1996 Concerning Noise Limits, 1996*
[15] *Emission Standard of Pollutants for Electrical Industry, 2nd Edition*
[16] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*
[17] *Discharge Standards of Water Pollutants for Dyeing and Finishing of Textile Industry, GB 4287-2012*
[18] *Integrated Emission Standard of Air Pollutants, GB 16297-1996*
[19] *Integrated Wastewater Discharge Standard, GB 8978-1996*
[20] *Law No. 18/2008 on Rubbish Management, 2008*
[21] *Law No.31 of 2009 on Meteorology, Climatology and Geophysics, 2009*
[22] *Act No. 4 of 1982 on the Basic Provisions for the Management of the Living Environment, 1982*
[23] *Government Regulation No. 82 of 2001 on Management of Water Quality and Control over Water Pollution，2001*
[24] *Decree of the State Minister of the Environment No. 51 of 2004 Regarding Standard Quality of Seawater, 2004*
[25] *Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources, 1995*
[26] *Ministerial Regulation No. 5 of 2012 on the Type, Size and Magnitude of Activities Which Require Environmental Impact Assessment, 2012*

Appendix

Appendix 1

List of Indonesia's Industrial Estates by Region (Part 1/4)

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

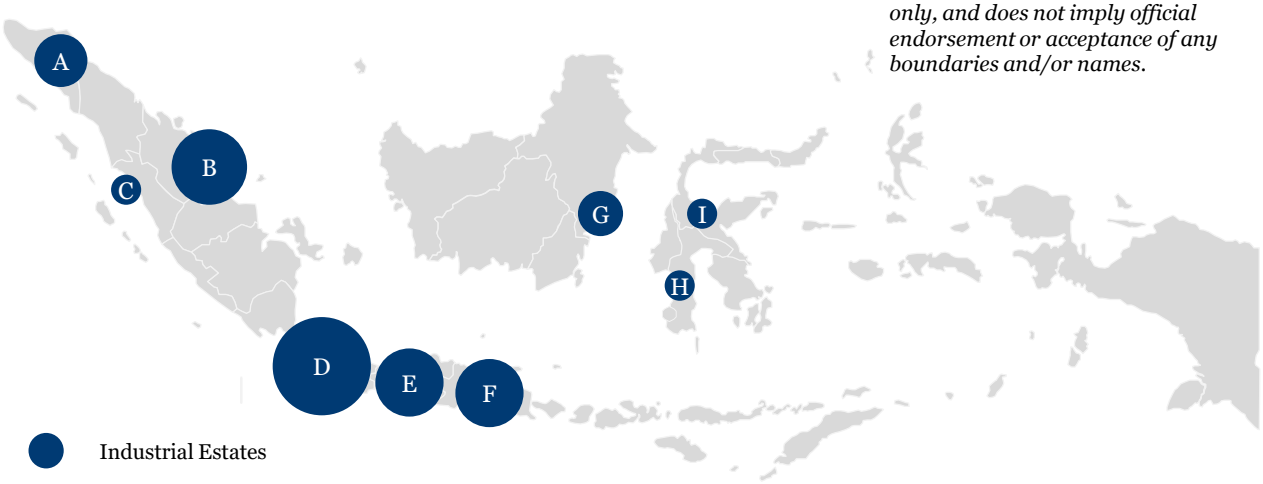


Industrial Estates by Region	Developed WPI	Developing WPI
A. North Sumatra		
1. Kawasan Industri Medan 2. Lampulo Fisheries Industrial Estate 3. Medan Star Industrial Estate 4. Pulahan Seruai Industrial Estate		✔
B. Riau and Riau Islands		
1. Batamindo Industrial Park 2. Bintan Industrial Park 3. Bintang Industrial Park II 4. Cammo Industrial Park 5. Citra Buana Center Park I 6. Citra Buana Centre Park II 7. Citra Buana Centre Park III 8. Dumai Industrial Park 9. Executive Industrial Park 10. Hijrah Industrial Estate 11. Kabil Integrated Industrial Estate 12. Kawasan Industri Tanjung Buton 13. Latrade Industrial Park 14. Panbil Industrial Estate 15. Puri Industrial Park 2000 16. Sarana Industrial Point 17. Taiwan International Industrial Estate 18. Tunas Industrial Park 19. Union Industrial Park 20. West Point Maritime Industrial Park		✔
C. West Sumatra		
1. Padang Industrial Park		✔

Appendix 1

List of Indonesia's Industrial Estates by Region (Part 2/4)

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

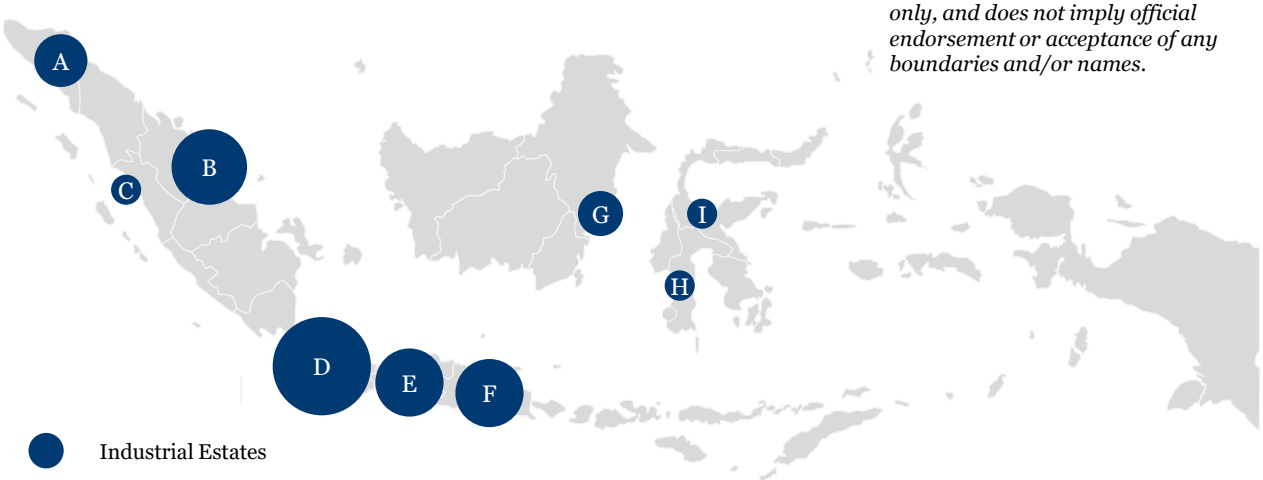


Industrial Estates by Region	Developed WPI	Developing WPI
D. Jakarta and West Java		
1. Artha Industrial Hill		
2. Bekasi International Industrial Estate		
3. Bukit Indah Industrial Park		
4. Cibinong Centre Industrial Estate		
5. Cilandak Commercial Estate		
6. East Jakarta Industrial Park		
7. Greenland International Industrial City		
8. GT Tech Park @Karawang Industrial Estate		
9. Indotaisei Industrial Estate		
10. International Warehouse & Industrial Estate		
11. Jababeka Industrial Estate-Cikarang		
12. Jababeka Industrial Estate-Cilegon		
13. Jakarta Industrial Estate Pulogadung		
14. Karawang International Industrial City		
15. Karawang New Industry City	✔	
16. Kawasan Berikat Nusantara		
17. Kawasan Industri & Pergudangan Cikupamas		
18. Kawasan Industri Gobel		
19. Kawasan Industri Lion		
20. Kawasan Industri Mitra Karawang		
21. Kawasan Industri Rancaekek		
22. Kawasan Industri Sentul		
23. Kawasan Industri Terpadu Indonesia China		
24. Kota Bukit Indah Industrial City		
25. Krakatau Industrial Estate Cilegon		
26. KSO Delta Silicon 8 Lippo Cikarang Industrial Estate		
27. Kujang Cikampek Industrial Estate		
28. MGM Cikande Integrated Industrial Area		
29. Millenium Industrial Estate		
30. MM2100 Industrial Town		

Appendix 1

List of Indonesia's Industrial Estates by Region (Part 3/4)

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

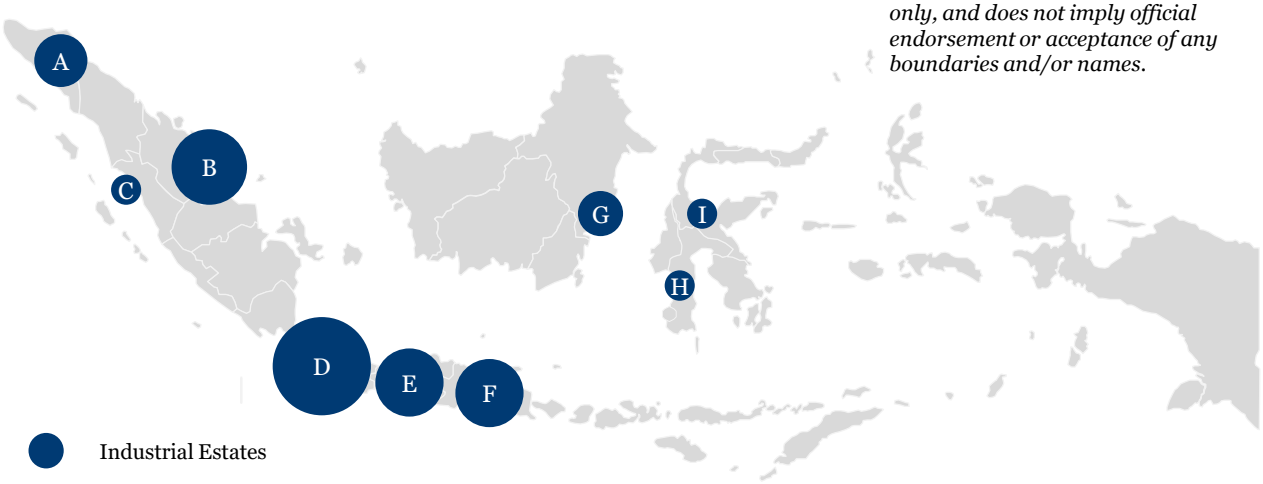


Industrial Estates by Region	Developed WPI	Developing WPI
D. Jakarta and West Java (cont'd)		
31. MM2100 Industrial Town BFIE 32. Modern Cikande Industrial Estate 33. Pasar Kemis Industrial Estate 34. Podomoro Industrial Park 35. Suryacipta City of Industry 36. Taman Tekno BSD 37. Wilmar Integrated Industrial Park	✔	
E. Central Java		
1. Bukit Semarang Baru (BSB) Industrial Park 2. Candi Industrial Estate 3. Jatengland Industrial Park Sayung 4. Kawasan Industri Wijayakusuma 5. Kawasan Industri Wonogiri 6. Kendal Industrial Park 7. LIK Bugangan Baru Semarang 8. Tanjung Emas Export Processing Zone 9. Terboyo Industrial Estate	✔	
F. East Java		
1. Java Integrated Industrial & Port Estate 2. Kawasan Industri Gresik 3. Kawasan Industri Tuban 4. Maspion Industrial Estate 5. Ngoro Industrial Park 6. Pasuruan Industrial Estate Rembang 7. Safe & Lock Warehouse and Industrial Complex 8. Sidoarjo Industrial Estate Berbek 9. Surabaya Industrial Estate Rungkut	✔	

Appendix 1

List of Indonesia's Industrial Estates by Region (Part 4/4)

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.



Industrial Estates by Region	Developed WPI	Developing WPI
G. East Kalimantan		
1. Delma Industrial Park 2. Kaltim Industrial Estate 3. Kariangau Industrial Estate 4. Muara Wahau Industrial Estate		✔
H. South Sulawesi		
1. Bantaeng Industrial Park (BIP) 2. Kawasan Industri Makassar 3. Kawasan Kota Industri Terpadu Takalar		✔
I. Central Sulawesi		
1. Kawasan Industri Palu 2. Morowali Industrial Park		✔

Appendix 2

The Main Environmental Laws/Regulations in Indonesia

Ministry of Environment and Forestry	1	Law No. 32/2009 on Environmental Protection and Management[1]
	2	Law No. 18/2008 on Rubbish Management[20]
	3	Law No.31 of 2009 on Meteorology, Climatology and Geophysics[21]
	4	Act No. 4 of 1982 on the Basic Provisions for the Management of the Living Environment[22]

The Main Environmental Ambient Standards in Indonesia

Ambient Standards	1	Government Regulation No. 82 of 2001 Concerning Water Quality Management And Water Quality Control[23]
	2	Decree of the State Minister of the Environment No. 51 of 2004 Regarding Standard Quality of Seawater[24]
	3	Ministry regulation No.41 of 1999 Air Pollution Control[13]

The Main Environmental Effluent Standards in Indonesia

Effluent Standards	1	Ministry Regulation No. 5 of 2014 on Industrial Wastewater[12]
	2	Ministerial Decree No.48 of 1996 on Noise Limits[14]
	3	Ministry Regulation No. 13 of 1995 on Quality Standards for Emission of Stationary Sources[25]

Appendix 3

List of Projects for which AMDAL Must be Prepared (Issued with Ministerial Regulation No. 5 of 2012 (“Regulation 5/2012”))[26]

Industries	Type of Activities	Scale/Magnitude
All industries	Industrial parks (including integrated industrial parks)	All size
	Other industrial activities using the areas of: - Metropolitan - Large city - Medium city - Small city - Rural	- Metropolitan: > 5 ha - Large city: > 10 ha - Medium city: > 15 ha - Small city: > 20 ha - Rural: > 30 ha

Glossary – Section 1 to 9 Operational Requirements

AFTA	ASEAN Free Trade Agreement
AHTN	ASEAN Harmonised Tariff Nomenclature
APA	Advance Pricing Agreement
APE	Exporter Identification Number (Angka Pengenal Ekspor)
API	Importer Identification Number (Angka Pengenal Importir)
ASEAN	Association of Southeast Asian Nations
BCB	Bipartite Cooperation Body
BKPM	Investment Coordinating Board (Badan Koordinasi Penanaman Modal)
BLK	Community Training Centre
BPJS	Badan Penyelenggara Jaminan Sosial
BPJS Kesehatan	National Healthcare Security Programme
BPJS Ketenagakerjaan	National Social Security Programme
BPPT	Agency for the Assessment & Application of Technology (Badan Pengkajian dan Penerapan Teknologi)
BPS	National Statistical Agency (Badan Pusat Statistik)
BRI	Belt and Road Initiative
CEPT	Common Effective Preferential Tariff
CIT	Corporate Income Tax
CLA	Collaborative Labour Agreement
DJP	Directorate General of Taxes (Direktorat Jenderal Pajak)
DKP-TKA	Compensation for the Use of Foreign Manpower (Dana Kompensasi Penggunaan TKA)
DNI	Negative Investment List (Daftar Negatif Investasi)

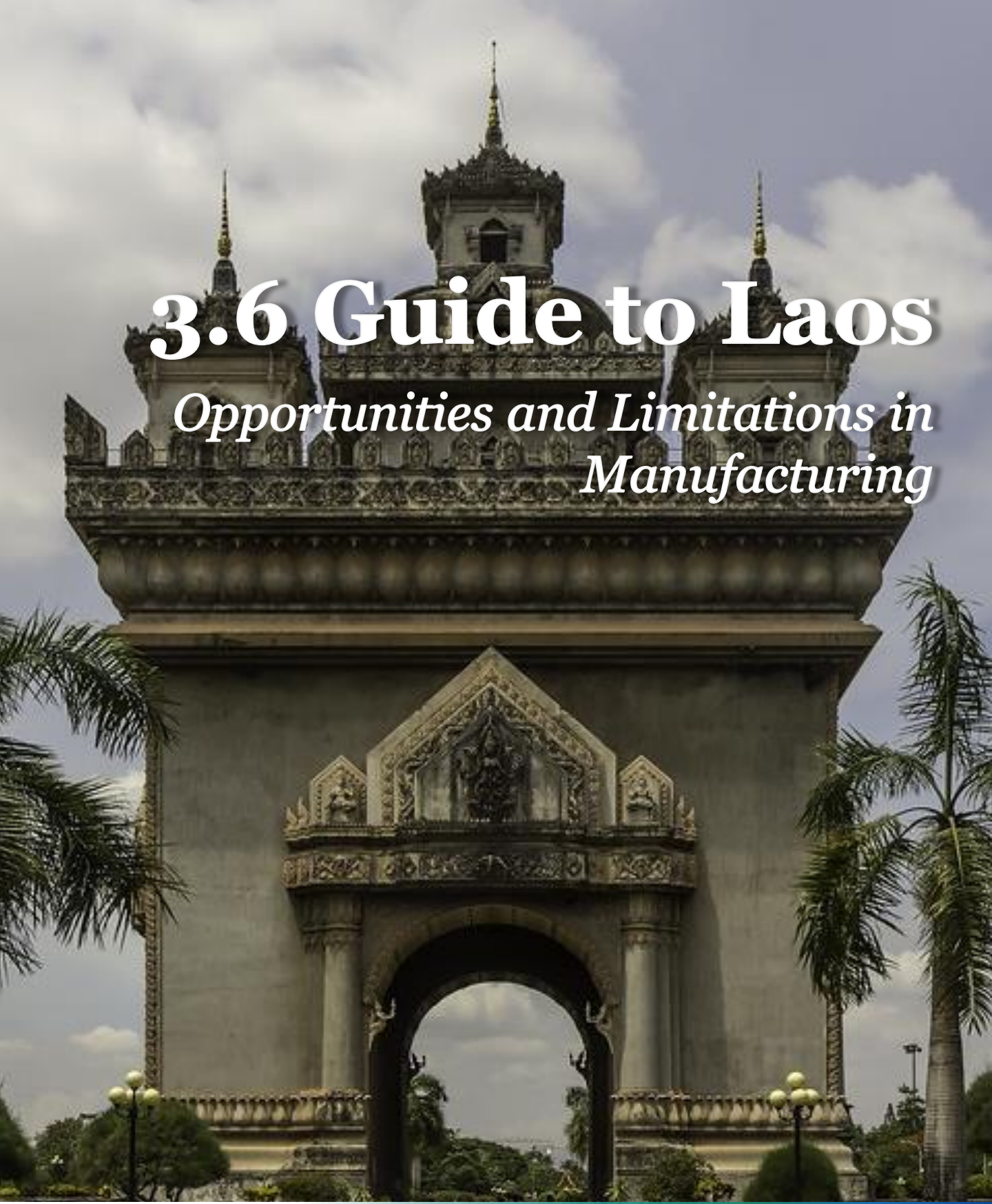
DTA	Double Taxation Agreement
EC	Economic Corridors
F&B	Food and Beverage
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
HKD	Hong Kong Dollar
HKI	The Indonesian Industrial Estates Association (Himpunan Kawasan Industri)
HS	Harmonised System
IAI	Indonesian Institute of Accountants (Ikatan Akuntan Indonesia)
ICE	Indonesia Convention Exhibition
ICT	Information and Communications Technology
IDR	Indonesian Roupie
IFAS	Indonesian Financial Accounting Standards
IP	Intellectual Property
IPC	Indonesian Port Corporations
ISF	Indonesia Science Fund
ITAS	Limited Stay Visa (Izin Tinggal Terbatas)
ITU	International Telecommunication Union
KLIK	Fast-track project construction facility (Fasilitas Kemudahan Investasi Langsung Konstruksi)
KPPIP	Committee for Acceleration of Priority Infrastructure Delivery (Komite Percepatan Penyediaan Infrastruktur Prioritas)
KPPU	Indonesia Competition Commission (Komisi Pengawas Persaingan Usah)
LIPI	The Indonesia Institute of Science (Lembaga Ilmu Pengetahuan Indonesia)
LPI	Logistics Performance Index

LST	Luxury-good Sales Tax
MOE	The Ministry of Environment
MOF	The Ministry of Finance
MOI	The Ministry of Industry
MOM	The Ministry of Manpower
MP3EI	Masterplan for Acceleration and Expansion of Indonesia Economic Development (Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia)
MRT	Mass Railway Transit
NIK	Customs Identification Number (Nomor Identitas Kepabeanan)
NPWP	Taxpayer Identification Number (Nomor Pokok Wajib Pajak)
NSP	National Strategic Projects
PI	Capital Investment Registration (Pendaftaran Investasi)
POLITEKNIK	Polytechnic Institution
PT PMA	Foreign Limited Liability Company (Perseroan Terbatas Penanaman Modal Asing)
R&D	Research and Development
RCEP	Regional Comprehensive Partnership
RDSI	Industrial Relations Dispute Settlement Institution
RISTEKDIKTI	The Ministry of Research, Technology & Higher Education
RO	Representative Office
RPJMN	National Medium Term Development Plan (Rencana Pembangunan Jangka Menengah Nasional)
RPTKA	Foreign Manpower Utilisation Plan (Rencana Penggunaan Tenaga Kerja Asing)
S&T	Science and Technology
SEZ	Special Economic Zone
SMK	Vocational and Pre-professional High School (Sekolah Menengah Kejuruan)
SOE	State-owned Enterprises

STI	Science, Technology and Innovation
STP	Science Techno Parks
TEU	Twenty-foot Equivalent Units
USD	United States Dollar
VAT	Value Added Tax
VET	Vocational Education Training
VITAS	Limited Stay Visa (Visa Tinggal Terbatas)
WPI	Industrial Development Zones (Wilayah Pengembangan Industri)

Glossary – Section 10 Environmental Requirements

AMDAL	Environmental Impact Assessment (Analysis Mengenai Dampak Lingkungan)
ASEAN	Association of Southeast Asian Nations
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
EDD	Environmental Due Diligence
ICEL	Indonesian Center for Environmental Law
MOEF	Ministry of the Environment and Forestry
NMHC	Non-methane Hydrocarbon
RKL-RPL	Environmental Management and Monitoring Plan (Rencana Pengelolaan Lingkungan Hidup dan Rencana Pemantauan Lingkungan Hidup)
UKL-UPL	Environmental Management and Monitoring Program (Upaya Pengelolaan Lingkungan Hidup dan Upaya Pemantauan Lingkungan Hidup)



3.6 Guide to Laos

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

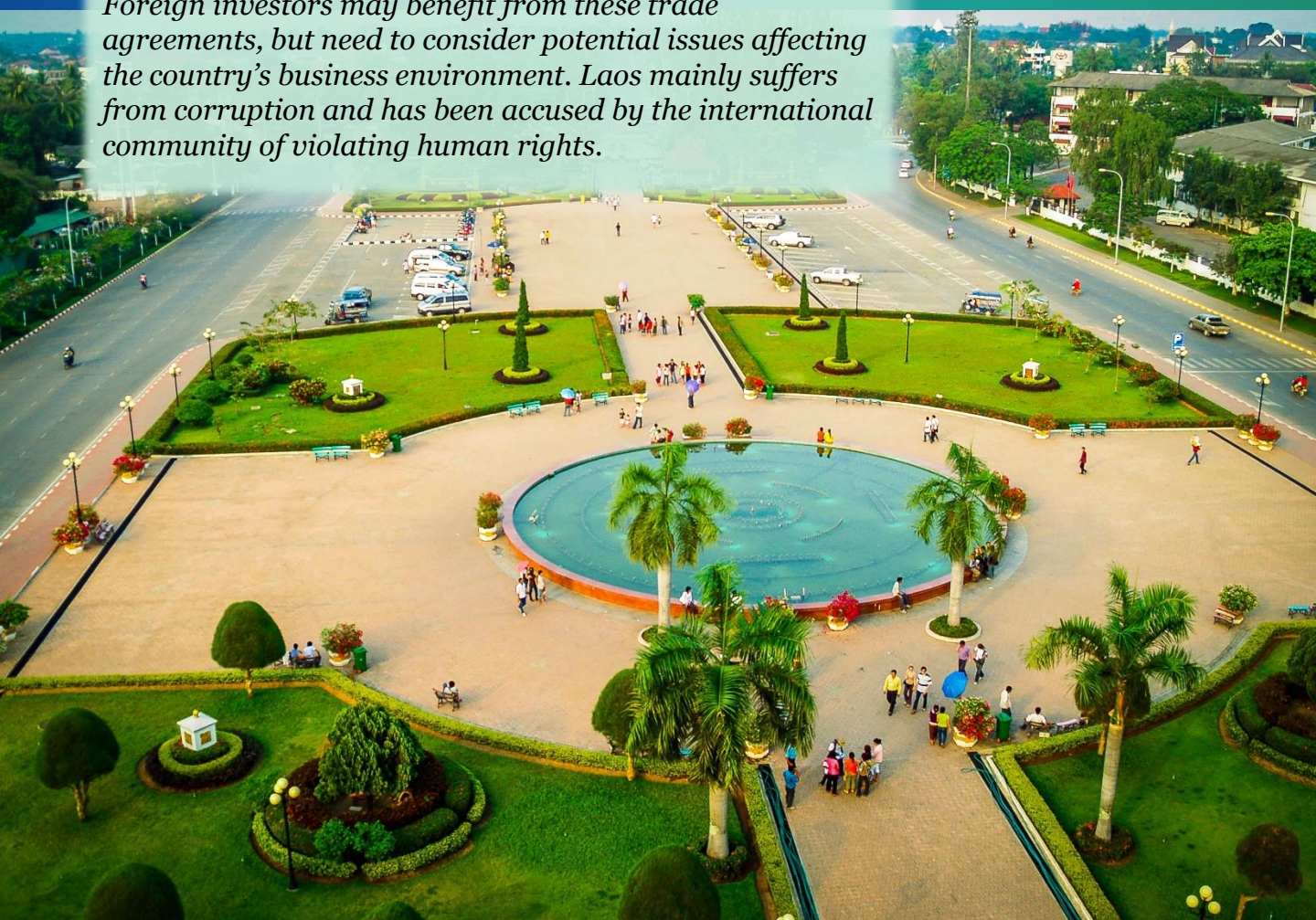
1. Overview of Laos

Executive Summary

The Lao People's Democratic Republic is still considered as one of the least developed countries (LDCs) in the world. However, its fast socio-economic development underlined by strong gross domestic product (GDP) growth over the last decade should enable the country to officially graduate from the LDC list by 2024.

Laos has four signed and effective bilateral trade agreements which usually eliminate import and export tariffs. In addition, the country is a member of the Association of Southeast Asian Nations (ASEAN), and therefore benefits from six multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Foreign investors may benefit from these trade agreements, but need to consider potential issues affecting the country's business environment. Laos mainly suffers from corruption and has been accused by the international community of violating human rights.



1. Overview of Laos

I. Country Profile[1,2,3,4,5,6,7]

Laos is considered as one of the least developed countries (LDCs) in the world. However, over the last decade, the country's economy grew at a rapid pace, with an average gross domestic product (GDP) growth of 7.7% per year. In 2019, it is forecasted that the country will grow at a 8.2% rate. Therefore, if Laos sustains this development pace, it should meet the criteria for removal from the LDC list by 2021 and officially graduate from the list in 2024. The country's economic growth is mainly driven by foreign capital investments in the power generation (especially hydropower), construction and manufacturing sectors. However, some major internal issues such as the small labour force, low domestic demand or poor infrastructure and transport system are keeping foreign investors at bay.

GDP *(in USD)*
19.9 billion (2019f)
18.4 billion (2018)

GDP Per Capita *(in USD)*
2,823 (2019f)
2,636 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 20.9%
Industry: 33.2%
Services: 45.9%

External Trade *(% of GDP)*
Import: 41.5% (2017)
Export: 34.3% (2017)

Population
7.17 million (2019)
World ranking: 105/191

Median Age
23.4 (2018)
World ranking: 170/228 (from oldest to youngest)

Language
Lao (official)
French

English Literacy
Very low proficiency (2018)
World ranking: unknown

Government Structure
Single-party socialist republic

Land Area
230,800 sq km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[8,9,10,11,12]

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. It allows companies located in two or more countries to trade goods with each other at reduced or zero tariffs. Laos joined the ASEAN in 1997 and became a member of the World Trade Organization (WTO) in 2013. The country has therefore a preferential access to Southeast Asian market and is also involved in international trade.

Laos currently has four effective bilateral trade agreements and benefits from the Free Trade Agreements (FTAs) signed between ASEAN and six other countries. In addition, the ASEAN – Hong Kong Free Trade Agreement came into effect in June 2019 (see section below). Furthermore, the country might benefit from the Regional Comprehensive Economic Partnership which is currently under negotiation.

Signed and Effective Bilateral Trade Agreements

	Affected Industry	Agreement (effective date)
	• All	**Asia Pacific Trade Agreement (1976)** • Preferential tariffs agreement between: Bangladesh, Mainland China, India, Korea, Laos, Sri Lanka and Mongolia. • Aimed at promoting intra-regional trade through tariffs concessions between the states.
	• All	**Laos-Thailand Preferential Trade Agreement (1991)** • Preferential import and export tariffs for goods and services with Laos.
	• All	**Laos-Vietnam Free Trade Agreement (2015)** • Eliminates tariffs on more than 95% of goods traded between the two countries. • More than 9,000 products will benefit from zero tariffs.
	• All	**US-Laos Trade and Investment Framework Agreement (2016)** • Facilitates bilateral trade between the two countries. • Strengthens cooperation on issues related to intellectual property, labour, environment and capacity building.

Signed and Effective Regional Trade Agreements as Member of the ASEAN

As a member of the ASEAN, Laos benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

Regional Comprehensive Economic Partnership (RCEP)

This partnership is being negotiated between ASEAN members and their FTA partners (i.e. Mainland China, South Korea, Japan, India, Australia, and New Zealand). The RCEP is designed to be a mutually beneficial economic partnership that will foster cooperation and integration between the 16 countries. The agreement aims to lower tariffs and other barriers to enhance trade between the partners.

The Association of Southeast Asian Nations (ASEAN)[12]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

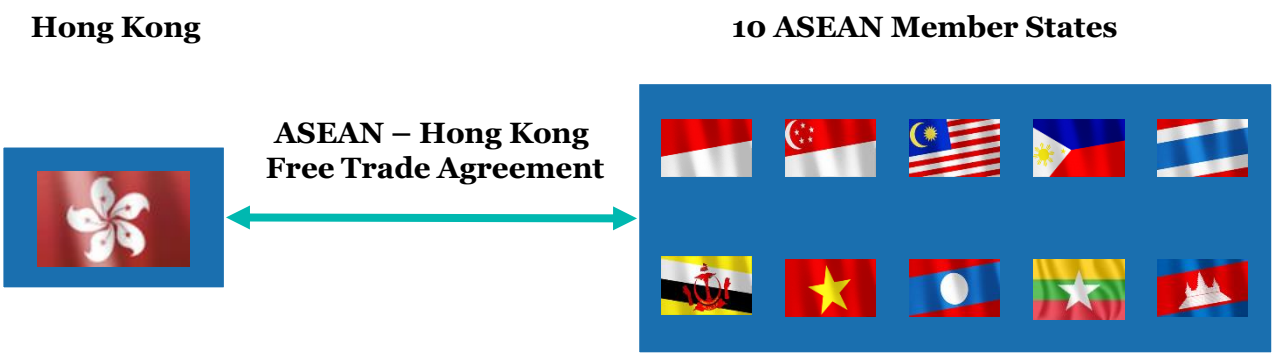
International Trade Agreement between Hong Kong and the ASEAN[13]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods, trade of services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[14,15,16]

The Lao People's Democratic Republic is a single-party socialist republic led by the Laotian People's Revolutionary Party (LPRP). The state powers are divided between three branches: executive power, legislative power and judiciary power .

The executive power is held by the President who is elected by the National Assembly every five years. The President is also the General Secretary of the LPRP. Once elected, the President appoints the Prime Minister and the Council of Ministers (government) which assist him during his tenure.

The legislative power is held by the National Assembly which is in charge of: electing the President, approving the appointed Prime Minister and Council of Ministers, and preparing, adopting and amending the Constitution (and the laws). The National Assembly consists of 149 representatives elected by the people every five years (the last election took place in 2016). As there is only one legal party in Laos, 144 out of the 149 representative are members of the LPRP.

The judiciary power is held by the Supreme Court and other subordinate courts. The Supreme Court's president is recommended by the President and appointed by the National Assembly.

C. Political Uncertainties and Historical Coup Records[17,18,19]

As Laos has been ruled by the same party (the LPRP is the only legal party in the country) since 1975, it is considered as a fairly politically stable country. Laos ranked 67th out of 195 countries in the World Banks Political Stability Index (with an above average value of 0.43 in 2017).

Under the ruling of the LPRP, there were limited political coups attempts in the country. Furthermore, the government has dismissed and denied opposition movements, such as a 2003 revolution led by the Lao Citizen Movement for Democracy (LCMD). The latest coup attempt recorded dates back to 2007 when several former Lao Army Generals tried to obtain heavy weapons in order to possibly overthrow the communist government.

The main sources of political uncertainties rest upon in the country's unresolved issues surrounding corruption and money laundering. In addition, Laos' poor human rights record hinders bilateral relations with other nations.

Source:

[1] *The World Bank in Laos, The World Bank, 2019*

[2] *Laos 10-Year Forecast, Fitch Solutions, 2019*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

[5] *Laos Population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First, 2018*

[7] *Geography Statistics of Laos, Worldatlas*

[8] *Free Trade Agreements, Asia Regional Integration Centre*

[9] *Asia Pacific Trade Agreement, United Nations*

[10] *United States and Laos Sign Trade and Investment Framework Agreement, US Trade Representative*

[11] *Laos, Vietnam Expand Free Trade Agreement, Tax News, 2015*

[12] *ASEAN official website*

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[14] *Laos government, Global Edge*

[15] *The National Assembly of Lao PDR homepage*

[16] *Lao PDR, Inter-parliamentary Union*

[17] *Political Stability Index, The World Bank, 2017*

[18] *Laos profile timeline, BBC News, 2018*

[19] *Laos' Political Reforms To Remain Slow Despite Increased International Scrutiny, Fitch Solutions, 2019*

2. Legal Environment and Competition Law

Executive Summary

Laos amended its main law towards foreign investments (the Law on Investment Promotion) in 2017 in order to create a better business climate in the country. However, sectors listed under the controlled business list or concession investment list are still regulated by the government.

Mainland China and Hong Kong companies can choose to operate in Laos as a Limited Liability Company (LLC), a branch office or a representative office. All these different types of entities can be 100% foreign-owned. Companies can also choose to set up operations in Laos via three other options: a joint venture (with a domestic or another foreign investor), a business contract by cooperation, or a public private partnership (PPP).

2. Legal Environment and Competition Law

Laos is aiming to attract an increasing volume of foreign investments in the near future. To do so, the government amended the Law on Investment Promotion in 2017 in order to create a better business climate, by, for example facilitating companies' incorporation process.

However, some activities are regulated by the Lao government and require local or foreign investors to contact relevant ministries in order to obtain a business licence. With the amended Law, the government clearly listed out which activities are under the controlled business list and which are categorised under concession investments. In addition, the government listed out the agencies that Mainland China and Hong Kong companies would need to contact, and which law they would need to comply with.

In Laos, Investments are Divided in Two Different Types: General Investments and Concession Investments[1,2,3]

General Investments

General investments are categorised into two lists:

- Business activities under the controlled business list: These are activities defined as having an impact on the "stability of national security, public order, national fine tradition and environment, society, and nature". Investments in these sectors are regulated by specific ministries and investment licenses are granted on a case by case basis. This list is periodically updated by the government. In 2019, the list includes activities such as:
  - Mining and mineral processing;
  - Production of chemicals and pharmaceuticals;
  - Transport services such as air freight or postal services.
- Business activities not under the controlled business list: these are business activities that are opened for general investments. Companies wishing to carry out these activities can apply for a business license according to the usual processes described in the Enterprise Law and other relevant regulations.

Concessions Investments

Companies need to seek the government approval in order to benefit from a concession. This specific type of investment applies to companies wishing to:

- Operate on concession land;
- Develop special economic zones;
- Operate in industrial processing zones dedicated to exports;
- Engage in mining, electric energy development, aviation and telecommunications.

Generally, the Lao government drafts every year a list of concession-based businesses.

For additional information, please refer to section 8 of this report.

I. Types of Legal Business Entities Available for Foreign Investment[4,5]

According to the Lao Enterprise Law and the Law on Investment Promotion, there are various types of entities that Mainland China and Hong Kong companies can set up in order to expand their manufacturing footprint in the country. The three types presented below are entities that can be wholly foreign-owned. Therefore, they are the most favoured business types by foreign investors:

1. Limited Liability Company (LLC)
2. Branch Office
3. Representative Office

Limited Liability Company (LLC)

The requirements to meet in order to establish an LLC are clearly defined by law. Therefore, it is the most common business type for foreign investors in Laos. To set up an LLC, a company needs at least two shareholders and one director. In this structure, the shareholders' liability is limited to their capital contribution. With an LLC, Mainland China and Hong Kong companies can conduct commercial activities, generate revenues and profits. If during the course of its activities, an LLC only counts one single shareholder, it will be required to change its legal status to a sole limited liability company.

There is no minimum paid-up capital required for setting up an LLC (i.e. it is only USD 1). However, depending on the nature of the investment and the sector in which the company is investing in, a paid-up capital of at least USD 125,000 could be required. Generally for an LLC, the registration process takes seven weeks.

Branch Office

Investors from Mainland China and Hong Kong also have the possibility to establish a branch office in Laos. This entity is considered as an extension of the parent company, therefore its scope of operations is defined by the latter. A branch office can engage in revenue generating activities. In Laos, this entity is required to have a management team independent from the parent company, as well as a local Lao corporate bank account. In the country, branch office can usually only be set up to conduct activities in some specific sectors: airline business, financial institutions, banking and insurance.

Generally, it takes around 10 weeks to open a branch office in Laos.

Representative Office

The scope of activities that can be carried out by a representative office is limited. This type of company is not allowed to conduct business activities (such as manufacturing) or revenue generating activities. Therefore, it can only be used to collect market information (e.g. perform market researches or surveys) in order to prepare for future manufacturing investments in Laos.

Nevertheless, it is very attractive to establish a representative office as the minimum paid-up capital required to obtain a business licence is very low (USD 50,000). In addition, the registration process is quite straightforward even if it generally takes around 10 weeks. In Laos, a representative office cannot operate for more than three years. In fact, the business licence is granted for a one-year period, and can only be renewed twice.

Apart from wholly foreign-owned companies, Mainland China and Hong Kong investors can choose to expand their manufacturing footprint in Laos via three other options: joint venture (with a domestic or another foreign investor), business contract by cooperation, and a public private partnership (PPP).

II. Overview on Other Business Laws and Regulations[5]

A. Legal and Administrative Framework on Competition Law[6]

The National Assembly approved the Business Competition Law No. 60/NA in January 2015, and the Law came into force in December 2015. In addition, a new regulation formalising the creation of the Business Competition Commission (BCC) was passed in 2018. The BCC is supposed to act as the regulatory entity in charge of administrating the Business Competition Law. However, the BCC is still in the establishment process (i.e. is not yet created), and therefore, the Law is currently unenforceable. Mainland China and Hong Kong companies considering to expand their manufacturing footprint in Laos are advised to seek legal counsel in order to obtain the latest news concerning the enforcement of the Business Competition Law.

The Business Competition Law applies to any business (whether local or foreign-owned) which carries out activities that aim to reduce, distort or obstruct competition in Laos. The Law lists three main topics under which some actions are prohibited:

1. Anti-competitive agreements;
2. Abuse of market power; and
3. Anti-competitive mergers.

In addition, the Law defines a list of practices which are considered as acts of unfair business competition.

Some common examples listed in the Business Competition Law are listed below. In addition to these examples, the BCC can also prohibit other types of actions that reduce, distort or obstruct competition in Laos. However, the Commission can also grant individual or collective exemptions.

1. Anti-competitive Agreements

The following behaviours are defined as anti-competitive agreements and are therefore prohibited by law:

- Fixing prices of goods and services;
- Allocating market shares or manufacturing volumes;
- Limiting the quality or technological development of goods and services;
- Preventing other businesses from entering the market and forcing some businesses out of the market.

2. Abuse of Market Power

The following actions are considered illegal market control and are therefore forbidden:

- Unfair price fixing on sales or purchases of goods and services;
- Selling goods and services below aggregate cost;
- Refusing to deal with customers/consumers;
- Imposing unfair contract terms (e.g. tied selling).

However, some actions can be tolerated if the company is able to prove that they are beneficial to Laos' socio-economic development.

3. Anti-competitive Mergers

The Business Competition Law prohibits mergers that would result in:

- A company with a market share over a certain level (this level has not yet been defined);
- Limited market access for other companies or limiting technological development of goods;
- Any impact on consumers, other businesses and on Laos' socio-economic development.

These restrictions apply to various types of mergers, including enterprise mergers, business acquisitions and joint ventures.

In addition, the Law defines actions which are considered unfair business competition: misleading conduct, violation of business secrets, coercion in business operations, discrediting other business operators, false advertising, unfair sales promotion, discrimination by business association, and other practices.

Please refer to the official Law on Business Competition document for additional information (www.laoservicesportal.gov.la/index.php?r=site%2Fdisplaylegal&id=42#1).

B. Intellectual Property Protection Law on Trademarks[7]

A trademark is a visible sign for distinguishing the goods or services of an enterprise and shall include a stamped or marked container of goods. Trademarks are protected in Laos since 2011, along with the publication of the Intellectual Property Law, among other regulations and decrees. The country also signed major international intellectual property (IP) treaties such as the Paris Convention or the Convention Establishing the World Intellectual Property, which set guidelines for trademarks protection.

Companies must register their trademarks with the Department of Intellectual Property (DIP) in order to be protected. To be able to register with the DIP, the trademark must be sufficiently distinctive, different from existing trademarks, clear, and must not create confusion to consumers. In addition, it must not be a threat to national security. Generally, the registration procedure with the DIP takes between six and eight months. Once registered, the trademark protection is valid for a period of 10 years. The protection can be renewed indefinitely.

In May 2018, the country published the new Law on Intellectual Property ("New IP Law") which extended the definition of trademarks to include non-traditional marks. A new opposition procedure has also been introduced in the New IP Law.

C. Import/Export Regulations and Licenses[8,9]

In Laos, imports and exports are regulated in the 2011 Customs Law which is enforced by the Department of Customs (operating under the Ministry of Finance). To import/export goods in Laos, Mainland China and Hong Kong companies will need to be registered in Laos. In addition, depending on the types of goods, it might be necessary to obtain an Export/Import Licence. This licence can be granted automatically under certain conditions or can be subject to the Department of Import/Export's (DIMEX) approval. This licence has no expiration date and is therefore valid for the companies' entire lifespan.

Import

Mainland China and Hong Kong companies wishing to import goods into Laos need to present the following documents: invoice, packing list, transport documents, bill of landing, customs clearance report, and additional licences or permits delivered by specific ministries.

Export

When applying for an export declaration, companies should have the following documentation: application for export declaration, invoice of goods, packing list, country of origin certificate, specific certifications such as the industrial products certification.

D. Jurisdiction System on Business Related Matters[10,11,12]

The court system in Laos consists of the People's Court (composed of the Supreme Court, Court of Appeal, provincial, city, district, and municipal level courts) and the Military Court.

The country does not have dedicated courts dealing with specific subjects. Therefore, the People's Court deals with all different types of cases including commercial disputes. However, there are two arbitration bodies in Laos operating at state and provincial level: the Centre of Economic Dispute Resolution (CEDR) and the Office of Economic Dispute Resolution (OEDR). These two bodies are valid alternatives to the court system as they resolve commercial disputes through mediation or arbitration. The CEDR and the OEDR operate according to the Law on Economic Dispute Resolution (which has been amended in 2019).

Source:

[1] *Decree on Controlled Concession List in Laos, Lao PDR, 2019*

[2] *Law on Investment Promotion, Lao PDR, 2017*

[3] *Investment under the Lao PDR Amended Law on Investment Promotion, Arion Legal, 2017*

[4] *Business Entities in Laos, Healy Consultants Group*

[5] *Laos Practical Law, Thomson Reuters, 2018*

[6] *Law on Business Competition, Lao Services Portal homepage*

[7] *New Law Reforms Lao Intellectual Property Regime, Tilleke & Gibbins, 2018*

[8] *Import/Export Procedures of Laos, HKTDC, 2018*

[9] *Laos - Import Requirements and Documentation, Export.gov*

[10] *Demystifying Laos' International Arbitration Scene, Lexology, 2018*

[11] *Lao legal system, Council of ASEAN Chief Justice*

[12] *The Amended Law On Economic Dispute Resolution, Conventus Law, 2019*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation in Laos are personal and corporate income tax (CIT), and value added tax (VAT).

Laos generally welcomes and needs foreign direct investment (FDI). Most sectors are open for investments, but certain sectors have restrictions detailed in the controlled business list. Investors can also benefit from tax incentives detailed in the Law on Investment Promotion.

Officially, the Lao kip (LAK) is required to be used in all transactions in Laos, but the USD, THB, and RMB are also commonly used in practice. The LAK is a controlled currency, and cannot be freely exchanged into foreign currencies.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

The principal tax law in Laos is the Tax Law, which was first enacted in 2005, and amended in 2016. Laos has no definition of tax residency in its tax law. Therefore, all companies that are registered in Laos, or are doing business in Laos, are subject to corporate income tax (CIT).

There are two main tax registration systems in Laos. Businesses with an annual revenue of at least LAK 400 million (around USD 46,000) must register under the value added tax (VAT) system. Small and medium-sized enterprises (SMEs) with annual revenue of less than LAK 400 million can choose to either register under the VAT system, or register under the lump-sum tax system. The tax system that a new enterprise is required to register under will depend on criteria such as business plan, expected size of activities, and registered capital, among others.

In general, a company registered under Laos law will be taxed on worldwide income, while a foreign company will be taxed only on income from Laos.

A. Corporate Income Tax (CIT)[1,2]

Tax Calculation

Taxable income is calculated from accounting profits, plus non-deductible expenses, minus any other authorised deductions.

Applicable Tax Rate

The standard CIT rate in Laos is 24%. SMEs with an annual revenue of LAK 12 million or less are exempt.

Industry	Tax Rate
Standard	24%
For the first 4 years after registering on the Lao Stock Exchange	19%
Producing, importing, or exporting tobacco	26%
SMEs under the lump-sum system	3 - 7% *(Note)*

Note: The tax rate will depend on the revenue and activities of the business.

Deductions

In general, expenses are tax deductible if they are related to business operations, and are not specifically classified as non-deductible. Examples of non-deductible expenses include:

- Travel expenses over 0.6% of annual revenue;
- Donations and advertisement expenses over 0.3% of annual revenue;
- VAT for the purchase of fixed assets used in business operations;
- Depreciation of fixed assets not registered with the business; and
- Salaries paid by a partnership to partners that are not managers or employees.

Dividend Income

Dividends paid will be subject to an income tax. The tax rate of 10% will be applied on the gross dividend amount received. Taxes paid on dividend income is not eligible for tax credits. There are also no tax exemptions for dividend income tax.

Losses and Consolidation

In Laos, any business losses can be set off against future income for three years. Businesses must first obtain approval from tax authorities to be able to carry forward these losses. Businesses that do not follow an accounting system are also not eligible to carry forward losses. Carryback of losses is not permitted.

There are no consolidated filing or group loss relief provisions in Laos.

Tax Return and Payment

The tax year in Laos is the calendar year, unless the business has ceased operations, or been sold. Tax returns must be filed by 1 March following the end of the tax year. Tax returns must be filed in the Lao language, and be prepared in LAK.

CIT is paid in advance quarterly in Laos, based on self-assessment. The payment due dates for each quarter are as follows:

- 1st quarter: before 10 April
- 2nd quarter: before 10 July
- 3rd quarter: before 10 October
- 4th quarter: before 10 January of the following year, and must include any outstanding unpaid tax from the year.

SMEs under the lump-sum tax system may be eligible for monthly, quarterly, semiannual, or annual payments, depending on the agreement with the tax authorities.

Tax Governance

In Laos, the Tax Department of the Ministry of Finance is responsible for formulating and implementing the tax law, and collecting tax from businesses and individuals. For more information on the Tax Department, please refer to their official website (www.taxservice.mof.gov.la/websquare/websquare.do).

Double Tax Agreement (DTA) with Hong Kong[3]

Laos has entered into DTAs with 11 countries. Hong Kong and Laos have not signed a DTA. Hong Kong and Laos signed an Air Services Income Agreement on 9 September 2009, but it is still pending ratification.

B. Value Added Tax (VAT)[1,2,4,5]

VAT is applicable to all goods and services provided in Laos, and on any imported goods and services. The current VAT was implemented in January 2010 to replace the old Business Turnover Tax (BTT), and the VAT Law was recently amended in June 2018.

Applicable Tax Rate

In Laos, the VAT that must be paid is calculated as the output VAT minus the input VAT. The output VAT is paid by the customers, and is calculated by multiplying the taxable value with the applicable VAT rate. Input VAT is paid upon purchase of goods and services, and taxpayers can claim input VAT credits. To claim input VAT credits, a business must obtain a VAT invoice from the supplier. Input VAT can be carried over for up to three months.

The standard VAT rate is 10%, which is applied to all imported and domestic goods and services that are not specifically exempt or subject to 0% VAT. Goods that are to be exported are subject to 0% VAT. Goods subject to 0% VAT are exempt for output VAT, but may still be eligible for input VAT credits.

Goods Exempted

Certain goods are specifically exempt from VAT, including:

- Raw materials, equipment, and machinery used in agriculture;
- Materials and equipment used in production of goods for export;
- Tax and postal stamps;
- Equipment that cannot be produced or supplied in Laos;
- Traditional medicine, and other medical tools;
- Educational materials such as textbooks; and
- Goods to be used in government projects either abroad or domestically in Laos, among others.

For more information on exempt goods, please refer to the VAT section of the Tax Department's website (www.taxservice.mof.gov.la/websquare/websquare.do).

VAT Filing and Payment

VAT returns must be filed every month, and be paid by the 15th of the following month. Businesses that purchase services from non-residents or businesses/persons not registered in the VAT system must withhold VAT and pay withholding VAT by the 15th of the following month. VAT on imported goods and services should be paid upon importation.

Tax Incentives[6]

Tax incentives in Laos are provided under the Law on Investment Promotion. The main incentives include CIT exemptions, import and export duty exemptions, and land lease permissions. Foreign investors can also benefit from certain investment incentives if they invest in promoted industries. For more information regarding tax incentives, please refer to section 9 of this report.

C. Transfer Pricing Provisions[1,2]

Laos currently has no transfer pricing provisions in place.

D. Statutory Auditing Requirements and Accounting Standards[1,2]

Audit Requirements

Any businesses that have total assets of over LAK 50 billion (around USD 6.25 million), must be subject to an audit. Businesses must also used locally licensed accounting software for CIT submission, the most common of which is Advance Programming and Information System Consultancy (APIS) and Intercom. Accounting records must also be maintained for a minimum of 10 years. If the accounting records are associated with a contract, those documents should be kept for 10 years after contract completion.

Financial Statements

Financial statements in Laos must include at least a balance sheet, an income statement, and any explanatory notes to the financial statements. Financial statements must be prepared in LAK. The fiscal year used in Laos is the calendar year, with 31 December as the year end date. The financial statements should be filed to the Tax Department of the Ministry of Finance (MoF) by 1 March of the following calendar year, upon notification by the MoF.

Financial Reporting Framework

The MoF is responsible for issuing accounting standards and financial reporting requirements. All financial statements must be prepared under the Lao Generally Accepted Accounting Principles (GAAP). Lao Financial Reporting Standards (LFRS) based on the International Financial Reporting Standards (IFRS) have been approved by the MoF, but are yet to be distributed or implemented.

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)[6,7]

Bank Account Setup Requirements

In Laos, the requirements for setting up bank accounts are generally the same for both residents and foreigners. Instead, the Instruction on Implementation of the Executive Decree on Management of Foreign Exchange and Precious Metals distinguishes between opening foreign currency and LAK bank accounts. Both residents and non-residents are permitted to open LAK accounts, use money within the accounts in business operations, and exchange LAK in the account to a foreign currency to bring to a foreign country.

Opening a foreign bank account will require more documentation, including at least an identification card, an application for opening a foreign currency account, and an investment license from the Ministry of Plan and Investment. Each bank may have additional required documentation, such as a tax registration certificate.

FDI Restrictions

Laos generally welcomes FDI, as foreign investments are heavily needed to meet the considerable spending needs in infrastructure, healthcare, education, and other areas of the country. However, in the Law on Investment Promotion that governs all investments in Laos, certain sectors have been designated as restricted for investment in the controlled business list. This list will be periodically updated by the government, and foreign investors that wish to invest in these industries must apply for approval from the central or provincial investment service offices.

For further information regarding FDI restrictions, please refer to section 8 of this report.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[8,9]

There are many restrictions on foreign exchange and the use of foreign currency in Laos. Foreign exchange control is governed under the Law on Management of Foreign Currency, the Executive Decree governing the Management of Foreign Exchange and Precious Metals, and the Instruction on Implementation of the Executive Decree on Management of Foreign Exchange and Precious Metals.

Local Currency

By law, LAK is required to be used for payments of goods and services within Laos. Debts should be paid in LAK, unless the Bank of the Lao PDR has specifically approved the transaction. LAK can be exchanged at any commercial banks or foreign exchanges licensed by the Bank of the Lao PDR.

Under Lao law, foreign businesses are permitted to repatriate profits, initial investment capital, interest, any wages and salaries, and certain other remittances from LAK to a foreign currency, upon approval from the Lao government. Foreign individuals are also allowed to repatriate any earnings, provided that they work for a foreign business.

Foreign Currency

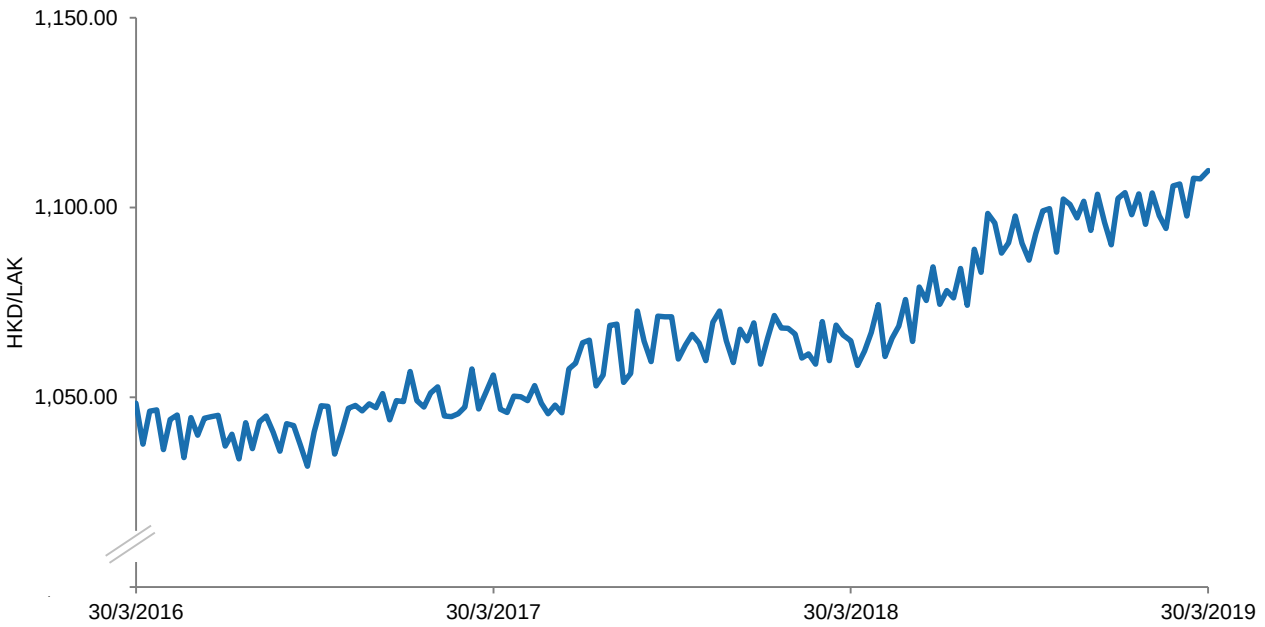
The use of foreign currency is common in Laos. Even though LAK is officially required to be used for transactions in Laos, in practice, USD and THB are also common foreign currencies used in everyday transactions. RMB is also commonly used in the northern parts of Laos. Foreign currency is commonly used by businesses that operate or deal internationally, as well as in private transactions involving imported goods.

Foreign currencies used in transactions must be deposited into commercial bank accounts (domestic or foreign) in Laos.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend[10]

Laos' official currency is the Lao Kip (LAK), and has been the official currency since 1952. The kip has gone through a few versions since its first introduction. The current Lao PDR Kip has been used since 1979. The banknotes range from LAK 200 to 100,000 notes. Coins are not currently in circulation in Laos, and have not been in use since the fall of the Soviet Union, due to inflation. The LAK is currently controlled by the Bank of Lao PDR, and the exchange rate between the LAK and USD is currently at around 8,500.

Three-year Exchange Rate Trend for HKD to LAK



Date	HKD/LAK Rate
30/03/2016	1,047.03
30/03/2017	1,056.50
30/03/2018	1,058.69
30/03/2019	1,095.64

D. List of Banks from Foreign Investments[11]

According to the Bank of Lao PDR, there are currently 19 foreign commercial bank branches in Laos.

Foreign Commercial Bank Branches in Laos

#	Names of Foreign Commercial Bank Branches
1	Australia and New Zealand Banking Group Limited, Lao Branch
2	Bangkok Bank PCL Vientiane Branch
3	Bangkok Bank PCL, Pakse Branch
4	Bank of Ayudhya PCL., Savannakhet Branch
5	Bank of Ayudhya PCL., Vientiane Branch
6	Bank of China Limited, Vientiane Branch
7	Cathay United Bank - Vientiane Branch
8	CIMB Thai Bank Public Company Limited - Vientiane Branch
9	First Commercial Bank Ltd, Vientiane Branch
10	Industrial and Commercial Bank of China Limited Vientiane Branch
11	Krung Thai Bank Limited Vientiane Branch
12	Malayan Banking Berhad Nongduang Branch
13	Malayan Banking Berhad Lao Branch
14	Military Commercial Joint Stock Bank - Lao Branch
15	Public Bank Berhad
16	Public Bank, Pakse Branch
17	Public Berhad Bank Ltd, Savannakhet Branch
18	Siam Commerce Bank Ltd Vientiane Branch
19	TMB Bank Public Company Limited

Source:

[1] *Laos Tax Profile, KPMG, Aug 2018*

[2] *Laos Highlights 2019, Deloitte, May 2019*

[3] *Comprehensive Double Taxation Agreements concluded, Inland Revenue Department*

[4] *A guide to VAT/GST in Asia Pacific 2019, PricewaterhouseCoopers, May 2019*

[5] *Value-added Tax Law, Tax Department*

[6] *Law on Investment Promotion, National Assembly, Nov 2016*

[7] *Instruction on Implementation of Decree Law on Management of Foreign Currency and Precious Metals, Bank of the Lao PDR*

[8] *Foreign Exchange Controls – Laos, JLL*

[9] *Laos – Foreign Exchange Controls, Export.gov, Jul 2019*

[10] *Bloomberg*

[11] *Banks in Laos, Bank of the Lao PDR*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

In Laos, the Labour Law provides guidelines on matters such as maximum working hours, minimum wages, and employees' welfare protection.

Foreign employment is subject to limitations in the country. Apart from case-by-case exceptions, foreign workers are only permitted to work for five years in Laos, with permissions renewed annually.

Foreign workers are required to obtain a work permit and a visa for legal employment in Laos, which are approved by the relevant government departments on a discretionary basis.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment[1,2,3]

A. Contracts and Protection Towards Employees

The Labour Law, among other related laws, governs the labour employment in Laos. It was enacted in 2013 to repeal the 2006 version. These laws apply to all employers and employees, whether or not they are registered, foreign employees working in Laos, or Lao employees working for foreign organisations.

Minimum Legal Working Age

The minimum employment age is 14. Nevertheless, children of 12 years old or above can be employed for light work. The positive list of light work is provided by the Department of Labour and Social Welfare.

Children under 18 years of age are prohibited from working overtime. They are not allowed to perform work which is "unsafe, dangerous to the health of the body, psychology or mind". The negative list of hazardous work is provided by the Department of Labour and Social Welfare.

Labour Contract

The Labour Law governs the agreement between employers and employees. An employment contract, either oral or written, is concluded for all categories of employment arrangements recognised by the labour law. If both parties are legal entities or organisations, the contract must be in written form. Otherwise, if it is between two individuals, the contract can be verbal.

In Laos, there are two main types of contracts: fixed-term contracts or indefinite-term employment contracts.

Termination of Employment

Employment termination clauses vary according to the type of contract:

- Indefinite-term employment contracts: either party may cancel the contract at any time. Parties are required to give at least 30-day notice (for physical labour) or 45-day notice (for mental labour).
- Fixed-term employment contracts: can be terminated upon mutual agreement between the two parties or if one party violates the contract. Usually, the violating party must compensate for any damages caused.

Some of the main termination scenarios where employers have to compensate employees are:

- If an employee shows a lack of specialised skills or if his health no longer permits him to stay in his position, an employer must reallocate him to a more suitable position. The employer is allowed to terminate the contract if the employee is still unable to work.
- An employer can reduce the number of employees if he considers it to be necessary for the improvement of work after consulting the relevant labour union and reporting to the Labour Administration Agency.
- An employee is allowed to terminate the contract and receive compensation if he has raised his dissatisfaction with his employer multiple times regarding issues such as contract terms, workplace relocation, or any form of molestation or harassment.

B. Minimum Wage Level

Laos monthly minimum wage has been raised from LAK 900,000 to LAK 1.1 million (around USD 126) in May 2018. This increase applies to all businesses (including manufacturing) operating in Laos. Previously the monthly minimum wage was raised to LAK 626,000 (from LAK 348,000) in 2012, and to LAK 900,00 in 2015.

The minimum wage rate is therefore regularly updated by the government.

C. Maximum Working Hours and Days

In Laos, the maximum number of working hours is eight hours per day, or 48 hours per week. Special dispositions apply to hazardous work: hours of work must not exceed six hours per day or 36 hours per week. By law, employees must be given at least one day of rest per week, or four days per month.

Overtime

Employers should obtain the consent of the relevant unions or of the majority of employees prior to requesting employees to work overtime if necessary. Overtime must not exceed three hours per day or 45 hours per month. For overtime work on a working day before 10 pm, employees shall receive 150% of their normal hourly wages and 200% after 10 pm.

For details on overtime pay calculation, please refer to the official Lao Labour Law document (www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=96369).

D. Mandatory Welfare

National Social Security Fund

The Ministry of Labour and Social Welfare published guidelines on the implementation of the Law on Social Security. The National Social Security Fund is the pooled funds provided by the government, employers, and employees to finance social security benefits. Benefits cover the following areas: healthcare, childbirth, abortion, employment injury, loss-of-work, pension, and death. For the exhaustive list, please refer to the Law on Social Security.

Employees must be insured and are required to contribute to the National Social Security Fund in order to receive the benefits as stated in the Law on Social Security. The government and employers are also required to make payments to the Fund for workers' social benefits. Employers of work units are required to contribute 6% of the monthly wages of each worker per month, whereas the employees themselves shall pay 5.5%. Self-employed persons should pay 9% of the minimum wage or the maximum insured monthly salary ceiling.

Other Benefits and Rights

In addition to these provisions, workers in Laos are entitled to various rights, as described below.

- Annual leave: employees who have worked continuously for one full year are entitled to at least 15 days of annual leave. Employers working in hazardous conditions are entitled to 18 days per year.
- Maternity leave benefits: full pay during maternity leave of at least 105 days, with at least 42 days taken after giving birth. In case of a miscarriage, the female employee is entitled to paid leave for a certain period determined by a physician.
- Personal leave: for marriages, births or funerals, employees are entitled to personal leaves while maintaining the same wage.
- Sick leave: employees are entitled to not more than 30 days per year.

E. Labour Law Governing Authorities, Enforcements, and Restrictions

Governing Authorities

The Ministry of Labour and Social Welfare is the official government body responsible for overseeing the labour administration and protection, social policy, and the promotion of employment in Laos.

Labour Law Enforcements

The Labour Administration Agency and its appointed labour inspectors are responsible for overseeing compliance with general working conditions, occupation safety and health, labour welfare, and labour relations. The Administration is also in charge of implementing policies and strategic plans; planning projects for scientific research on labour affairs; and special inspection in accordance with orders from a higher authorities.

Employment Restrictions

Limitation on Foreign Employment

Foreign workers in Laos are permitted to remain in the country for no more than 12 months. Multiple one-year extensions can be requested, however, the total working period must not exceed five years. Requests for exemptions for foreigners at management level and experts are considered on a case-by-case basis.

Prohibition against Discrimination

Employers are prohibited from terminating employment contracts or obstructing employment due to the employee's marital status, gender, or health status. Direct or indirect discrimination is prohibited, including all biased actions to hinder or limit promotion opportunities, or undermine confidence of employees.

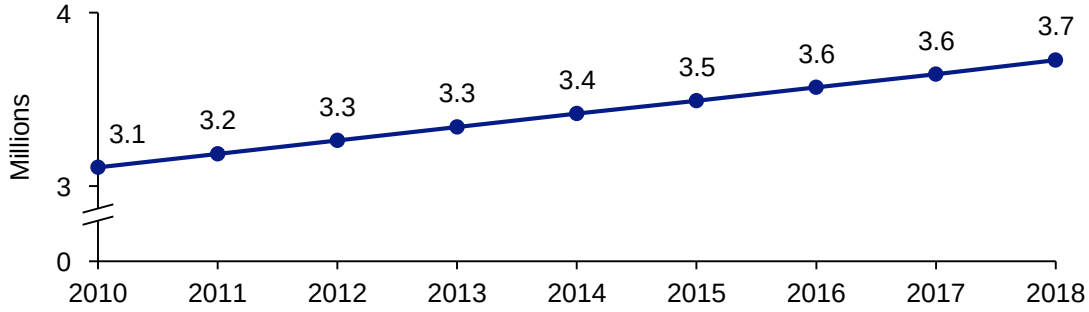
Other Prohibitions

Employers are not allowed to deploy employees for two shifts on the same day, conceal accidents or labour disputes, and/or relocate foreign labour to locations not subject to their labour unit without authorisation from the Labour Administration Agency.

II. Local Labour Supply Market Condition

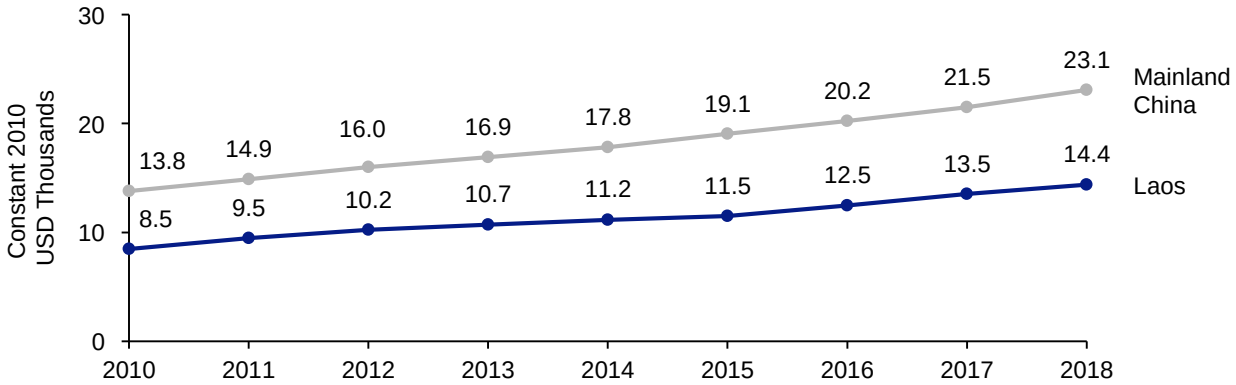
A. Supply Situation for Total Labour Force[4,5,6]

Laos' Total Labour Force (2010 – 2018)



The estimated total labour force was around 3.7 million in 2018. The supply of labour for the past nine years has shown an overall upward trend. Approximately 73% of the labour force was engaged in the agriculture sector, 21% in the service industry and 6% in manufacturing industry.

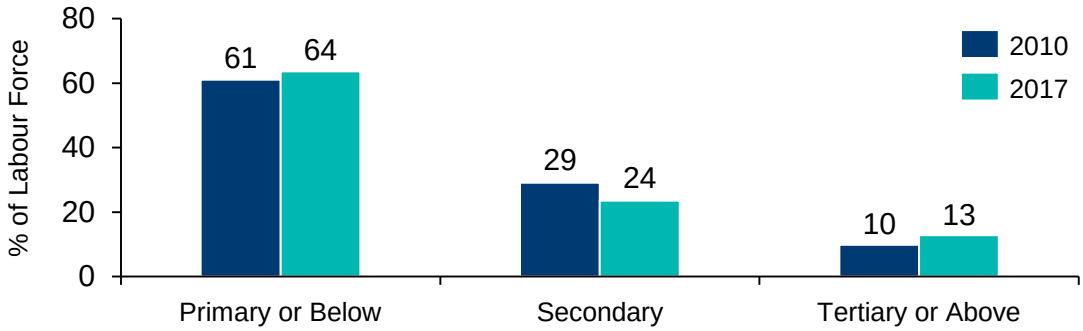
Laos' Labour Productivity (GDP per worker) (2010 – 2018)



Laos' labour productivity is around 38% lower than Mainland China's in 2018. Nevertheless, Laos' productivity is growing at a similar rate (around 6.8%) than that of Mainland China (around 6.7%) between 2010-2018. Laos' productivity is ranked sixth among the 10 ASEAN countries.

B. Supply on Educated Employees

Laos' Estimated Labour Force with Higher Education (2010, 2017)



The Lao government has conducted two Labour Force Surveys, one in 2010, and another more recently in 2017. Approximately 37% of the labour force, or around 1.4 million people in Laos attained higher education (defined as a level of education beyond secondary school) in 2017, a drop of 2% compared to the labour force in 2010.

C. Government Support on Employee Training

Section 2 of the Labour Law outlines the labour skills development system which aims to increase the competitiveness of Laos' workforce. The Ministry of Labour and Social Welfare is in charge of labour skills competition which promotes and improves the labour standards in the country.

Employers are required to provide trainings to their employees to improve production quality and competitiveness. Annually, 1% of the annual salary reserve fund of employees should be used to finance labour skills trainings.

D. Labour Unionisation and Related Government Regulations

Protection of Rights of Unionisation

Trade unions can be established within labour units, at the central, provincial, municipal or district level. Trade unions are responsible for educating and encouraging employees to comply with laws and other labour-related obligations; contributing to the revisions of labour-related laws; participating in collective bargaining; and encouraging employees to become members.

Labour units with 10 or more employees must have a trade union or employee representative; with 50 or more employees requiring two representatives; and one extra representative for every further 100 employees.

Labour Dispute Settlement

Section 13 of the Labour Law provides methods for the resolution of labour disputes. These include compromises, administrative solutions, resolutions by the committee for labour dispute resolution, court rulings, and resolutions consistent with international protocols. For details, please refer to the Labour Law.

Employees in a labour dispute must still continue to work as per usual and the employer must provide them with access to the workplace. Except in extreme cases where a tripartite organisation permits work stoppage in order to minimise damages or risks.

E. Work Permits and Visas[7]

Work Permits

There are two main permits for foreigners in Laos: the Work Permit and the Stay Permit (SP). The employer must sponsor and file the application for the foreign applicant worker within one month of receiving authorisation from the Lao Ministry of Foreign Affairs (MFA). Documents that are required for the application include: an approval to import foreign workers; a copy of the applicant's passport and Labour Visa (see below); a copy of the employer's registration certificate; and a proposal form from the employer's company. Work Permits are issued by the Ministry of Labour and Social Welfare, while SPs are issued by the Immigration Department of the Ministry of Public Security.

Foreign workers in Laos must be over 20 years old, possess the skills required for his/her position, be in good health, and fulfil "other conditions as deemed necessary" as stated in the Labour Law.

Visas

- Labour Visa (LA-B2 visa) : the most common visa for foreigners living and working in Laos. The LA-B2 visa must be applied for before entering or arriving in Laos, and cannot be applied for while in Laos. The applicant needs to have secured employment in Laos with a locally-licensed entity, and obtain a sponsorship letter from the employer. The employer will need to seek approval from the MFA and present a financial guarantee for the foreign applicant. The LA-B2 visa can be valid for three, six, or 12 months.
- Investor Visa (NI-B2 visa): for foreigners investing in a locally-registered enterprise. Investors, stockholders, technical officers, and company directors can apply for this visa at the Ministry of Planning and Investment. Applicants will need to provide an investment license or enterprise registration certificate as proof when applying for the NI-B2 visa. Investors that have both the NI-B2 visa and an SP can apply for a multiple entry Investor Visa, which is valid for three, six, or 12 months.

Travelling to Laos

Hong Kong citizens are permitted to stay in Laos for 30 days visa-free.

F. Religious and Cultural Concerns or Considerations[8,9]

Religion

Freedom of religion is protected by the Constitution but the government supervises religious affairs. The largest religion in Laos is Buddhism, practised by 65% of the population. Christianity is practiced by approximately 2% of the population. Traditional indigenous religions and other religions make up the remainder.

Culture

Business relations are heavily influenced by personal relationships, and employers often hire their family members or close friends. Hierarchy also plays a significant part in the running of a business, and therefore the decision-making process can sometimes be inefficient.

Source:

[1] *Labour Law, Lao PDR, 2013*

[2] *Laos Increases Minimum Monthly Wage for the Third Time in Eight Years, ASEAN Briefing, 2018*

[3] *Law on Social Security, Lao PDR, 2013*

[4] *Total Labour Force (Laos), The World Bank*

[5] *Industry (including construction), value added per worker (constant 2010 USD), The World Bank*

[6] *Lao PDR Labour Force Survey 2017, Ministry of Planning and Investment and Lao Statistics Bureau*

[7] *The Guide to Employment Permits for Foreign Workers in Laos, ASEAN Briefing, 2017*

[8] *The Religious Beliefs in Laos, World Atlas, 2018*

[9] *Lao Culture, Cultural Atlas, 2019*

5. Research and Development Environment

Executive Summary

Laos is trying to develop an entire Science Technology and Innovation (STI) ecosystem by implementing the Science and Technology Development Strategy (STDS). The country's objective is to build infrastructure, train the workforce, promote knowledge transfer and change the management structure in order to enhance Laos' STI capabilities and level up with the neighbouring countries.

Despite efforts to foster science and technology (S&T) collaboration with other countries, and establish new intellectual property laws, the country's capabilities are still very limited. Laos lacks specialised infrastructure, universities, and human resources. The private sector also doesn't have an impact on the regional scene. In addition, there is a lack of appropriate funding for domestic and foreign investors to facilitate their efficient development.

5. Research and Development Environment

I. The Science and Technology (S&T) in Laos

Over the 2016-2020 period, Laos is implementing the 8th National Socio-Economic Development Plan (NSEDP). The main objective is to implement strategies paving the way to meet the Vision2030: transforming Laos from one of the least developed countries to an upper-middle income country. In the NSDEP, S&T has been identified as one of the eight main implementing measures to realise the vision.

A. Policy and Trends in S&T

The Science and Technology Development Strategy 2013-2020 (STDS)[1]

With this strategy published by the Ministry of Science and Technology (MOST), Laos aims to develop an efficient science, technology and innovation (STI) ecosystem, which is able to drive the country's socioeconomic development and promote a sustainable national growth. The main target for 2030 is for Laos' STI capabilities to reach that of the neighbouring countries.

According to the government, STI is a key lever to be used in order to meet Laos' needs in terms of industrialisation, modernisation and sustainable development. The country is therefore focusing on developing a comprehensive STI ecosystem by:

- Establishing scientific and social science education programmes to train a skilled workforce;
- Building the necessary infrastructure for the development of S&T activities;
- Promoting knowledge transfer domestically and internationally; and
- Modernising the STI management system.

In order to evaluate the progress of the STDS' implementation, the MOST has set intermediate and long-term targets. For 2020, the objectives are as follows:

- Research and development (R&D) expenditures should represent between 0.45% and 1% of the national GDP;
- The private sector should account for 15% of total S&T spending in the country;
- Reach a researcher ratio of between seven and eleven researchers per 10,000 people; and
- The value-added output of STI activities should account for 8% of the national GDP.

Outlook[2]

Despite the government's efforts, Laos' S&T capabilities are minimal. According to the Global Competitiveness Report 2018, the country ranked 117th out of 140 countries in the "Innovation Capability" category, behind every other ASEAN country (other than Myanmar, which was not ranked in this report). The country's lowest scores were in the categories of trademark applications (124th), scientific publications (115th) and quality of research institutions (112th). In addition, Laos was not even ranked in the R&D expenditure criteria as the percentage of the country's GDP spent on R&D activities is unknown. However, Laos had average rankings in buyer sophistication (52nd), and multi-stakeholder collaboration (52nd).

B. S&T Related Organisations[1]

The Ministry of Science and Technology (MOST)

The MOST is in charge of all the STI-related activities in the country including intellectual property (IP) standards and measurements. Its main objective is to develop a strong STI ecosystem which should enable the country to achieve a sustainable and inclusive growth, and fight against poverty. The main missions of the MOST are:

- Drafting and implementing S&T supporting policies, plans, programmes and laws;
- Supporting companies with their R&D activities with tests, validations, certifications or IP related services and increase the R&D applications;
- Fostering the access to S&T education by encouraging S&T trainings, developing trainings materials and supporting academics; and
- Investigating the development of STI infrastructure and coordinating with all stakeholders.

In order to carry out its missions, the MOST relies on its Departments and Institutes, which all have very specific goals, such as:

- Department of Planning and Cooperation: acts as a liaison with the Ministry of Planning, and also researches, compiles, and formulates short and long-term programmes and strategies;
- Department of Science: mainly focuses on nuclear security in the country and coordinates with regional authorities to monitor and mange scientific activities;
- Department of Technology and Innovation: interacts with research institutes, educational institutes, and the private sector in order to promote knowledge transfer; and
- Institute of Management Science and Technology: promotes and upskills S&T staff (i.e researchers and technicians) in order to enhance the effectiveness of S&T activities in the country.

In addition, the MOST manages three specialised research institutions which mostly focus on:


Biotechnology


Ecology


New Materials


Renewable Energy

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[3]

In Laos, there are only a few R&D centres. Most of them are managed by different government ministries. Below is an overview of the country's major R&D centres.

Government R&D Institutes (Part 1/2)

Ministry	Institute	R&D
Ministry of Science and Technology	Institute of Computer and Electronics Technology	Focused on electronics technologies: • Software, hardware, internet of things, artificial intelligence, cyber security, etc.

Government R&D Institutes (Part 2/2)

Ministry	Institute	R&D
Ministry of Science and Technology	Institute of Ecology and Biotechnology	Focused on ecological and biological technologies: • Chemical, genetic, biomedical, and agricultural technologies, etc.
	Renewable Energy and Materials Institute	Renewable Energy Research Centre: • Alternative energies, bio-energies, and mechanical engineering, etc.
Ministry of Agriculture and Forestry	National Agriculture and Forestry Research Institute	• Carries out applied research in agriculture, forestry and fisheries; • Assists in formulating strategies related to these topics; and • Develops methods, tools, and information packages.
Ministry of Health	Pasteur Institute of Laos	Comprised of 4 laboratories focusing on research in: • Emerging viral, infectious, parasitic, and vector-borne diseases.

B. University-based R&D Institutes[4,5]

None of Laos' universities are ranked in the 2019 QS Asia University Rankings. The ranking comprises around 500 institutes that are evaluated based on criteria such as academic reputation and citation per faculty. Consequently, the few R&D activities carried out in Laos' universities make nearly no impact on the regional or international scene.

The research focus of the two main universities in the country is provided in the table below.

University	Research Fields in the University
National University of Laos	The latest official scientific articles published were related to: • Information and Communications Technology; • Mathematics; and • Renewable Energy (hydropower, wind and solar power). In addition, the institution published articles related to economics and international relations.
Souphanouvong University	The university conducts academic research aimed at improving the socio-economic development of the country. It also cooperates with local and international agencies to foster its research capabilities.

C. Private Business Firms (Research Centres)[6,7,8]

Private sector participation in the Laos' R&D activities is still limited. However, to offset the lack of private initiatives, the government is trying to create strong S&T-related links with its neighbouring countries. Below are three examples of Laos's cooperation with other countries:

- Laos and Vietnam: the two countries cooperated on a project called "Strengthening Capacity of Scientific Research and Technology Deployment for the Laos National Academy of Science (LNAS)".Vietnam is bound to invest USD 2.8 million in order to help the country create the LNAS, invest in scientific equipment and train a sufficient competent workforce;
- Laos and Thailand: the two countries created the Laos-Thai Committee of Cooperation on Science, Technology and Innovation. This committee aims to identify possible co-projects to implement in fields such as water management, bio-energy, food security and safety or health;
- Laos and Mainland China: the two countries signed an agreement to set up a joint S&T commission which will focus on fostering international cooperation in the identified priority fields. A few examples of actions are: sending scientists and researchers to Laos for knowledge transfer purposes, organising seminars and technical trainings, or carrying out joint research projects.

D. Infrastructure Availability for Foreign Investments[9,10]

There is no specific R&D infrastructure available for foreign investments highlighted by the various ministries. However, Laos is keen on attracting foreign investors in order to meet the STDS objective (they should account for 15% of the country's total R&D spending by 2020). Therefore, the country is leveraging its relationship with neighbouring countries to create business opportunities for private investors. For example, the Laos-China Park of Science & Technology in Modern Agriculture, which focuses on biotechnologies was established in 2013 with the help of the Shenzhen BGI Genomics. In addition in 2018, Mainland China's Yunnan Normal University cooperated with the MOST to create a renewable energy lab. Therefore, it seems that foreign investors can cooperate with Lao government to create their own S&T infrastructure.

III. Priority Areas in Laos (major exports)[11,12]

Laos' export and economy strongly rely on natural resources. In 2018, Laos' top five exports were:

Top Five Exports	% of Total Exports (in 2018)
Mineral Fuels (including oil)	25.7%
Electrical Machinery (equipment and parts)	13.7%
Ores, Slag and Ash	11.3%
Copper and Related Products	9.0%
Other Commodities	7.2%

According to the latest data available, Laos managed to upgrade its exports and produce hi-tech products. In 2018, hi-tech products (e.g. products with high R&D intensity, such as in aerospace, computers or pharmaceuticals), represented around 34% of total manufactured exports, which is higher than Vietnam or Malaysia.

IV. Funding for S&T R&D[13,14,15]

The lack of governmental funding directed at S&T or R&D activities is one of the main issues in Laos. Currently, most of the research activities are funded by foreign investors which focus on topics such as agriculture, health or the environment. Therefore, the local Laos industry does not receive sufficient R&D funding to upgrade its production and contribute to the country's competitiveness increase. Below are two examples of foreign institutions funding R&D activities:

- The European Union collaborates with the National Institute of Public Health and the University of Health Sciences in Laos to fund the LEARN programme. It aims to to enhance local public health institutes capabilities. However, the funding is very minimal as the maximum grant for each project is around USD 45,000.
- The Canadian International Development Research Centre (IDRC) has been funding research projects in the country for more than 30 years. Since 1987, the IDRC funded 53 projects related to poverty alleviation, sustainable use of natural resources or Internet access development, worth a total amount of USD 10.2 million.

Foreign manufacturing investors looking to expand their footprint to Laos might also seek funding from the MOST. Through its multiple agencies (e.g. Department of Technology and Innovation, Institute of Management Science and Technology), the ministry supports R&D and S&T activities in the country. However, the MOST's total budget or its total amount dedicated to funding activities is unknown.

V. Human Resources for S&T[16,17]

Laos's S&T labour force is very scarce. According to the latest data available which is from 2002, the ratio of researchers in R&D was 16 per 1 million people. At a country level, this adds up to just over 100 full time researchers only. Laos is not ranked in the INSEAD's 2019 Global Innovation Index.

However, in line with the STDS' goal to train a skilled workforce, the government opened the country's first official S&T human resources training centre in Vientiane in 2018. The centre, which will train around 600 and 800 "scientific managers" per year, cost around USD 4.2 million and was mostly financed by the Vietnamese government.

VI. Support in Testing and Certification[18]

In Laos, support in testing and verification can be obtained from the MOST, and more specifically, the Standardisation and Measurement Department (SMD) which operates under it. Indeed, one of the missions of the MOST is to support companies with their R&D activities (e.g. tests, validations, certifications or IP related services) and the related services provided by the SMD include, industrial testing support, measuring equipment's calibration, products quality verification, prototypes or documentation verification etc. In addition, the SMD participates in international studies on measurements standards and their implementation.

VII. Intellectual Property Policy[19,20]

Laos is not ranked in the 2019 IP Index published by the Global Innovation Policy Center (GIPC), which compares IP protection frameworks in 50 different countries.

In May 2018, the country published the new Law on Intellectual Property ("New IP Law"), which replaced the IP Law enacted in 2011. This new framework, which covers trademarks, industrial designs, patents and copyrights, is a way for the government to support the country's participation in international trade by attracting and protecting domestic and foreign investors.

Trademarks

The scope of registrable trademarks has been extended to include 3D and animated images. The new laws introduced an opposition procedure which allows third party to contest a trademark within 60 days preceding the publication (previously, the cancellation procedure could span over a few years). In addition, trademarks are now protected for 10 years starting from filing date (against the registration date before). The 10-year protection periods are renewable.

Industrial Designs

No major updates except for the setting of an opposition procedure. Designs are protected for an initial period of five years (from filing date) and can be renewed every five years up to a maximum of 15 years.

Patents

The new law states that patents which could pose a threat (e.g. to public health or the environment), will now be automatically rejected. In addition, third parties will also have the opportunity to oppose the registration of a patent within 90 days preceding the registration. Patents are protected for 20 years.

Copyright

No major framework updates in the New IP Law. Copyright protection can vary from 25 to 50 years according to the nature of the work.

Source:

[1] *Ministry of Science and Technology Homepage*

[2] *The Global Competitiveness Report 2018, World Economic Forum*

[3] *Related Ministries and Institutes homepages*

[4] *QS World University Rankings, QS Asia University Rankings 2019*

[5] *National University of Laos homepage*

[6] *Laos, Vietnam strengthen science, technology cooperation, Asia News Network, 2018*

[7] *Laos, Thailand extend science and technology cooperation, Asia News Network, 2017*

[8] *China-Laos Science and Technology Cooperation Agreement Signed in Vientiane, MOST China*

[9] *BGI Laos homepage*

[10] *China, Laos inaugurate joint lab for renewable energy study, XinhuaNet, 2018*

[11] *Trade Map, International Trade Centre*

[12] *High-technology exports, The World Bank*

[13] *Mapping Research and Innovation in Laos, UNESCO, 2018*

[14] *IDRC Laos homepage*

[15] *Open Call for Research Grants, Lao Tropical and Public Health Institute*

[16] *Researchers in R&D (per million people), The World Bank*

[17] *Vietnamese, Lao PMs attend training centre's inaugural ceremony, Customs News, 2018*

[18] *Standardization and Measurement Department homepage*

[19] *Intellectual Property Protection in Laos, HKTDC, 2018*

[20] *New Law Reforms Lao Intellectual Property Regime, Tilleke & Gibbins, 2018*

6. Supply Chain Environment

Executive Summary

Laos' economy is still heavily dependent on the agricultural sector. Most of its population works in agriculture and related industries, with many suffering in poverty. Through Vision2030, the Lao government aims to transform Laos from a low-income country to a middle-income one, by developing industries such as agriculture and energy.

As the only landlocked nation in Southeast Asia, Laos has limited trade routes passing through the country. Poor infrastructure and logistics facilities have only further exacerbated this problem. However, the Lao government, with assistance from foreign countries such as Mainland China, aims to transform the country from "landlocked" to "land-linked", and become a major transportation channel in the region.

6. Supply Chain Environment

I. Industry Profiles in Laos

Breakdown of 2018's Top 10 Exports[1,2,3]

Laos' major sectors by gross domestic product (GDP) in 2017 were services (45.9%), industry (33.2%) and agriculture (20.9%).

In Laos, the service sector mainly includes tourism, distribution, telecommunications, and finance. The major industries are mining and textiles. The primary products dominating the agricultural industry are rice, coffee, rubber, and corn.

In 2018, Laos' total global shipments amounted to USD 5.6 billion of which over 80% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Mineral fuels including oil	USD 1,428 million	25.7%
2. Electrical machinery, equipment, and parts	USD 761 million	13.7%
3. Ores, slag, and ash	USD 632 million	11.3%
4. Copper and related products	USD 502 million	9.0%
5. Other commodities	USD 400 million	7.2%
6. Wood and related products	USD 266 million	4.8%
7. Apparel and clothing, not knitted or crocheted	USD 182 million	3.3%
8. Rubber and related products	USD 170 million	3.1%
9. Wood pulp and recovered paper	USD 128 million	2.3%
10. Fertilisers	USD 126 million	2.3%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to the following link: www.censtatd.gov.hk/trader/hscode/index.jsp

Agriculture is one of the main industries in Laos. In 2017, the country was the second largest exporter of rough wood in Asia, the sixth largest exporter of rubber in Asia, and the sixth largest exporter of coffee in Asia.

Laos is also one of the countries richest in natural minerals in Asia. As such, mining is a major industry in the country. The country was the sixth largest exporter of copper ore in Asia in 2017. It also exports gold, iron, zinc, and tin.

II. The Key Supported Industries in Laos[4,5,6]

The Vision2030 plan prepared by the Lao government aims to turn Laos from a low-income economy into a middle-income one. It includes extensive reforms and improvements in many aspects of the country, covering poverty, hunger, healthcare and education, water and energy, and infrastructure, among others. The plan also specifies a list of industries which are strategically important for Laos' development. Two of the main industries in Vision2030 are the agriculture and energy sectors.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations

Agriculture

Agriculture is a major industry in Laos. In 2017, agriculture accounted for 21% of Laos' GDP with 73% of the country's total labour force being involved in the agricultural, forestry, or fishery industries. However, due to low agricultural productivity, Laos is not a major player in the global market in any of its main agricultural crops (e.g. rice, coffee, rubber, and corn).

This low agricultural productivity can be explained by four main factors: low quality seeds, limited technical skills, limited infrastructure, and limited resistance to climate variations. In particular, the country is especially vulnerable to floods and droughts. For example, the many rivers of the Mekong River system in Laos can cause floods during the raining season. In 2018 alone, around 300,000 tonnes of rice were lost due to flooding in the wet season, with about 101,000 hectares (ha) planted area of rice being affected. In the future, improved irrigation systems and infrastructure will help the country minimise the impact of climate change on its agricultural sector.

Energy

The energy industry is critical for the future success of Laos' economy. Not only is the country rich in fossil fuels such as oil and gas, but the Mekong River system running in the country also provides Laos with an extensive source of hydropower. According to the Ministry of Energy and Mines, there are 61 operational hydropower plants in Laos, and the government is aiming to have a total of 100 plants by 2020. This additional dams are expected to help the country double its 2018 power generation. Using this sustainable source of energy, Laos aims to be the regional power source by 2025, and sell around 15,000 megawatt of electricity annually to neighbouring Southeast Asian nations.

However, hydropower causes some political and environmental issues. All the dams across the Mekong River and its tributaries could negatively affect the flora and fauna downriver, and disrupt the ecosystems. Additionally, countries such as Cambodia and Vietnam who are located downstream from the dams will also be affected, as they rely on the Mekong River for fishing, agriculture or transport.

Other than the ecological impacts, some recent events are raising concerns about dam safety. In July 2018, a dam collapse caused 40 death and hundreds missing, and led to the displacement of over 6,000 people living in the surrounding region.

III. Key Raw Materials Sourcing Platforms/Channels[7]

The Department of Import and Exports (DIMEX) and the Lao National Chamber of Commerce and Industry (LNCCI) jointly created Plaosme.com. The website aims to support Laos' small and medium-sized enterprises (SMEs) in their e-commerce and exports activities, both within ASEAN and around the world. Plaosme.com also helps businesses connect with suppliers of raw materials across multiple industries.

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered

The two main issues facing Laos are the high logistics costs and the unknown potential of the country's natural resources:

- The country's poor transportation infrastructure induce high transportation time and logistics costs. Due to the development gap between Laos and its neighbouring countries, many trucks returning to Laos are not fully loaded, or even empty. This leads to even higher logistics costs.
- Laos has many unexplored and unexploited natural resources, ranging from undeveloped rivers for hydropower and fishing, to land for mineral resources. However, the government has not conducted any basic surveys regarding the country's mineral resources. Therefore, there is no information on the quantities of precious minerals and metals that can be used in Laos, leading to many resources remaining untapped.

Through Vision2030, the Lao government is aiming to improve the above-mentioned issues, among others. In 2018, the government found that both the control of natural resources and the development of infrastructure in Laos have seen large improvements since the start of Vision2030 in 2016.

According to a 2019 report by the World Bank, Laos is ranked 154th in the world in Ease of Doing Business, and is ranked ninth out of the ASEAN countries (Hong Kong is ranked fourth in the world in the same report). Laos ranks comparatively well in getting credit (73rd), trading across borders (76th), and registering property (85th), but performs poorly in enforcing contracts (162nd) and resolving insolvency (168th).

B. Efficiency of Customs and Clearance Process[8,9]

Laos applies two systems of tariffs classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Laos and the other ASEAN countries, whilst the 6-digit Harmonised Commodity Description & Coding System (commonly known as the HS Code) applies for trade with non-ASEAN countries. All imported and exported goods into/from the country must be categorised using the HS Code.

All the goods imported are liable for customs duty, and value added tax. Certain goods will also be subject to excise tax. Any goods arriving from other ASEAN countries may benefit from preferential rates according to the ASEAN Free Trade Agreement. Goods exported generally are not subject to export duties. However, certain items such as precious stones, gas, oil, and timber, are subject to export duties.

All businesses wishing to import or export goods must register with the Department of Enterprise Registration and Management under the Ministry of Industry and Commerce. Certain goods will also require an import/export license, which can be acquired from the DIMEX. DIMEX separates goods into three categories: 1) not requiring license, 2) requiring automatic license, and 3) requiring non-automatic license. Goods in the automatic license category only need to satisfy basic statutory requirements, but goods in the non-automatic license category will need approval from DIMEX for import/export, and may also require approval from certain ministries. For a list of goods requiring specific permits and licenses, please refer to the official website of the Lao PDR Trade Portal (www.laotradeportal.gov.la/index.php?r=site/index)

Laos uses the Automated System on Customs Data (ASYCUDA) at 11 border check points, including at Wattay International Airport.

Customs Clearance Process[10]

Customs Declaration → **Assessing Goods** → **Payment of Duties and Taxes** → **Inspection and Release of Cargo**

Step 1:

Goods imported or exported are subject to customs declaration. A Customs Declaration (Form ACDD) must be filled in and submitted to the Customs officer at the border check point along with any other required documents.

Step 2:

The Customs officer will categorise goods into one of four control channels:

- Green: No documentary check necessary
- Yellow: Document inspection necessary
- Red: Document and physical inspection necessary
- Blue: to be considered for post-clearance audit

Step 3:

All duties/custom taxes imposed on imported goods will need to be computed and paid in advance before the goods can be released. The payment can be made at the bank office at the border check point, or in cash.

Step 4:

After payment of duties and approval from the Customs officers, Customs will issue a Release Order clearing the cargo.

The following table shows the supplementary documents needed for customs declaration:

	Import and Export Goods
1	Invoice
2	Packing list
3	Tax registration
4	Business license
5	Bill of lading/carriers report
6	Import/export customs declaration
7	Import/export license (if necessary)
8	Any other product specific required documents

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[11,12,13,14,15]

Laos has traditionally suffered from being a landlocked country (without access to the sea) as it is cut off from major international trade routes. Poor logistics and transportation infrastructure, as well as economic inequality with neighbouring countries, have further limited trade between Laos and the other countries in the region. The strategy under Vision2030 is to take advantage of the country's position between the major Southeast Asian economies of Vietnam, Thailand, Cambodia, Myanmar, and Mainland China in order to become the regional "land-link" between them.

Airports

Laos has five international airports: Wattay International Airport (VTE) in Vientiane, Luang Prabang International Airport (LPQ), Pakse International Airport (PKZ) in Champasak, Savannakhet International Airport (ZVK), and Attapeu Province International Airport (AOU). Tourism is an important industry in Laos. In 2017, around 3.9 million tourists visited the country. It is estimated that 16% of them came from Mainland China as the country is one of Laos' major sources of tourists.

Seaports

As a landlocked country, Laos does not have any seaports. The main river in Laos is the Mekong River, but rapids, waterfalls, and seasonal variation in the river make navigation difficult. Therefore, the Mekong River is not a major method for freight transport in Laos.

Location of Major Airports

Wattay International Airport

The airport is the main gateway into Laos, and is located 3km outside the city centre of Vientiane, the capital city of Laos. Expansion work ended in 2018, and the airport can now handle around 2.3 million passengers a year. However, current traffic remains well below capacity. The government expects 1.5 million passengers in Vientiane by 2023, an increase from the one million passengers traffic in 2017.

Luang Prabang International Airport

The airport is the second busiest airport in Laos, and mainly acts as a regional hub. It does not support long-haul flights, and mainly provides flights to neighbouring countries such as Mainland China, Thailand, Vietnam, and Cambodia. Even though Luang Prabang is a major tourist destination in Laos, the airport only handled around 500,000 international passengers in 2015. The airport underwent an expansion in 2012 to be able to support jet planes.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Highways

Laos' road network is 60,000 km long, with eight Asian Highways (AHs), totaling 2,816 km, connecting the country with bordering countries. However, only two of the eight AHs have a road bearing capacity of 50 tonnes. As of 2017, only 9,251 km of the country's roads (around 15%) were paved. Despite this, nearly 90% of passengers and 80% of freight use road transport.

The Lao government has invested in developing the country's transportation infrastructure, and around 85% of the rural population now has all-weather road access. In addition, Laos has built "friendship bridges" with two neighbouring countries in order to facilitate trade and transportation across the Mekong River system. There are currently four bridges built with Thailand (and the fifth bridge agreed), and one bridge with Myanmar.

Railways

The rail network in Laos was originally built by the French during the colonial period, but is no longer in use. The only current railway in Laos is the railway from Thailand that stops in the border town of Thanaleng.

Under Mainland China's Belt and Road Initiative (BRI), a USD 7 billion railway line between Kunming in Yunnan Province and the Lao capital of Vientiane is being built. The project is mainly paid for by the Chinese government and loans from Chinese financial institutions. The line has been half completed as of March 2019, and is expected to open for service in December 2021. The railway will eventually extend to Bangkok, then down through Malaysia to Singapore.

B. Key Logistics Hubs[13]

Laos currently has weak logistics infrastructure, and weak domestic logistics capabilities. Improving the logistics infrastructure is a major part of Vision2030, the major policy guiding the country towards becoming a middle-income economy. One of the major goals of Vision2030 is to develop three international logistics parks in Vientiane, Luang Namtha, and Savannakhet, as well as six more regional logistics parks in the regions bordering Vietnam and Thailand. The first of the logistics parks, Vientiane Logistics Park, will be jointly developed by Singapore's Pacific Logistics Group and Laos' Sitthi Logistics, with the Hong Kong logistics company Kerry Logistics also constructing a dry port in the park.

Through the development of logistics and transportation infrastructure, the Lao government aims to turn the main country's weakness (being landlocked) into a strength. Laos should become the connecting regional logistics hub between Mainland China and the surrounding Southeast Asian countries. Laos envisions itself to become the "land-link" or "land-bridge" for the region.

C. Logistics Information Tractability and Transparency[16]

Laos has a poor logistics performance as compared to other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Laos was ranked 82nd out of 160 countries for the overall LPI, a large improvement from the 2016 result (ranked 152nd out of 160). Laos ranked eighth amongst the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Laos ranked relatively well in Customs (74th) and Tracking and tracing (69th), but performed poorly in Infrastructure (91st) and Timeliness (117th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Laos, Central Intelligence Agency*

[3] *Cambodia, Observatory of Economic Complexity*

[4] *Voluntary National Review on the Implementation of the 2030 Agenda for Sustainable Development, Government of the Lao People's Democratic Republic, Jul 2018*

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[14] *Thailand, Laos sign agreement on 5th friendship bridge across Mekong River, Xinhua, Jun 2019*

[15] *China's US$7 billion railway link to Laos is almost half done, on schedule to begin service in 2021, SCMP, Mar 2019*

[16] *Logistics Performance Index (LPI), The World Bank, 2018*

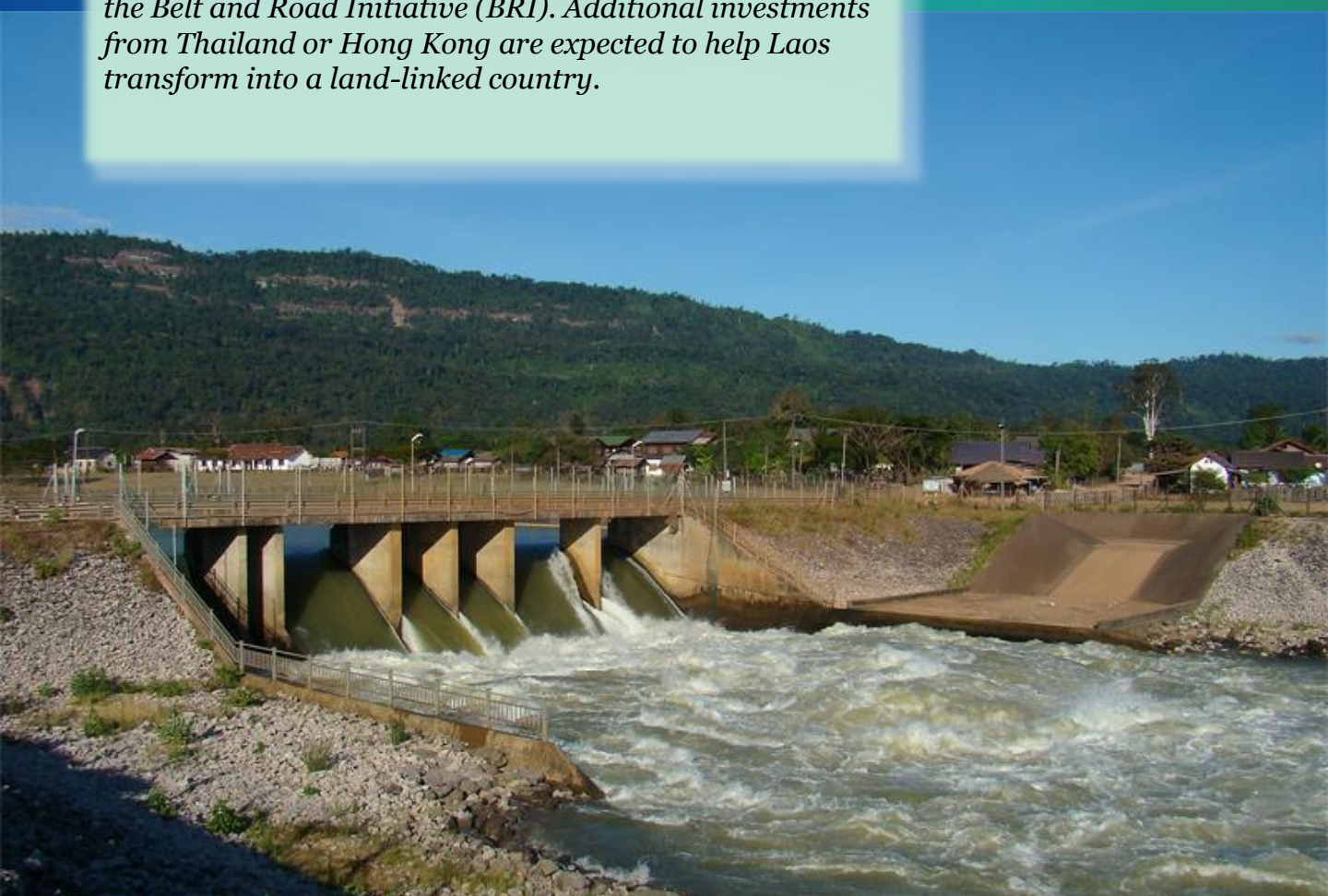
7. Infrastructure

Executive Summary

Laos' infrastructure and industrial estates ecosystem are developing with the assistance of and funding from foreign investors.

There are currently five industrial estates in the country located inside the Special Economic Zones (SEZs). Laos also has two additional SEZs which mainly host and cater to manufacturing companies. The industrial estates and SEZs are mainly concentrated around three strategic locations: Vientiane (Laos' capital), the Thai border, and the Lao border with Mainland China.

Laos is a landlocked country with low quality infrastructure. However, the country's infrastructure pipeline is very healthy as Laos benefits from the heavy investments provided by Mainland China in the context of the Belt and Road Initiative (BRI). Additional investments from Thailand or Hong Kong are expected to help Laos transform into a land-linked country.



7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations[1]

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates

The development of Laos' major industrial estates is linked with the establishment of Special Economic Zones (SEZs) in the country. Generally, these zones are designed to attract local and foreign manufacturing investors, in strategic locations such as in Vientiane, or on the borders with Thailand and Mainland China. To reach this objective, the government jointly developed both SEZs and industrial estates.

Mainland China and Hong Kong companies looking to expand their manufacturing footprint in Laos can choose to establish their operations in five industrial estates, which are located in the following SEZs: Savan-Seno, Vientiane Industrial Trade Area (VITA), Saysetha, Phoukhyo and Pakse-Japan SME (Pakse). These industrial estates were developed by various parties such as the Lao government, Lao private investors or foreign private investors (e.g from Mainland China or Japan).

In addition to the above SEZs with industrial estates, there are six other SEZs in Laos. Two of them (Golden Triangle and Boten Beautiful) host companies engaged in manufacturing activities, whereas the other four only provide distribution facilities or are mainly residential zones.

Support and Incentives

When considering establishing in Laos' industrial estates and/or SEZs, it is important to consider the existing utilities, the transportation infrastructure available, and the incentives provided by the government.

Utilities

The industrial estates are generally equipped with water supply stations, wastewater treatment plants and a reliable electricity supply. In addition, they offer investors access to housing, shopping, education, and leisure facilities.

Transportation

The country's main industrial estates are located near Vientiane (where the most developed transportation infrastructure is available), or near strategic locations such as the Lao-Thai Friendship Bridges (which are roads/bridges connecting the two countries).

Government Incentives

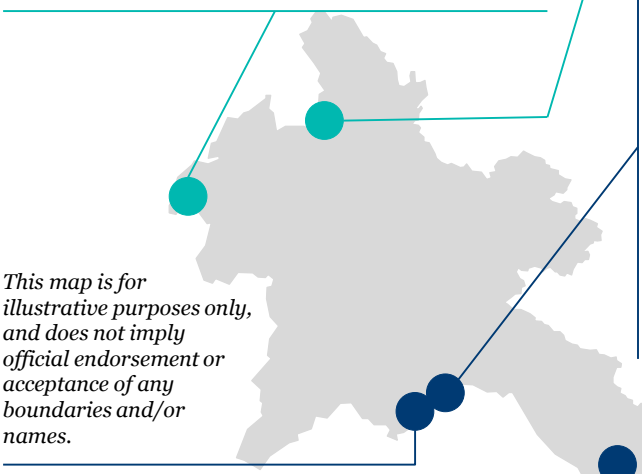
Investors choosing to locate their manufacturing operations in Laos' industrial estates or SEZs will be mainly granted fiscal incentives. These incentives vary according to the sector in which the investor is engaged. However the two main types of fiscal incentives are:

- Profit tax exemption for between three to 10 years;
- Reduced corporate income tax rate after the end of the profit tax exemption period.

For further details regarding incentives, please refer to section 9 of this report or the Invest Laos official homepage (www.investlaos.gov.la/index.php/where-to-invest/special-economic-zone?start=1)

Location of Industrial Estates and SEZs

SEZs with Industrial Estates Other SEZs



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Golden Triangle

- Total Investment: USD 87 million
- Developer: Lao government and Mainland Chinese private investors
- Area: 3,000 hectares (ha)
- Industries: Hosts multiple manufacturing companies, warehouses and transportation facilities

Boten Beautiful

- Total Investment: USD 500 million
- Developer: Mainland Chinese private investors
- Area: 1,640 ha
- Industries: Hosts multiple manufacturing companies, warehouses and distribution facilities

Saysetha

- Total Investment: USD 128 million
- Developer: Lao government, Mainland Chinese and Lao private investors
- Area: 1,000 ha
- Industries: Hosts companies manufacturing agricultural and woods products, electric appliances, machinery; and companies engaged in light industry or new energy

VITA

- Total Investment: USD 43 million
- Developer: Lao government and Taiwanese private investors
- Area: 110 ha
- Industries: Hosts companies manufacturing apparel and footwear, bicycle or electronics parts; and warehouses and distribution facilities

Phoukhyo

- Total Investment: USD 708 million
- Developer: Lao private investors
- Area: 4,850 ha
- Industries: Hosts goods manufacturing companies, spare parts assembly factories, air/road transportation networks and shipping services

Pakse

- Total Investment: USD 63 million
- Developer: Lao government, Lao and Japanese private investors
- Area: 195 ha
- Industries: Hosts multiple manufacturing companies

Savan-Seno

- Total Investment: USD 74 million
- Developer: Lao government
- Area: 954 ha
- Industries: Hosts companies manufacturing electrical wires, apparel and clothing, footwear; and automobile and electronic parts assembly lines

Not all SEZs are shown on this map. The four excluded SEZs are: Thakhek and Dongphosy (which only host warehouses and distribution facilities), and ThatLuang Lake and Longthanh (which are mostly residential or service focused zones).

Foreign Direct Investment (FDI)[2]

Despite introducing a new law that favours investments, in 2018, Laos only received around USD 1.3 billion in FDI, a 13% decrease compared with USD 1.5 billion in 2017. In 2018, the country's main investors were its neighbouring countries: Mainland China, Vietnam and Thailand. When considering the country's accumulated FDI over the last 10 years, 80% are concentrated in projects related to hydropower production and mining exploitation. In addition, new projects around transportation infrastructure or agro-forestry are also attracting an increased amount of foreign capital.

Cost of Usage

Companies choosing to locate their manufacturing operations in Laos' industrial estates or SEZs are usually charged with three main types of fees: 1) land leasing, 2) maintenance fee, and 3) water and electricity fees.

According to the Ministry of Planning and Investment, when considering land leasing cost, VITA, followed by Savan-Seno are the most expensive locations. However, when considering utilities such as electricity or water fee, other industrial estates (e.g. Phoukhyo) come out on top.

For more details on specific costs, please refer to Appendix 1.

Outlook[3,4]

In Laos, the SEZ ecosystem (which harbours industrial estates) is still developing. As of 2018, there are 11 operational SEZs in the country. Nevertheless, 38 more projects are planned and should therefore provide foreign companies additional investment opportunities or venues to locate their manufacturing operations. In addition, Laos is a key country in Mainland China's Belt and Road Initiative (BRI), which is designed to establish numerous infrastructure in multiple countries across Asia and Europe. Therefore, some foreign companies are thinking about investing in Laos in order to benefit from the BRI. For example, Amata (a major Thai industrial estate developer) is considering to develop industrial estates in Laos as it expects that a rising number of Mainland Chinese factories will settle in the country due to the BRI.

B. Land or Building for the Major Industrial Estates

Availability for Foreign Ownership and Terms[5]

According to Lao laws, the government owns the land and only Lao citizens can lease land directly from the government. Therefore, foreign investors are only left with two options: lease land from a Lao citizen or receive a land concession from the government. Based on certain criteria, the maximum allowed lease duration vary from 20 to 50 years, but this may be extended provided that the relevant authorities approve it.

Application Procedures for Business Operations in Laos

Investors wishing to receive a land concession for carrying out manufacturing activities need to submit their request via the Ministry of Planning and Investment's One Stop Service Office. This office will communicate with all necessary authorities (e.g. Committee for Planning and Investment, Provincial Authorities) in order to seek the concession licence approval. The entire procedure should take around 25 days. The investor is required to submit multiple documents (e.g. an economic-technical analysis) to obtain its land concession. For additional details about the procedure, please refer to the Invest In Laos homepage (www.investlaos.gov.la/index.php/start-up/concession-tactical-activities/industrial-services-and-others).

II. Potential Infrastructure Shortfall[6,7]

In the World Economic Forum's 2018 Competitiveness Report, Laos ranked 99th out of 140 countries for the quality of its infrastructure, which is below every other ASEAN country except Cambodia (and Myanmar, which is not ranked in this report). The country's major infrastructural problems are:

- Very poor road connectivity (130th) and poor road quality (107th);
- Inefficient port services (115th) and train services (105th);
- Comparatively low electrification rate (97th), with only 91.4% of population having access to electricity; and
- Exposure to unsafe drinking water (100th).

In addition, Laos is a landlocked country as it does not have a direct access to the sea. Therefore, the country relies mainly on roads for internal and external trade, however, only a fraction of them are paved. Additionally, infrastructure such as roads, bridges and other ongoing public works are usually impassable or severely damages during the rainy season. The country is subsequently forced to heavily invest in repair work every year. For example, in 2019, the government approved a special budget of LAK 500 billion (around USD 57 million) in order to repair the infrastructure damaged by the floods.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending[8]

Laos' total infrastructure needs and current investment trends are not analysed in the G20 Global Infrastructure Outlook Report.

The Lao government is eager to escape from the status of "Least Developed Country" by 2020. To achieve this objective, the country has identified the construction of new infrastructure and upgrade of existing ones as one of the main strategies. The vision is to transform Laos from a landlocked country into a land-linked country, thus becoming a major connection and logistics hub between Southeast Asian nations (e.g. Thailand or Vietnam) and Mainland China. In order to achieve its vision, Laos is embracing the BRI. Indeed, Mainland China has planned numerous infrastructure projects running through Southeast Asia, most of which are passing through Laos. The country is therefore benefitting from the heavy road and rail investments by Mainland China. Below is an overview of some of the major ongoing infrastructure developments in Laos.

Transportation

Roads[9,10]

In order to become a land-linked country, the Lao government plans to invest around USD 9.2 billion to build a total of 1,700km of roads. This overall project, which includes the construction of expressways and motorways, is expected to link the country with Vietnam and Mainland China.

- The Mainland China-Laos expressway is a 460 km project connecting Vientiane and Boten, a town near the Chinese border. The country's first expressway is being developed by a Public Private Partnership (PPP) between the Yunnan Construction and Investment Holding Group from Mainland China and the Lao government. Part of this project is the USD 1.3 billion expressway linking Vientiane and Vang Vieng, which is expected to be completed by 2021.

Rail[11,12]

Laos is an important country in the BRI. The country therefore benefits from Mainland China's plan to connect Singapore to Mainland China's Kunming (Yunnan's capital) via the Pan-Asia Railway Network:

- The China-Laos railway is a 925km project connecting the city of Kunming to Vientiane. The USD 7 billion railway line will be 70% financed by Mainland China and 30% by Laos (through loans from Mainland Chinese financial institutions). The Lao section of the railway is expected to be completed by 2021 and should cut travel time between Boten and the country's capital from three days to three hours. The project's next phase will be focused on connecting this railway line to existing lines in Thailand and Vietnam.

Ports[13]

As a landlocked country, Laos does not have any seaports. However, the country is aiming to develop dry ports to facilitate cross border transport of goods between neighbouring countries:

- The Vientiane Logistic Park will include a dry port co-developed through a joint venture between the Hong Kong company Kerry Logistics, and Sitthi Logistics from Laos. The 35 ha-dry port will create a strong logistics hub in Vientiane connecting rail and road infrastructure between Thailand and Mainland China. The new port will mainly be used to transfer cargo between different transportation modes and facilitate distribution of goods in the Greater Mekong Area.

Airports[14,15,16]

Multiple airport expansion projects being carried out or completed in Laos are the result of various cooperation between the Lao government and other Asian nations:

- Vientiane's airport extension, supported by Japan, was completed in August 2018. The airport can now handle around 2.3 million travellers a year (around nine times its previous capacity).
- The improvement of the Pakse International Airport, costing USD 6 billion, is being financed by Thai government-approved loans.
- The construction of Nong Khang Airport, worth USD 74 million, is being carried out by the Vietnamese Hoang Anh Gia Lai Joint Stock Company.

Utilities

Water[17]

With the aim of reducing natural waterways pollution, Laos is considering a major wastewater treatment project in Vientiane. This USD 100 million project would help the city better filter wastewater (e.g. remove chemicals) from households and factories before reinjecting it into rivers. This water treatment project would include the construction of new sewers and the upgrade of existing water and wastewater treatment facilities. This project aims to double Vientiane's water treatment daily capacity.

Energy[18]

Laos' electricity production heavily relies on hydropower dams. The current government's plan aims to have 100 operational plants by 2020 with a capacity of 28,000 megawatts, doubling its 2018 capacity. In addition, the country is looking to modernise its entire power sector in order to boost its power export capacity. Hydropower is one of Laos' main sources of revenue, as it is estimated that the country exports around two-thirds of its total production (mainly to neighbouring countries such as Thailand and Vietnam).

Telecommunications[19]

The Lao government acknowledges the importance of information and communications technology (ICT) for the country's future economic growth. Some of the main objectives identified by the Ministry of Post and Telecommunications are: increasing internet accessibility, improving internet speed and quality while maintaining low costs. However, despite having set these goals, no official projects are being carried out to reach them.

IV. Availability of Natural Resources[20,21,22,23,24,25,26]

Natural Resource	Details
Natural Vegetation, Forests and Timber	• More than 50% of Laos is covered by forest. • Tropical rainforests are found in the north of the country and monsoon forests are found in the south. • Forest governance is poor in Laos, therefore leading to high rates of illegal logging.
Agriculture	• Agriculture accounts for more than 20% of Laos' GDP and employs the majority of the country's workforce (around 75% in 2017). • Rice is the country's major crop as many farmers still practice subsistence agriculture. • Other products include: sweet potatoes, sugarcane, corn, other vegetables and fruits.
Fishing/ Aquaculture	• Laos fishing only relies on its inland water resources composed of rivers and streams. • Aquaculture has been rapidly growing in the country over the past years. • The usual fish farms include tilapia and various types of carps.
Livestock	• Laos' ruminant production is non-industrial and dominated by small-scale producers who adopt traditional practices. • The Lao government is currently promoting new production techniques in order to increase efficiency and meet the new meat demand.
Water Resources	• About 90% of the Lao territory is located within the Mekong River basin. • The country is considered rich in water resources. It is estimated that Laos has per capita water resources of 55,000m^3 per year. • The country's major challenge is improving its water resources management.
Minerals	• The Lao mining industry has witnessed declining productivity over the last few years resulting in a decreased contribution to the country's economy from the sector. • The Sepon mine (one of the largest gold mines in Laos) is expected to stop operations in 2020 due to resource exhaustion. • The main minerals found in Laos are: gold, copper, zinc or lead.
Coal, Oil and Fossil Fuels	• According to the latest data available (2015), electricity produced with coal only represented 14% of the country's total production. • In 2015, Laos inaugurated its largest coal-fired power plant: the Hongase Power Plant, which is composed of three 626-megawatt generators. The electricity produced by the plant is used for internal consumption and is also exported to Thailand.
Renewable Energy	• Hydropower is the country's most important power producing resource. • The Lao government plans to have 100 operational hydropower plants by 2020. It is estimated that there are 61 operational hydropower plants in 2018. • In the future, the country will need to diversify its energy production facilities to create a more resilient power system.

Source:

[1] *Invest Laos, Ministry of Planning and Investment*

[2] *Laos Foreign Investment, Santander*

[3] *Laos' Investment Outlook for 2019, ASEAN Briefing, 2019*

[4] *Thai industrial park developer eyes investment opportunity in Laos, Asia News Network, 2018*

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8. Types of Industries Encouraged by the Local Government

Executive Summary

With the Law on Investment Promotion, Laos defines a list of nine promoted sectors, including the hi-tech, infrastructure, agriculture, and healthcare industries. Mainland China and Hong Kong companies investing in these sectors will generally be granted attractive incentives.

Laos is generally open to foreign investors, and does not prohibit them from investing in any activities. However, foreign companies may need approval from multiple authorities, or may need to comply with specific conditions, in order to carry out activities under the controlled business list or engage in concession-based activities.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1,2]

Promoted Sectors under the Law on Investment Promotion

Foreign and domestic investments in Laos are regulated by the Law on Investment Promotion. This Law was amended in 2017 to create a more attractive business environment in the country by providing companies with simplified processes for business applications, licensing and government approvals. The amended law provides a clear list of nine promoted sectors which are eligible for investments incentives. Foreign investors engaging in the nine sectors described below will therefore be eligible for government incentives.

Hi-tech

(e.g. R&D, innovation, and businesses using modern technologies)

Agro-processing Industry

(e.g. eco-friendly agro industry and handicrafts industry)

Agriculture

(e.g. clean agriculture, animal breeding, and biodiversity protection)

Infrastructure

(e.g. development of transportation infrastructure, international linkage services)

Commercial Centres

(e.g. development of exhibition centres and fairs for domestic industrials products)

Healthcare

(e.g. development of hospitals, and pharmaceutical and medical equipment factories)

Finance

(e.g. microfinance institutions)

Education

(e.g. vocational training, skill development projects, and human resources development)

Culture and Tourism

(e.g. eco-tourism, cultural and historical tourism industry)

In addition, the Law on Investment Promotion defines incentives by zones of activities. Companies carrying out activities in sectors not listed above can still be granted incentives if they operate in Zone 1 (poor and remote areas with socio-economic infrastructure unfavourable to investment), Zone 2 (areas with socio-economic infrastructure favourable to investment), or Zone 3 (Special Economic Zones).

For additional information please consult the official Law on Investment Promotion document (www.investlaos.gov.la/images/IP_Law_2016_PDF/Final_IPL_No.14.NA_17Nov2016_Eng_30_Oct_2018.pdf).

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[2,3]

No activities are prohibited from foreign participation in Laos. However, foreign investors may need to obtain multiple approvals from various government authorities in order to carry out activities in the controlled business list or engage in concession-based activities.

Controlled Business List

The Law on Investment Promotion defines two different types of general investments: business activities under the controlled business list, and business activities not under the controlled business list. Activities under the controlled business list are defined as having an impact on the "stability of national security, public order, national fine tradition and environment, society, and nature". Investors wishing to invest in these activities need to submit an application to the investment one-stop service office. The office will then coordinate with relevant authorities (e.g. local or national administration) and the committee for investment promotion and management in order to review the application. If approved, the office shall issue the company an investment licence and an enterprise registration certificate.

The controlled business list is regularly updated by the government. In 2019, the list includes 44 activities across 14 sectors. Some manufacturing-related examples are described below.

Sector	Activity	Relevant Authority
Processing Industry	• Production of oil products • Production of chemicals • Pharmaceuticals manufacturing	Mine and Energy Authority
Mining and Mineral Processing	• Mineral search and exploration • Mineral support services	Industry and Health Authority
Transport and Warehouse	• Air freight transport • Movement of postal services	Works and Transport Authority

Concession

In addition, some activities in Laos are concession-based. Companies wishing to invest in these sectors need to seek approval from the government, which will then set the concession conditions according to the investment features (e.g. type, size, total value). Generally, a concession cannot exceed 50 years.

The concession-based activities list is regularly updated by the government. In 2019, the list includes 23 activities across seven sectors. Some manufacturing-related examples are described below.

Sector	Activity	Approval Condition
Mining and Processing	• Mining of metallic minerals • Mining and processing activities	• Total production must exceed 100,000m^3 per year
Public-private Partnership	• New projects or infrastructure improvements projects	• Company must have stable and sound financials
Special Economic Zones	• Manufacturing, processing or export-focused industry settling in SEZs	• Company must prove to be experienced and successful

For the full list of control and concession-based activities, please refer to the official Law (www.investlaos.gov.la/images/IP_Law_2016_PDF/Final_IPL_No.14.NA_17Nov2016_Eng_30_Oct_2018.pdf)

Source:

[1] *New Law on Investment Promotion in Laos, Tilleke & Gibbins, 2017*

[2] *Law on Investment Promotion, Lao PDR, 2017*

[3] *Decree on Controlled and Concession List, Lao PDR, 2019*

9. Key Government Incentives

Executive Summary

Companies investing in the promoted sectors listed in the Law on Investment Promotion are, under certain conditions, eligible for fiscal and non-fiscal incentives. These incentives vary according to the zone in which the companies wish to carry out business, as the Lao government is eager to attract investments in remote areas with low socioeconomic development.

Mainland China and Hong Kong companies looking to expand their manufacturing footprint in Laos can also settle in one of the 11 operating Special Economic Zones (SEZs). However, only seven SEZs are suitable for manufacturing activities. Numerous financial incentives are available for investors carrying out business in Lao SEZs.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments[1]

In Laos, investment incentives are granted to companies investing in the promoted sectors defined in the Law on Investment Promotion. Therefore, investments in activities on the controlled business list or in concession-based activities can also benefit from government incentives.

Incentive Eligibility Criteria

In order to be eligible for incentives, the investment must be realised in one of the nine promoted sectors described in the Law on Investment Promotion (please refer to section 8). In addition, the investment must comply with one of the following conditions:

- The company plans to invest a minimum capital of LAK 1.2 billion (around USD 140,000); or
- The company employs at least 30 Lao technical staff; or
- The company uses 50 or more Lao workers with an employment contract of at least one year.

Small and medium-sized enterprises (SMEs) that cannot comply with one of the above-mentioned conditions can still be granted incentives listed in the relevant laws and regulations.

Incentive Card Application

Investments incentives are mainly granted to general investments not included in the controlled business list. For more information on the controlled business list, please refer to section 8. In order to be granted incentives, investors need to first obtain an enterprise registration certificate and an incentive card.

According to the Law on Investment Promotion, foreign companies investing in general investments not included in the controlled business list need to submit an enterprise registration application to the industry and commerce sector authority. Obtaining the enterprise registration certificate should take around 10 days.

Once the enterprise registration certificate is received, the company investing in a promoted sector can submit a request to the investment one-stop service office in order to receive an incentive card.

Incentives

As described in the Law, incentive levels depend on the zone that the investment is placed in. In Laos, there are three different zones:

- Zone 1: Poor and remote areas with socio-economic infrastructure unfavourable to investment;
- Zone 2: Areas with socio-economic infrastructure favourable to investment; and
- Zone 3: Special Economic Zones

Generally, companies investing in Zone 1 will receive more incentives than the ones investing in Zone 2. Business investing in Zone 3 will usually be granted incentives specified in other regulations than the Law on Investment Promotion.

The main investment incentives available for companies investing in promoted sectors are detailed in the table below. For additional information, please refer to the official Law on Investment Promotion document (www.investlaos.gov.la/images/IP_Law_2016_PDF/Final_IPL_No.14.NA_17Nov2016_Eng_30_Oct_2018.pdf)

Selected Financial Incentives per Zones

Incentive Category	Zone 1	Zone 2	Zone 3
Profit Tax Exemption *(Note 1; Note 2)*	10 year exemption and additional 5 years for specific sectors	4 year exemption and additional 3 years for specific sectors	Defined in other specific regulations
Custom Duty Exemption	Exemption on import of materials and equipment used for production	Exemption on import of raw materials, equipment and parts used for production	None
0% Value Added Tax (VAT)	0% VAT on materials and equipment used for production	0% VAT on raw materials, equipment and parts used for production	0% VAT on domestic raw materials used
Rental Fee Exemption *(Note 2)*	10 year exemption and additional 5 years for specific sectors	5 year exemption and additional 3 years for specific sectors	Defined in other specific regulations

Note 1: The exemption period shall be counted from the year the investing enterprises start to generate business revenues. Upon expiration of the exemption period, the enterprises shall follow the Taxation Law.

Note 2: The selected sectors are Agriculture, Agro-processing Industry, Education, Healthcare

Additional financial incentives include, among others:

- Simplified access to financing with institutions operating in Laos;
- Ability to carry forward losses over three years to be deducted against future profits; and
- Facilitated land use rights for investors in concession investments.

Non-financial Incentives

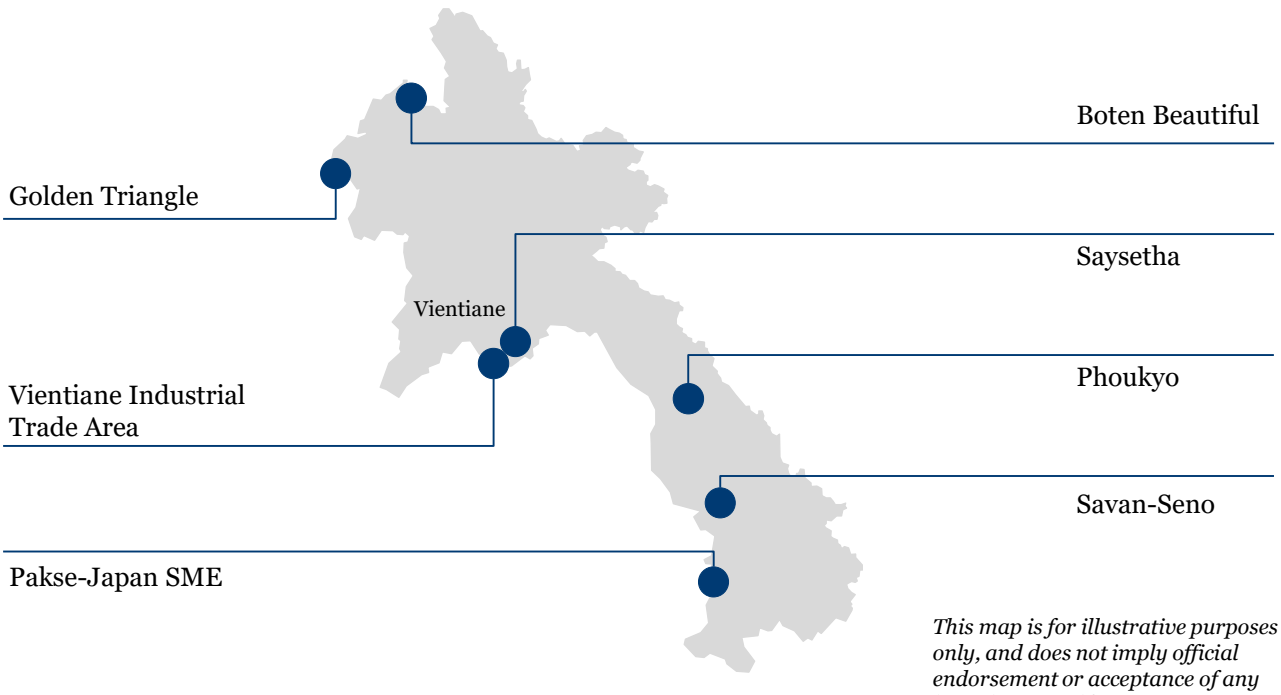
Companies investing in supported sectors can also be granted the following non-financial incentives (non-exhaustive):

- Access to one-stop service offices for collecting and compiling relevant information on investments (e.g. guidebooks, newsletters, brochures);
- Simplified and facilitated processes to obtain residence permits and multi-entry business visas for foreign investors;
- Facilitated process for entering and exiting Laos for investors and their families; and
- Investors can claim additional government incentives from the relevant authorities.

II. Scope of Special Economic Zones Schemes and Geographical Location[2,3,4]

There are currently 11 operating Special Economic Zones (SEZs) in Laos, however, only seven zones host manufacturing activities. The four other SEZs only offer logistic facilities (and no production activities) or are mainly residential and services-based. Therefore, Mainland China and Hong Kong companies should mainly focus their investments in the seven SEZs presented below. These SEZs may be developed by the government, the private sector (domestic or foreign) or by public private partnerships. In Laos, the SEZs are strategically located near the country's borders with Thailand, Myanmar and Mainland China.

Location of Lao SEZs Hosting Manufacturing Activities



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Incentives available in Lao SEZs

Incentives granted to companies investing in Lao SEZs vary from one zone to another. The incentives listed below are the most common ones granted in Pakse and Savan-Seno:

- Long-term corporate income tax (CIT) holidays (maximum of 10 years);
- Reduced CIT rate of 8% (compared to the standard rate of 24%);
- Personal income tax rate of 5%;
- Dividend tax rate of 5% (vs. 10% originally);
- Import duty exemption on machinery and equipment used for production; and
- Land concession up to 50 years.

For additional information about Lao SEZs, please refer to section 7 of this report or Invest Laos homepage (http://www.investlaos.gov.la/index.php/where-to-invest/special-economic-zone?limitstart=0)

Source:

[1] Law On Investment Promotion, Lao PDR, 2017

[2] Invest Laos, Ministry of Planning and Investment

[3] Pakse-Japan SME homepage

[4] Savan Park homepage

10. Environmental Requirements

Executive Summary

In Laos, the Ministry of Natural Resources and Environment (MONRE) is the primary regulatory body responsible for management and administration of environmental policy and standards, as well as the enforcement of law. Environmental Protection Law is the fundamental law regarding environmental management in Laos. Any foreign businesses wishing to invest or do business in Laos must abide by the Law.

Factories in Laos may encounter environmental hurdles or problems, such as historical pollution and license requirements.

There are environmental organisations and agencies in Laos that can provide relevant environmental supporting services to those companies requiring assistance.

10. Environmental Requirements

I. Environmental Laws and Regulations in Laos[1]

The Ministry of Natural Resources and Environment (MONRE) of Laos has a mandate as a secretariat and key regulator for direct management of land, forest, water, air, biodiversity and minerals throughout the country. The MONRE was established in 2011 combining departments and divisions related to natural resources and environment.

The Environmental Protection Law was established in 1999, and latest revised in 2012. The Environmental Protection Law defines principles, regulations and measures relating to the management, monitoring, protection, control, preservation and rehabilitation of both natural environment and social environment.

A. The Main Environmental Protection Administrations in Laos

Ministry of Natural Resources and Environment (MONRE)[2,3,4]

The MONRE takes direct responsibilities and leading roles in coordinating with line sectors and local authorities to study and identify policies, strategies, regulations, methods and measures of environmental protection.

The ministry is comprised of the Department of Environmental and Social Impact Assessment, the Pollution Control Department, the Department of Land Allocation and Development, the Department of Land Management, the Department of Water Resources, the Department of Nature Resources and Environmental Research, the Department of Environmental Quality Promotion, the Department of Meteorology and Hydrology, and the Department of Disaster Management and Climate Change as major units.

Primary mandate for pollution control lies on the Pollution Control Department of MONRE. Also, the Ministry of Industry and Commerce, the Ministry of Agriculture and Forestry Department of Agriculture and the Ministry of Public Works and Transport are partly undertaking the authority for industrial pollution and regulation, depending on the type of industry. Improvement is underway to address the confusion brought by interrelated duties among the government departments.

B. The Main Environmental Legislation in Laos

Law on Environmental Protection No.29/NA, 2012[2]

The Environmental Protection Law dated 2012 declares that every person has commitments to protect the environment which generally consist of the followings: (i) the commitment to prevent environment against any natural or man-made events; (ii) the commitment to control pollution of not violating the national pollution and environmental quality standards; and (iii) the commitment to control and dispose toxic chemical and waste properly.

In particular, in terms of the commitment to prevent the natural environment and social environment, it is required that the Integrated Spatial Planning, the Strategic Environmental Assessment, Initial Environmental Examination, Environmental and Social Impact Assessment or the Environmental Management of Household Business shall be conducted, prepared and submitted to the Ministry of Natural Resources and Environment for their comment and, in certain circumstances, approval in the form of certificate.

Penalties

Persons, legal entities and organisations violating the Law on Environmental Protection shall be subject to re-education, warning, disciplinary sanctions, fines or civil remedies or criminal penalties based on the seriousness degree of each case in accordance with regulations.

Other Environmental Laws and Regulations (air, water, wastes, etc.)

Laos has also issued environmental laws such as Law on Water Resources (revised in 2013), Forestry Law, etc. Emissions and disposal of air pollutant, water pollutant, wastes and hazardous materials are regulated by the relevant laws, regulations, and standards. Any violation of such laws and regulations could be punished.

A detailed list of environmental laws and regulations in Laos can be found in Appendix 2.

C. Main Environmental Related Joint Announcements and Statements Which HK and Mainland China Have Issued with Laos

The Chinese Ministry of Foreign Affairs has issued a joint statement between the People's Republic of China and the Lao People's Democratic Republic, to further strengthen China and Laos's comprehensive strategic partnership. The statement encourages cooperation in the environment-related fields.

In addition, there are also a series of statements and plans to further enhance the environmental cooperation between China and the ASEAN that will affect Laos.

Main Environmental-related Joint Announcements and Statements[5,6,7]

Statements	Impact	Clause
Memorandum of Understanding on Environmental Protection Cooperation between the Ministry of Environmental Protection of the People's Republic of China and the Ministry of Natural Resources and Environment of the Lao People's Democratic Republic	Encourage priority cooperation in the following areas: • Biodiversity conservation; • Environmental regulations and policies; • Urban and rural environmental management; • Solid waste management; • Environmental protection industry and technology; • Environmental education and public awareness; • Environmental management capacity building; and • Other areas of cooperation agreed by both.	Clause 1 to 7
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clause 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clause 45, 47, 53, 54

D. The Main Environmental Permits in Laos[8,9]

Laos has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Environment Impact Assessment (EIA)

According to the Decree on Environmental Impact Assessment in 2019, the investment projects and activities in Laos are divided into two groups:

- Group 1: The investment projects and activities that are believed to cause less or not-severe impacts on social and natural environment will have to conduct Preliminary Environmental Impact Assessment (PEIA).
- Group 2: The investment projects and activities that are believed to cause huge or severe impacts on social and natural environment will have to conduct Comprehensive Environmental Impact Assessment (CEIA).

For the projects and activities which are neither in Group 1 nor Group 2, the MONRE or provincial Department of Natural Resources and Environment (DONRE) will conduct the screening process to consider whether or not the EIA is necessary.

For the Grouping List of Investment Projects and Activities Subject to EIA, please refer to Appendix 3.

Wastewater Discharge Permit

The 2017 amended Law on Water Resources has added the regulations about Wastewater Discharge Permit. Wastewater discharges to various water sources must comply with the conditions of a Wastewater Discharge Permit or the regulations on the exemption.

Each wastewater discharge permit contains conditions that specify the necessary treatment process, relevant wastewater discharge standards, and the measurement of wastewater quality.

II. Environmental Situations in Laos

A. Hurdles or Problems Encountered and Resolutions[8,9]

Before Land Acquisition	Pre-construction Period			Operation Period
Historical Pollution Issues	**License Requirements**			**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability from historical pollution	PEIA/ EIA	Wastewater Discharge Permit *(subject to project characteristic)*	Hazardous Waste Generator Registration *(subject to project characteristic)*	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify potential significant environmental risks in a report.

EDD Case

The WSP consultant company was appointed to perform EDD services of a 1,070 MW Hydroelectric Project in Laos.

As part of the due diligence process, the services included studying the environmental and social impacts of the hydropower plant and associated infrastructure, as well as the relocation of 16 villages. The services also included overseeing activities during the village relocation and project construction process. As a result, the aid agencies and project sponsors signed off on the project following the successful completion of the due diligence process, and since then, the hydropower plant has been in full commercial operation.

For a list of organisations/agencies providing EDD services in Laos, please refer to Section 10.III.A.

Pre-construction Period: Preliminary Environmental Impact Assessment (PEIA)

According to the Decree on Environmental Impact Assessment, the projects in Group 1 are required to conduct a Preliminary Environmental Impact Assessment (PEIA).

Resolutions

PEIA

According to the Decree on Environmental Impact Assessment, PEIA must be conducted only by a consultancy firm or by a consultant registered at the MONRE.

PEIA Processes:

Supporting agency selection: Hiring a registered consultancy firm or individual consultants to conduct PEIA.

- Submission: Submitting 10 hardcopies of the PEIA report, with its softcopy to the DONRE of where the project is located;
- Approval: The DONRE will organise a provincial team of specialists to review the report, make a final approval and issue an environmental certificate. The review process will be within 40 working days, excluding the periods in which the project owner revises the documents.

Pre-construction Period: Comprehensive Environmental Impact Assessment (CEIA)

According to the Decree on Environmental Impact Assessment, the projects in Group 2 are required to conduct a Comprehensive Environmental Impact Assessment (CEIA). The project owner must prepare a scope of assessment and work for the MONRE to review before conducting CEIA.

Resolutions

CEIA

According to the Decree on Environmental Impact Assessment, CEIA must be conducted only by a consultancy firm or by a consultant registered at the MONRE.

CEIA Processes:

- Supporting agency selection: Hiring a registered consultancy firm or individual consultants to conduct CEIA;
- Submission: Submitting 10 hardcopies of the CEIA report, with its softcopy to the MONRE;
- Approval: The MONRE will organise a central-level team of specialists to review the report, make a final approval and issue an environmental certificate. The review process will be within 90 working days, excluding the periods in which the project owner revises the documents.

For the Grouping List of Investment Projects and Activities Subject to EIA, please refer to Appendix 3.

EIA Case

According to the Decree on Environmental Impact Assessment in Laos, 1,000 hectare plantation scheme (the project) located in Southern Laos was required to conduct a CEIA. SLP Environmental Consultants (Laos) was appointed to provide CEIA services for the project.

The services include: i) assessing the potential environmental and socio-economic impacts of the planned project activities on the natural environment, as well as its effects on people and communities, and ii) formulating and implementing environmental and social action plans to mitigate the effects of any identified adverse impacts and enhance the positive impacts. The CEIA was approved by the MONRE and the project was issued with an environmental certificate.

For a list of organisations/agencies providing EIA supporting services in Laos, please refer to Section 10.III.B.

Pre-construction Period: Wastewater Discharge Permit

According to the 2017 amended Law on Water Resources, wastewater discharges to various water sources must apply for a Wastewater Discharge Permit or comply with the regulations on the exemption.

Resolutions

Wastewater Discharge Permit

- The company can either apply themselves or hire a third party to help with obtaining the permit;
- The MONRE is responsible for approval and check of Wastewater Discharge Permit;
- The Permit shall be issued for one year and may be renewed annually.

Operation Period: Environmental Pollution Problems

During the operation period, company may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The MONRE is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

Environmental Pollution Case

A brewery factory in the capital Vientiane has been shut down by the Lao government due to pollution. The factory recycled 80 tons of spent beer malt per day. However, its owners failed to control pollution from the process, causing pollution of the local river. According to the penalty regulation, the Law on Environmental Protection in Laos, the offender shall be subject to suspension, withdrawal of license, or termination of operation, etc.

For a list of organisations/agencies providing waste disposal service and other related services in Laos, please refer to Section 10.III.C.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Laos

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards Between Laos and Mainland China

Please refer to the below legend for the understanding of all the comparison tables in this section.

For the Laos standards, values are the limitation of industrial wastewater passing the treatment process and dilution discharged to public water source.

For the Mainland China standards, values in brackets indicate the parameters of industrial wastewater when it is discharged into the water sources serving tap water, and the values not in brackets indicate the parameters of effluent discharged into environment directly (except for electronic industry and textile industry).

For the Mainland China standards in the electronic and textile industry, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Laos.

"↑" indicates the requirement of Laos is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Laos.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories both in industrial area and non industrial area.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH and temperature)	pH		6-8.5	6.0-9.0	↑
		Total suspended solids		50	50	=
		Total dissolved solids		2500	-	N/A
		Temperature[c]		50	-	N/A
		COD		120	80	↓
		TKN		100	-	N/A
		Ammonia nitrogen	Special electronic materials	-	10/20[d]	N/A
			Electrical units		5	N/A
			Printed circuit boards		20	N/A
			Semiconductor devices		10	N/A
			Display device and photoelectron components		5	N/A
			Electron terminals products		5	N/A
		Total nitrogen	Special electronic materials	-	20/30[d]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH and temperature)	Total phosphorus	Special electronic materials	-	0.5/1.0[d]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hydrogen sulfide		1.0	-	N/A
		Copper	Special electronic materials	2.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH and temperature)	Zinc	Special electronic materials	5.0	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron component		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.03	0.05	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↑
			Display device and photoelectron component		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.25	0.2	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		0.75	-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, and temperature)	Arsenic	Special electronic materials	0.25	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron component		0.2	↓
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.2	0.2	=
			Electrical units		0.1	↓
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	=
			Display device and photoelectron component		0.2	=
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	0.2	0.2	=
			Electrical units		0.2	=
			Printed circuit boards		0.2	=
			Semiconductor devices		0.2	=
			Display device and photoelectron components		0.2	=
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Laos[a]	Mainland China[b]	
Electronics	Air Pollutants mg/m^3	TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production	70[e]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Emission standard of pollutants for electrical industry[11], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The unit for temperature is ˚C.*
d. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*
e. *24 hours average volume (Leq24) not exceed 70 dB (A).*

Garment & Clothing

Water and air pollutants are the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Laos[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, temperature, and colour)	pH	6-8.5	6.0-9.0	↑
		Total suspended solids	50	50	=
		Total dissolved solids	2500	-	N/A
		COD	120	80	↓
		BOD_5	30	20	↓
		Colour and odour	Not be detected	-	N/A
		Colour	-	50[c]	N/A
		Temperature[d]	40	-	N/A
		TKN	100	-	N/A
		Ammonia nitrogen	-	10	N/A
		Total nitrogen	-	15	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine	1.0	-	N/A
		Chlorine dioxide	-	0.5	N/A
		AOX	-	12	N/A
		Hydrogen sulphide	1.0	-	N/A
		Sulphide	-	0.5	N/A
		Aniline	-	Not be detected	N/A
		Hexavalent chromium	0.25	Not be detected	↓
		Cyanide	0.2	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production	70[e]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third party . For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[13], Integrated emission standard of air pollutants[14], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The method of measuring Colour in China is dilution method, and the value refers to the dilution factor.*
d. *The unit for temperature is ˚C.*
e. *24 hours average volume (Leq24) not exceed 70 dB (A).*

Watches & Jewellery

Water pollutants from washing process and air pollutants from polishing process are the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Laos[a]	Mainland China[b]	
Watches & Jewellry	Water Pollutants mg/L (Except pH)	pH	6-8.5	6.0-9.0 (6.0-9.0)	↑ (↑)
		Total suspended solids	50	150 (70)	↑ (↑)
		Total dissolved solids	2500	-	N/A
		COD	120	150 (100)	↑ (↓)
		BOD_5	30	30 (20)	= (↓)
		Temperature[c]	40	-	N/A
		TKN	100	-	N/A
		Ammonia nitrogen	-	25 (15)	N/A
		Cyanide	0.2	0.5 (0.5)	↑ (↑)
		Fat, oil and grease	5.0	15 (10)	↑ (↑)
		Petroleum	-	10 (5)	N/A
		Hexavalent chromium	0.25	0.5 (0.5)	↑ (↑)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production	70[d]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Integrated wastewater discharge standard[15], Integrated emission standard of air pollutants[14], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The unit for temperature is ˚C.*
d. *24 hours average volume (Leq24) not exceed 70 dB (A).*

Toys & Games

Water pollutants from washing process and air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Laos[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH, and temperature)	pH	6-8.5	6.0-9.0 (6.0-9.0)	↑ (↑)
		Total suspended solids	50	150 (70)	↑ (↑)
		Total dissolved solids	2500	-	N/A
		COD	120	150 (100)	↑ (↓)
		BOD_5	30	30 (20)	= (↓)
		TKN	100	-	N/A
		Temperature[c]	40	-	N/A
		Ammonia nitrogen	-	25 (15)	N/A
		Sulphide	-	1.0 (1.0)	N/A
		Hydrogen sulphide	1.0	-	N/A
		Cyanide	0.2	0.5 (0.5)	↑ (↑)
		Hexavalent chromium	0.25	0.5 (0.5)	↑ (↑)
		Fat, oil and grease	5.0	15 (10)	↑ (↑)
		Petroleum	-	10 (5)	N/A
		Phenols	1.0	-	N/A
		Volatile Phenols	-	0.5 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production	70[d]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Integrated wastewater discharge standard[15], Integrated emission standard of air pollutants[14] , and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The unit for temperature is ˚C.*
d. *24 hours average volume (Leq24) not exceed 70 dB (A).*

Hi-tech (Part 1/4)

Water pollutants from the chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards between Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH and temperature)	pH		6-8.5	6.0-9.0	↑
		Total suspended solids		50	50	=
		Total dissolved solids		2500	-	N/A
		COD		120	80	↓
		TKN		100	-	N/A
		Temperature[e]		40	-	N/A
		Ammonia nitrogen	Special electronic materials	-	10/20[c]	N/A
			Electrical units		5	N/A
			Printed circuit boards		20	N/A
			Semiconductor devices		10	N/A
			Display device and photoelectron components		5	N/A
			Electron terminals products		5	N/A
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 2/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH and temperature)	Hydrogen sulfide		1.0	-	N/A
		Copper	Special electronic materials	2.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	5.0	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron component		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.03	0.05	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↑
			Display device and photoelectron component		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 3/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH and temperature)	Hexavalent chromium	Special electronic materials	0.25	0.2	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		0.75	-	N/A
		Arsenic	Special electronic materials	0.25	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓
			Display device and photoelectron component		0.2	↓
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.2	0.2	=
			Electrical units		0.1	↓
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	=
			Display device and photoelectron component		0.2	=
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A

Hi-tech (Part 4/4)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Laos[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH and temperature)	Cyanide	Special electronic materials	0.2	0.2	=
			Electrical units		0.2	=
			Printed circuit boards		0.2	=
			Semiconductor devices		0.2	=
			Display device and photoelectron components		0.2	=
			Electron terminals products		-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Noise emission limits from production		70[d]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Emission standard of pollutants for electrical industry[11], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*
d. *24 hours average volume (Leq24) not exceed 70 dB (A).*
e. *The unit for temperature is ˚C.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc. In Laos, the relevant standards for pollutants are general effluent and emission standards.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Laos, the chemicals & plastics industry should be in compliance with the general environmental standards.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Laos and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Laos[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	6-8.5	6.0-9.0 (6.0-9.0)	↑ (↑)
		Total suspended solids	50	150 (70)	↑ (↑)
		Total dissolved solids	2500	-	N/A
		COD	120	150 (100)	↑ (↓)
		BOD_5	30	30 (20)	= (↓)
		TKN	100	-	N/A
		Temperature[c]	40	-	N/A
		Ammonia nitrogen	-	25 (15)	N/A
		Sulphide	-	1.0 (1.0)	N/A
		Phosphate	-	1.0 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB(A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production	70[d]	-	N/A
	Hazardous Waste	Hazardous waste are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Laos Standards: Water pollution control Standard from general industries[10], Air pollution control standard from industries in general[10] and Ambient noise standards[10].*
b. *Mainland China Standards: Integrated wastewater discharge standard[15], Integrated emission standard of air pollutants[14] , and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The unit for temperature is ˚C.*
d. *24 hours average volume (Leq24) not exceed 70 dB (A).*

III. The Main Local Supporting Organisations/Agencies in Laos

The Laos environment is changing rapidly as a result of economic development. The new environment ministry has developed aggressive goals in “MONRE Vision toward 2030”, which include “reducing water and air pollution for industries and services by 30%“, "reducing the waste generation in the municipal areas across the country by 30%", etc. Environmental management could be stricter in the near future.

To ensure environmental compliance and to maintain a good relationship with the public, the investor should pay attention to the environment survey, license application and to meet the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environmental related support services.

A. EDD Services in Laos

Agency/ Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Environmental and Social Risk Management; • Environmental and Health and Safety (EHS); • Regulatory Compliance Assessments; and • Independent Assurance, etc.	+856 (21) 222 718-9
SLP Environmental	• Environmental Due Diligence; • Technical Assistance & Advisory Services; and • Environmental & Social Impact Assessment, etc.	+ 66 (0) 2168 7016 (ASEAN headquarter in Thailand)
WSP	• Environmental Due Diligence; • Contaminated Land and Soil Remediation; and • Environmental and Social Impact Assessment and Planning, etc.	+66 (0) 2343 8866 (Thailand Office)

B. EIA Supporting Services in Laos

Agency/ Organisation	Service Coverage	Contact
Environment-Sustainability-Livelihood	• Environmental and Social Impact Assessment; • Environmental Monitoring; • Waste Management; and • Water Resource Management, etc.	+856 (21) 413 723
LEM Consultants Company Limited	• Environmental and Social Impact Assessment; • Environmental and Social Monitoring and Management; • Environmental Monitoring; and • Sustainable Natural Resource Management, etc.	+856 (21) 461 978
LAO-UAE Laboratory and Environment Services Company Limited	• Environmental and Social Impact Assessment; • Laboratory Testing Services; and • Training and Coaching Services, etc.	+856 (20) 550 4825

C. Monitoring Services and Wastes Management Services in Laos

Agency/ Organisation	Service Coverage	Contact
Environment-Sustainability-Livelihood	• Environmental and Social Impact Assessment; • Environmental Monitoring; • Waste Management; and • Water Resource Management, etc.	+856 (21) 413 723
Geo-Sys (Lao) Company Limited	• Hydrological and Water Quality Monitoring, Analysis and Modelling; • Water, Air and Soil Pollution Monitoring and Remedy Techniques Design; • Ecology and Biological Conservation; and • GIS and Cartography, etc.	+856 (21) 315 818
LEM Consultants Company Limited	• Environmental and Social Impact Assessment; • Environmental and Social Monitoring and Management; • Environmental Monitoring; and • Sustainable Natural Resource Management, etc.	+856 (21) 461 978
Waste Pro Collection Sole Company Limited	• Garbage Collection; • Waste Exportation; • Spent Grain Drying Factory; and • Recycling Center, etc.	+856 (30) 977 9777

Source:

[1] *MONRE Vision toward 2030, Ministry of Natural Resources and Environment (MONRE), 2015*

[2] *Law on Environmental Protection No. 02-99/NA, 1999*

[3] *Decree on Establishment and Activities of the Ministry of Natural Resources and Environment, MONRE, 2012*

[4] *National Pollution Control Strategy and Action Plan 2018-2025, with Vision to 2030, 2017*

[5] *Memorandum of Understanding on Environmental Protection Cooperation between the Ministry of Environmental Protection of the People's Republic of China and the Ministry of Natural Resources and Environment of the Lao People's Democratic Republic, 2013*

[6] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[7] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[8] *Decree on Environmental Impact Assessment No. 21/GOL, 2019*

[9] *Law on Water Resources (Revised Version), 2017*

[10] *Lao PDR National Environmental Standards, 2017*

[11] *Emission Standard of Pollutants for Electrical Industry, 2nd Edition for Suggestion*

[12] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*

[13] *Discharge Standards of Water Pollutants for Dyeing and Finishing of Textile Industry, GB 4287-2012*

[14] *Integrated Emission Standard of Air Pollutants, GB 16297-1996*

[15] *Integrated Wastewater Discharge Standard, GB 8978-1996*

[16] *Environmental Impact Assessment Guidelines, 2011*

[17] *Law on Land No. 01/97 NA (Revised Version), 2003*

[18] *Law on the Chemicals No.07/NA, 2016*

[19] *Law on Industrial Processing No. 01/99/NA (Revised Version), 2013*

[20] *Labour Law(Amended) No. 43/NA, 2013*

Appendix

Appendix 1

Land Leasing Cost and Utility Fees in the Main SEZs

SEZ	Land Leasing (USD/m²/year)	Electricity Fee (USD/KWh)	Water Fee (USD/m³)
VITA	USD 0.03 – 0.06	USD 0.06 – 0.07	USD 0.3 – 0.4
Savan-Seno	USD 0.3	USD 0.09	USD 0.7
Thakhek	USD 0.2	USD 0.06 – 0.07	USD 0.05
Phoukhyo	N/A	USD 0.07 – 0.08	USD 0.06 – 0.08
Pakse	Subject to Negotiation	N/A	USD 0.7

Appendix 2

The Main Environmental Laws/Regulations in Laos

Ministry of Natural Resources and Environment	Ministry of Industry and Commerce	Ministry of Labor and Social Welfare
Law on Environmental Protection, 2012[2]	Law on the Chemicals, 2016[18]	Labour Law, 2013[20]
Law on Water and Water Resources, 1996 (amended in 2017)[9]	Law on Industrial Processing, 1999 (amended in 2013)[19]	
Law on Land, 1997 (amended in 2003)[17]		

The Main Environmental Ambient Standards in Laos

Ambient Standards	1	Ambient Air Quality Standard, 2017
	2	Soil Pollution Control Standard for Other Application Purpose, 2017
	3	Surface Water Quality Standard, 2017
	4	Quality Standards for Groundwater, 2017
	5	Drinking Water Quality Standard, 2017
	6	Ambient Noise Standards, 2017

The Main Environmental Effluent Standards in Laos

Effluent Standards	1	Air Pollution Control Standard from Industries in General, 2017[a]
	2	Air Pollution Control Standard from Vehicles, 2017
	3	Air Pollution Control Standard from Incinerators, 2017
	4	Soil Quality Standard for Housing and Agricultural Production, 2017
	5	Soil Pollution Control Standard for Other Application Purpose, 2017
	6	Water Pollution Control Standard from General Industries, 2017[a]
	7	Water Pollution Control Standards from Building, 2017
	8	Water Pollution Control Standard for Housing Estate, 2017
	9	Interference Noise Control Standard, 2017[a]

Note:
a. Corresponding effluent/emission standards are the main standards utilised in Section 10.II.C.

Appendix 3

Grouping List of Investment Projects and Activities Subject to EIA (Issued with Environmental Impact Assessment Guidelines (2011)) (Part 1/2)

Industries	Type of Investment Projects and Activities	Group 1 (PEIA)	Group 2 (CEIA)
Food & Beverage	Production, processing and storage of foods (Meats, fish, fruits, cooking oils, animals and animal feeds)	≤ 1 ton/day	> 1 ton/day
	Milk processing factory	≤ 40 tons/day	> 40 tons/day
	Tapioca and tapioca products processing factory	40 - 80 tons/day	> 80 tons/day
	Sugar processing factory	≤ 30 tons/day	> 30 tons/day
	Alcohol processing factory	≤ 500,000 litre/day	> 500,000 litre/day
	Drinking water processing factory	All	-
	Tobacco production factory	All	-
Garment & Clothing	Textile, fabric and clothes making and dyeing factory	All	-
	Leather soaking and tanning factory	All	-
	Leather processing factory	≤ 1 million pieces/year	> 1 million pieces/year
Chemicals & Plastics	Petroleum and hydrocarbon factory	-	All
	Chemical products production factory	-	All
	Medical equipment and pharmaceutical product factory using chemical reaction and bio-chemicals	-	All
	Cleaning products, polishing and making up equipment factory	≤ 10 tons/day	> 10 tons/day
	Rubber processing factory	50 - 200 tons/year	> 200 tons/year
	Plastic product production factory	< 400 tons/year	> 400 tons/year

Appendix 3

Grouping List of Investment Projects and Activities Subject to EIA (Issued with Environmental Impact Assessment Guidelines (2011)) (Part 2/2)

Industries	Type of Investment Projects and Activities	Group 1 (PEIA)	Group 2 (CEIA)
Electronics	Home appliances, office equipment, and electrical tools processing factory	All	-
	Automotive battery and alkaline battery factory	≤ 70 tons/year	> 70 tons/year
	Spare parts, automobile parts and related machines factory	≤ 1,000 tons/year	> 1,000 tons/year
	Home appliances production factory	≤ 10,000 units/year	> 10,000 units/year

Glossary – Section 1 to 9 Operational Requirements

AFTA	ASEAN Free Trade Area
AH	Asian Highways
ASEAN	Association of Southeast Asian Nations
BCC	Business Competition Commission
BRI	Belt and Road Initiative
CEDR	Centre of Economic Dispute Resolution
CIT	Corporate Income Tax
DIMEX	Department of Import and Exports
DIP	Department of Intellectual Property
DTA	Double Taxation Agreement
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
HS Code	Harmonised Commodity Description & Coding System
IDRC	International Development Research Centre
IP	Intellectual Property
LAK	Lao Kip
LDC	Least Developed Country
LLC	Limited Liability Company
LNAS	Laos National Academy of Science
LPI	Logistics Performance Index

LPRP	Laotian People's Revolutionary Party
MoF	Ministry of Finance
MOST	Ministry of Science and Technology
NSDEP	National Socio-Economic Development Plan
OEDR	Office of Economic Dispute Resolution
PPP	Public-private Partnership
R&D	Research and Development
RCEP	Regional Comprehensive Economic Partnership
RMB	Renminbi
S&T	Science and Technology
SEZ	Special Economic Zones
SMD	Standardisation and Measurement Department
SME	Small and Medium-sized Enterprises
STDS	Science and Technology Development Strategy
STI	Science Technology and Innovation
THB	Thai Baht
USD	United States Dollar
VAT	Value Added Tax
VITA	Vientiane Industrial Trade Area
WTO	World Trade Organization

Glossary – Section 10 Environmental Requirements

ASEAN	Association of Southeast Asian Nations
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
CEIA	Comprehensive Environmental Impact Assessment
DONRE	Department of Natural Resources and Environment
EDD	Environmental Due Diligence
EIA	Environmental Impact Assessment
MONRE	Ministry of Natural Resources and Environment
NMHC	Non-methane Hydrocarbon
PEIA	Preliminary Environmental Impact Assessment
TVOC	Total Volatile Organic Compounds

3.7 Guide to Malaysia

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

1. Overview of Malaysia

Executive Summary

Malaysia has sustained rapid growth and economic development since gaining independence in 1957 and is now on the edge of becoming a high income country. It is an open economy which actively supports investments and international trade.

The country is engaged in seven bilateral trade agreements with other countries in Asia-Pacific, Latin America and Western Europe. These agreements eliminate tariffs and incentivise investments in a number of industries. As part of the Association of Southeast Asian Nations (ASEAN), Malaysia also benefits from six other multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Malaysia is also an attractive country for foreign investments due to its long lasting political stability. However, the effects of the recent regime change and corruption scandal need to be considered before investing in the country.

1. Overview of Malaysia

I. Country Profile[1,2,3,4,5,6,7]

Malaysia has consistently exhibited openness to trade and investment, with a trade to gross domestic product (GDP) ratio averaging around 130% over the last decade. The country diversified itself from an agricultural and commodity-based economy to a large player in the manufacturing and service sector, and is now also a leading exporter of electrical appliances. Malaysia's open policies related to trade and investments have been crucial for employment creation and income growth. Malaysia is classified as an upper-middle income country and is expected to transform to a high income country by 2024. However, to ensure future development, the government has to sustain the private sector activities as the external environment is increasingly challenging Malaysia's export-led growth.

GDP *(in USD)*
372.7 billion (2019f)
354.9 billion (2018)

GDP Per Capita *(in USD)*
11,484 (2019f)
11,075 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 8.8%
Industry: 37.6%
Services: 53.6%

External Trade *(% of GDP)*
Import: 62.6% (2018)
Export: 69.7% (2018)

Population
32.45 million (2019)
World ranking: 45/191

Median Age
28.7 (2018)
World ranking: 130/228 (from oldest to youngest)

Language
Bahasa Malaysia (official)
English
Chinese

English Literacy
High proficiency (2018)
World ranking: 22/88

Government Structure
Federal constitutional monarchy

Land Area
328,550 sq. km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions

International trade agreements provide various benefits for the participating countries. It allows companies of two or more countries to trade goods with eliminated or decreased tariffs which enhances economic growth on both sides. Malaysia is a full member of ASEAN and the World Trade Organization (WTO), which gives the country preferential access to the Southeast Asian markets and international trade.

Currently, Malaysia has 15 signed and effective trade agreements, including seven bilateral and eight collective trade agreements, including the ASEAN Free Trade Area (AFTA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). In addition, the ASEAN – Hong Kong Free Trade Agreement (FTA) has been signed and will come into effect soon (see section below). Furthermore, there are five bilateral trade agreements under negotiation (with the US, European Union (EU), European Free Trade Association, Regional Comprehensive Partnership, and South Korea) and another six proposed. The most recent negotiations began in June 2019, where Malaysia initiated bilateral FTA negotiations with South Korea. However, negotiations between Malaysia and the EU have been suspended due to rising tensions between the two parties. In March 2019, the EU implemented restrictive measures against Malaysian palm oil and related products. Malaysian government is considering retaliatory actions including suspending free-trade discussions with the EU and restricting imports of French products.

Signed and Effective Bilateral Trade Agreements[8] (Part 1/2)

	Affected Industry	Agreement (effective date)
	• Agriculture • Industrial products • ICT	**Japan-Malaysia Economic Partnership Agreement (2006)** • Comprehensive agreement covering the liberalisation and facilitation of trade and investments. • Progressive reduction or elimination of nearly all tariffs on industrial and agricultural products (including forestry and fishery). • Foster cooperation in education and human resources development, information and communications technology (ICT), as well as science and technology.
	• Agriculture • Industrial products • Healthcare	**Malaysia-Pakistan Closer Economic Partnership Agreement (2008)** • Trade liberalisation, investment facilitation and technical cooperation in areas such as intellectual property protection, construction, tourism, healthcare and telecommunications. • Progressive reduction or elimination of tariffs on industrial and agricultural products.
	• All	**New Zealand-Malaysia Free Trade Agreement (2010)** • Liberalisation of trade in goods and services, travel facilitation between the two countries for individuals. • Full tariff elimination of exports from Malaysia (i.e. 0% duty on all goods entering into New Zealand).

Signed and Effective Bilateral Trade Agreements[8] (Part 2/2)

	Affected Industry	Agreement (effective date)
	• Healthcare • Telecom • Retail	**India-Malaysia Comprehensive Economic Cooperation Agreement (2011)** • Progressive reduction or elimination of tariffs on industrial and agricultural products. • Allows foreign equity shareholding from 49% to 100% in sectors such as professional services, healthcare, telecommunications, retail and environmental services.
	• Industrial products • Food • Apparel	**Malaysia-Chile Free Trade Agreement (2012)** • Progressive reduction or elimination of tariffs on industrial products (e.g. electronics, rubber, paint), wood, metals, food, apparel, and clothing. • Excluded items: alcoholic beverages, tobacco, explosive and some foods (e.g. rice, sugar, and honey).
	• Telecom • Financial services	**Australia-Malaysia Free Trade Agreement (2013)** • Complement the ASEAN-Australia FTA with the liberalisation of services and investment facilitation in telecommunications and financial services. • 0% duty on Malaysian exports; Malaysia will eliminate 99% of tariffs by 2020.
	• Textile • Agriculture and food	**Malaysia-Turkey Free Trade Agreement (2015)** • Progressive reduction or elimination of tariffs on textile, agricultural and fishery products, food.

Signed and Effective Regional Trade Agreements as Member of the ASEAN

As a member of the ASEAN, Malaysia benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

In addition to these bilateral and multilateral agreements, another recent key FTA for Malaysia is the CPTPP, which opened up an important trading bloc.

The Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)[9]

Originally an American initiative, the Trans-Pacific Partnership (TPP) has been amended since the withdrawal of the USA. The remaining 11 countries therefore decided to sign a new FTA called the CPTPP or TPP11. This agreement is set between Canada and 10 other countries in Latin America and Asia-Pacific: Chile, Peru, Mexico, Australia, New-Zealand, Singapore, Brunei, Malaysia, Vietnam and Japan. The CPTPP fully entered into force in January 2019 creating a trading bloc of 495 million consumers representing an estimated 13.5% of global GDP with reduced tariffs for agriculture, metals, wood and fishery products.

The Association of Southeast Asian Nations (ASEAN)

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

ASEAN Members


Indonesia


Singapore


Malaysia


Philippines


Thailand


Brunei


Vietnam


Laos


Myanmar


Cambodia

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

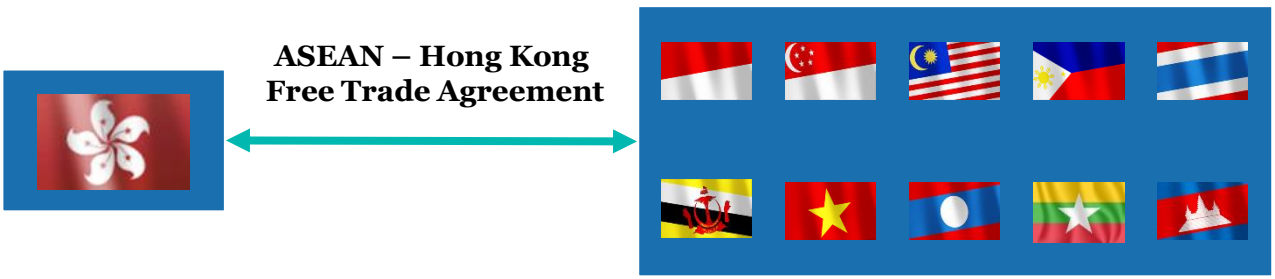
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11,12]

Malaysia is a federal constitutional monarchy composed of 13 states. Nine of these states have hereditary rulers, the Sultans. Each of them serves as the constitutional head of their state. The other four states are headed by governors appointed for fixed terms. The King of Malaysia (the Yang di-Pertuan Agong or Paramount Ruler) is elected by the Sultans from among their number for five years. He acts as the Head of the State under the advice of the government (led by the Prime Minister).

- In Malaysia, the executive power is shared between the Federal Government headed by the Prime Minister, and the sultans/governors of the 13 states. Each state has its own "local" government.
- The legislative power is shared between the Federal House of Representatives (Dewan Rakyat), the Senate (Dewan Negara), and the states' elected legislative assemblies. The Malaysian voters also elect the 222 members of the Dewan Rakyat. The Prime Minister is selected from these members.
- The judiciary system is independent from the executive branch.

In May 2018, Malaysia underwent its first regime change in its political history. During the 14th Malaysian General Election, the United Malays National Organisation (UMNO), was defeated by the Pakatan Harapan (PH or Alliance of Hope); therefore ending six decades of one-party rule. The next general election will be held in 2023.

C. Political Uncertainties and Historical Coup Records[13,14,15]

Malaysia is considered as a fairly politically stable country as it has been ruled by the same elected party for more than 60 years. Malaysia ranked 89th out of 194 countries in the World Bank's Political Stability Index (with an above average value of 0.16 in 2017). However, some recent events can create political uncertainties.

- The ruling coalition is facing internal tensions. The Pakatan Harapan coalition is formed by four different parties, and recently major ideological differences have emerged. Three of them want to reform the country and eliminate previous practices, whereas the current leader (Mahatir) is more conservative. The other major issue shaking the coalition is the change of leadership announced for 2020. The current Prime Minister, Mahathir Mohamad, pledged to hand over the power to Anwar Ibrahim in 2020. If he keeps his promise, Malaysia's political direction would then experience a change, thus fuelling a state of uncertainty.
- Malaysia was recently shaken by a major corruption scandal involving the former Prime Minister (PM) Najib Razak. When he became PM in 2009, Mr Najib created the Malaysia Development Berhad (1MDB) fund, originally intended as a vehicle to create long-term economic development in Malaysia. In 2015, six different countries launched an investigation on the fund for money laundering. The US Department of Justice declared that USD 4.5 billion were misappropriated from 1MDB and that Mr Najib used his position as PM to channel around USD 800 million for personal use. He was arrested in 2018 and is currently awaiting trial. Top Malaysian executives were also affected by this scandal, which led to the change of political regime as mentioned above.

Source:

[1] *The World Bank, 2019*

[2] *Malaysia 10-Year Forecast, Fitch Solutions, 2019*

[3] *The World Factbook, CIA*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

[5] *Malaysia population, Worldometers 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Malaysia, Worldatlas*

[8] *Malaysia Ministry of International Trade and Industry; WTO Regional Trade Agreements database*

[9] *What is the CPTPP?, Government of Canada*

[10] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release 2019*

[11] *Doing Business In Malaysia, PwC, 2018*

[12] *'New' Malaysia: four key challenges in the near term, Lowy Institute, 2019*

[13] *Political Stability And Absence Of Violence/Terrorism, World Bank*

[14] *Malaysia's economy suffers as political instability continues post GE14, ASEAN Today, 2019*

[15] *Malaysia's former prime minister Najib Razak faces more than 100 years in jail, ABC News, 2019*

2. Legal Environment and Competition Law

Executive Summary

Malaysia attracts foreign investments with open economic policies. Only a few sectors are restricted for foreigners and there has been no overarching ceiling for foreign equity ownership since 2009.

Mainland China and Hong Kong investors can choose to set up different types of business entities. It is possible to set up a 100% foreign-owned enterprise such as a Limited Liability Company, amongst other types. In addition, foreign investors can set up a Branch office to expand their business to Malaysia and explore opportunities to expand their manufacturing footprint on a short-term basis, with comparatively low administrative efforts.

Malaysia has a relatively liberalised import and export tariff regime and many goods can be traded without a license.

2. Legal Environment and Competition Law

Malaysia welcomes and actively attracts foreign direct investment (FDI). There are no restrictions on the repatriation of capital and profits. Since the Foreign Investment Committee was abolished in 2009, the regulations around FDI were liberalised over different phases. In addition, the overarching ceiling of 70% foreign equity ownership has been removed. Currently, the restrictions on foreign investment are minimal, however, there are still sector-specific regulations issued by the relevant government departments. Investments are also governed by different laws, such as the Industrial Coordination Act (1975) governing investments in manufacturing. The Act requires any company or individual engaging in manufacturing activities (with a few exemptions) to obtain a license issued by the Malaysian Investment Development Authority (MIDA).

Malaysian law only distinguishes between Malaysian and foreign companies and does not outline special laws for Mainland China or Hong Kong companies that consider expanding their manufacturing footprint to Malaysia.

The Principal Industries that are Subject to Restrictions on Foreign Investment Include[1,2]

- Financial services;
- Capital markets;
- The insurance and Islamic insurance (takaful) industries;
- Textile, restaurant (non-exclusive), bistro, jewellery shops;
- Communications and multimedia;
- Wholesale and distributive trade (in relation to hypermarkets and food & restaurant businesses);
- Education;
- Freight forwarding and shipping;
- Energy supply; and
- Professional services.

The upper limit on foreign equity ownership of investment banks, Islamic banks, insurance companies, and takaful operators is 70%. Telecommunications network providers are also limited to 70% foreign ownership. For the oil and gas sector, the foreign ownership limit is set at 49%. For fund management and manufacturing companies, 100% foreign ownership is allowed. Nevertheless, there are certain foreign investment share limitations as well as minimum required ownership by indigenous ethnic groups, known as Bumiputera, in specific sectors. For further information, please refer to section 8 of this report or contact the Ministry of International Trade and Industry (MITI) or the MIDA.

I. Types of Legal Business Entities Available for Foreign Investment[2,3,4]

There are several different main structures available for investors seeking to expand their manufacturing footprint or business from Mainland China or Hong Kong to Malaysia. The country liberalised its equity policies in 2009 and now offers the possibility of setting up a 100% foreign-owned company in most industries. For industries where 100% foreign ownership is restricted, investors from Mainland China and Hong Kong could consider entering into a joint venture with a local partner. The most common company type in Malaysia is the Limited Liability Company (limited by shares), as the shareholders are not liable for the company's debts beyond the amount of share capital they have subscribed to.

Some main forms of doing business or expanding the manufacturing footprint to Malaysia include:

1. Limited Liability Company (LLC)
2. Limited Liability Partnership (LLP)
3. Partnership or sole proprietorship
4. Joint Venture (JV)
5. Branch office
6. Representative/Regional office

Limited Liability Company (LLC)

LLCs must meet the formal requirements stated in the Companies Act 1965. There are three applicable company types. Each of them has to appoint auditors to verify the financials, records, accounts and statements; they are also obliged to have at least one company secretary attending the annual general meeting as well as the board and shareholders' meetings.

A foreign investor can be the sole shareholder of the company (holding 100% of the shares). However, if the same person wants to be the sole director of the company, the Companies Act requires the person to reside in Malaysia. Companies are established as separate legal entities with a minimum of one and a maximum of 50 shareholders (if the company is private).

A Mainland China or Hong Kong company seeking to expand to Malaysia has to apply for an employment pass. A paid-up capital of MYR 500,000 (around USD 120,000) is required if the company is 100% foreign owned. A mixed foreign and local ownership requires MYR 350,000 (around USD 84,000).

Companies Limited by Shares

This type of company limits the liability of its members to the extent of the amount of capital invested. This means that if the company becomes insolvent, the members are not obliged to pay the company's debts (if no guarantee is given by any member). This business type is identified in Malaysia as "Sendirian Berhad" or "Sdn. Bhd." together with the company name.

Companies Limited by Guarantee

The liability of this company type is limited to the amount the members guaranteed or specified in the Memorandum and Articles of Association during the establishment process. This type is often chosen by non-profit organisations, societies and clubs.

Unlimited Companies

This type of company does not place a limit on the liability of its members. This means that the members of this company are personally liable for the debts of the company without limit, if the assets of the company are not sufficient. Generally, this company type is very similar to partnerships, however, the major difference is that the unlimited company is free to return capital to its members and it is required to have articles of association.

Registration Process and Timeline

As the first step for a Mainland China or Hong Kong company wishing to register as an LLC in Malaysia, an application of the availability of the company name has to be submitted to the Companies Commission Malaysia (CCM). In addition, the applicant has to attach a letter of consent from the company which owns the trademark or the company name. The approval of the company name usually takes approximately three days.

Subsequently, together with a registration fee of MYR 1,000 (around USD 240), various registration documents have to be submitted to the CCM within one month upon approval of the name (non-exhaustive):

- The Application for Registration of a Company which includes amongst others:
  - A description of the nature of the business;
  - Particulars of the director(s);
  - Registered address; and
  - Where a company member is a corporate body, a copy of the board resolution authorising the subscription for share(s) of the company, certified by two directors or a director and the secretary of the corporate body.

If all requirements are met, the CCM issues a Notice of Registration which means that the company is duly registered under the Companies Act 2016. The incorporation process usually takes approximately 10 working days.

Limited Liability Partnership (LLP)

LLPs combine the characteristics of a conventional partnership and a private company. They provide flexibility of internal arrangements through an agreement between partners as well as limited liability status. An LLP is a separate legal entity, therefore, any changes in relation to the partners will not affect the rights of liabilities of the LLP itself.

LLPs are governed under the Limited Liability Partnerships Act 2012. They are separate legal entities and the company names in Malaysia end with “PLT” which stands for Perkongsian Liabiliti Terhad. A minimum of two shareholders is required and there is no maximum limit. The advantage of an LLP is that the registration process is much easier compared to other company types, therefore, entrepreneurs often chose an LLP to start their business.

The registration process and timeline are basically the same as for an LLC, however, in this case the applicant must provide information about every person who is going to be a partner.

Partnership or Sole Proprietorship

All partnerships and sole proprietorships except for LLPs are unincorporated and have to be registered with the Registrar of Businesses, which is also under the auspices of the Companies Commission Malaysia. Both business entities are covered under the Registration of Business Act 1956. As unincorporated entities, partnerships and sole proprietorships have unlimited liability, which means the liability can be extended to the personal assets of the partners or the sole proprietor. The advantage of these business types is that there is no audit requirements meaning less paper work and lower administrative costs. As such, this is a good option for starting a business.

Joint Venture (JV)

JVs can either take the structure of an LLC or a partnership. The term JV itself does not denote a separate and distinct business entity. Therefore, the formalities described under LLC and partnerships in Malaysia also apply here. JVs between foreign and local companies are common in Malaysia. Foreign investors often chose a JV with a local partner if the specific sector is restricted for foreigners.

Branch Office

Mainland China and Hong Kong companies that want to expand their operations to Malaysia for the short-term often choose to set up a branch office. Branch offices are easier to maintain administratively than LLCs, and a greater capital base may be available (for regulated industries). In addition, the closure of a branch is easier than the liquidation of an LLC. Branch offices are 100% owned by the head office and are not separate legal entities, therefore, the parent company is liable for the branch's liability. The Companies Act 2016 requires filing of audit reports from the branch office as well as from the parent company annually.

Registration Process and Timeline

The registration process is similar to that of the LLC. First, the availability of the company name has to be verified by the CCM, through the submission of the Application and Reservation for Availability of Name. In addition, attachment of a copy of the certificate of incorporation or registration of the foreign company is required. The approval process usually takes approximately three working days.

Upon approval of the company name, the registration fee - in case the Branch office is based on the amount of the authorised share capital of the foreign company - will need to be submitted to the CCM, along with all registration documents, such as:

- The Application for Registration of Foreign Company requires the following information:
  - Company name, registration number and registration date from the country of origin;
  - Share capital including details of classes and number of shares in its place of origin, if any;
  - For a company limited without share capital: amount undertaken by members to contribute to the assets of the foreign company in its place of origin in the event of being wound up;
  - Particulars of shareholders and directors.
- A confirmation of the consent of appointment;
- A certified copy of the registration certificate of the foreign company from its place of origin;
- A certified copy of its charter/statute/memorandum and articles of association.

Additionally, a few other memoranda may have to be submitted. For further details, please refer to the official portal of the Companies Commission of Malaysia (www.ssm.com.my/Pages/Home.aspx).

Representative/Regional Office

These two business types are not allowed to undertake any commercial activities in Malaysia, but only to represent their head offices when undertaking designated functions. They are not legal entities and therefore are not required to be incorporated under the Companies Act 2016. Setting up a representative or regional office needs approval from the Malaysia Government.

Representative Office

Mainland China and Hong Kong companies that wish to establish a presence in Malaysia without conducting business activities can choose this business type. A representative office is usually established to collect information on investment opportunities (especially in the manufacturing and service industries), enhance bilateral trade relations, promote export of Malaysian goods and services, and carry out research and development activities. It is easy to administer and does not have tax liabilities; however, in order to set up the office, the proposed operational expenditures per year should be at least MYR 300,000 (around USD 72,000).

Regional Office

A regional office is different from a representative office in terms of the different activities it is approved to conduct. A regional office can serve as a coordination centre for the foreign company's affiliates, subsidiaries and agents in Southeast Asia and the Asia Pacific region.

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[5,6]

The Malaysian Parliament has passed the Competition Commission Act 2010 and the Competition Act 2010, which came into force in 2011 and 2012 respectively. In addition, regulations prohibit anti-competitive behavior from existing in specific business sectors, notably the media, energy, telecommunications, and franchising sectors.

The new Competition Act regulates both Malaysian and foreign companies in case their actions have a competition restriction impact on the domestic market. The scopes of prohibition include:

1. Anti-competitive agreements: agreements which have the objectives or effects of significantly preventing, restricting or distorting competition in Malaysia; and
2. Abuse of dominant position: engaging in any conduct which amounts to an abuse of a dominant position in any market for goods or services in Malaysia.

The Malaysian Competition Commission (MyCC) executes the Competition Act. The MyCC is an authority established in 2011 pursuant to the Competition Commission Act. The laws outline general regulations and do not specify particular rules for Mainland China or Hong Kong businesses.

Anti-competitive Agreements

This law prohibits horizontal agreements between competitors as well as vertical agreements between different companies along the supply chain (e.g. retailer and distributor).

The following horizontal agreements between enterprises are prohibited:

- Fixing, directly or indirectly, a purchase or selling price or any other trading conditions;
- Sharing markets or sources of supply;
- Limiting or controlling i) production, ii) market outlets or market access, iii) technical or technological development, or iv) investment; and
- Performing an act of bid rigging.

The MyCC has indicated that anti-competitive agreements will not be considered as “significant” if:

- The combined market share of the parties does not exceed 20% in the relevant market; and
- The parties are not competitors and each of the parties individually has less than 25% share in any relevant market.

For vertical agreements, there is no prohibition on price fixing, which means that companies can, for instance, set minimum resale prices. However, the MyCC has indicated that it will take a strong stance against resale price maintenance that could lead to collusions. More information can be found in the Competition Act 2010 (www.mycc.gov.my/sites/default/files/CA2010.pdf).

Abuse of Dominant Position

The Competition Act also prohibits enterprises from abusing their dominant market position. A market position is considered dominant if one or more enterprises possess such significant power in a market to adjust prices, outputs or trading terms, without effective constraint from competitors or potential competitors. The MyCC states that generally a market share above 60% indicates market dominance. However, market share is not the only factor taken into account to assess the dominance of an enterprise. Under the Competition Act, an abuse of a dominant position may also include activities such as: directly or indirectly imposing an unfair purchase or selling price or other unfair trading conditions, or refusing to supply to a particular enterprise or group/category of enterprises. The entire list can be found in the Competition Act 2010 (www.mycc.gov.my/sites/default/files/CA2010.pdf).

B. Intellectual Property Protection Law on Trademarks[7,8]

A trademark is defined as a device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination thereof, which indicates that a certain good or service belongs to the owner of the trademark. Malaysia's overarching Intellectual Property (IP) regulation, including those related to trademark, is rated as average (ranked 24th out of 50). The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong companies.

Trademark protection is regulated by two layers of Malaysia's legislation as well as in the common law: the Trademark Act 1976 forms the primary legislative framework for the registration of a trademark. The Trade Marks Regulation 1997 is the subsidiary legislation thereunder, and the Trade Description Act 2011 provides for criminal enforcement against trademark infringement in the common law.

The administration of trademarks is overseen by the Intellectual Property Corporation of Malaysia (MyIPO). A Mainland China or Hong Kong company that wants to step into Malaysia can register its trademark at the MyIPO electronically. The registration process generally consists of seven steps:

1. Formality examination: submit the relevant documents to the MyIPO (myipo.gov.my/en/apply-for-trade-marks);
2. Search and examination: the examiner will check whether the trademark is in conflict with any existing trademarks and whether all conditions are fulfilled;
3. Objection: the applicant has to file a written response in case the trade mark submitted conflicts with an existing trademark in order to overcome an office action;
4. Hearing: if the applicant's written response is not accepted, the applicant can attend an oral hearing;
5. Acceptance and advertisement: if the trademark passes all examinations and meets all requirements, a Notice of Acceptance will be issued by the Trade Marks Registry to the applicant. In addition, the application will be issued in the Government Gazette;
6. Opposition: within two months of the advertisement, any person can file a Notice of Opposition. If so, the applicant of the trademark and the opposition party will engage in opposition proceedings, after which the examiner decides whether the opposition was successful or not. If the opposition is successful, the trademark will not be registered. However, the applicant can further appeal against the examiner's decision; and
7. Registration: if the trademark passed all the examinations, including any potential opposition, it will be registered and a Certificate of Registration will be issued.

The whole process usually takes approximately 12 - 18 months if there is no objection or opposition raised during the process. The costs range from USD 600 - 1,000 for a normal case. Trademarks in Malaysia are valid for 10 years and can be renewed. A trademark registered in Malaysia is only valid in Malaysia.

C. Import/Export Regulations and Licenses[9,10,11]

Malaysia has progressively liberalised its tariff regime and generally encourages import and export businesses. Most goods do not require an import or export license, however, in order to safeguard local manufacturers and national security, certain goods are either regulated through licenses or prohibited from trading.

The Custom Prohibition Act 1967 regulates amongst others the import of the following goods through imposing high tariffs or import license provisions by the corresponding authorities:

- Food & agricultural products;
- Motor vehicles;
- Electric domestic equipment (that uses more than 50 volt or 120 volt DC);
- Pharmaceutical products; and
- Steel products.

The complete list can be accessed at the official portal of the Royal Malaysian Customs Department (www.customs.gov.my/en/tp/pages/tp_ie.aspx).

Malaysia also strictly restricts the export of two goods (turtle eggs and rattan from Peninsula of Malaysia) and requires a permit to export certain other goods, such as sugar and rice.

If engaging in the import and export businesses, traders have to provide the following documents to the customs officials:

- Customs Export or Import Declaration;
- Commercial Invoice;
- Bill of Lading;
- Packing List; and
- Certificate of Origin.

Malaysia uses the Harmonised System (HS) for the classification of goods; all imported or exported goods must be categorised based on the Malaysian Customs tariff numbers.

D. Jurisdiction System on Business Related Matters[12]

The Malaysian legal system is built upon the British legal system and the principles of common law. There are generally two types of trials: the civil system and the criminal system. The former is about private law suits, whereas the latter deals with cases of someone being charged with a crime and brought to a trial in court to determine his innocence or guilt. The Malaysian court system comprises different levels:

- The Magistrates Court and Sessions Court are part of the first instance. Both have jurisdiction over civil and criminal matters. The Magistrates Court hears civil matters where the claim does not exceed MYR 100,000 (around USD 24,000), whereas the Sessions Court has jurisdiction to hear suits with the claim not exceeding MYR 1 million (around USD 240,000).
- Next, there are two High Courts - the High Court in Malaya and the High Court in Sabah and Sarawak. Both can act as appellate courts as well as first instance courts if the amount claimed exceeds MYR 1 million (around USD 240,000). In addition to the civil, criminal, appellate, and special powers divisions, the High Court of Malaya in Kuala Lumpur also has a commercial division.
- The Court of Appeal hears all civil appeals against decisions of the High Courts (except where it is against judgement or orders made by consent).
- The highest court in Malaysia is the Federal Court which hears appeals of civil and criminal decisions from the Court of Appeal.

Besides the ordinary courts, there are also specialised tribunals in Malaysia, for example, the Labour Court, the Tribunal for Consumer Claims, and the Industrial Court, which provide an alternative and expedited option to settle disputes between different parties.

Source:

[1] *Doing Business in Malaysia, PwC, 2018*

[2] *Doing business in Malaysia – Practical Law, Thomson Reuters, 2019*

[3] *Type of Business Entities in Malaysia, KL Management Services*

[4] *Sole Proprietor vs. LLP vs. General Partnerships vs. Company, 3E Accounting*

[5] *Antitrust and Competition Laws in Malaysia, Baker McKenzie, 2016*

[6] *Laws of Malaysia – Competition Act 2010 (Act 712), Malaysia Competition Commission*

[7] *U.S. Chamber International IP Index, GIPC, 2019*

[8] *Malaysia: Trade Marks 2019, International Comparative Legal Guides, 2019*

[9] *Import/Export, Royal Malaysian Customs Department*

[10] *Import and Export Procedures in Malaysia – Best Practices, ASEAN Briefing, 2017*

[11] *Malaysia Regulations, and Standards, International Trade Administration through export.gov*

[12] *Malaysia - Dispute Resolution Guide 2016, Conventus Law*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation in Malaysia are personal and corporate income tax, sales and service tax among other specific business taxes. The former goods and service tax was repealed in 2018 and replaced with a new sales tax and service tax framework.

Foreign Direct Investment (FDI) is generally welcomed in Malaysia. Most sectors are open for investment, but certain sectors have limitations on equity ownership. Additionally, increasingly relaxed foreign ownership rules have led to the presence of many foreign-owned banks.

While the Malaysian Ringgit (MYR) is a controlled currency, the use and exchange of local and foreign currency in Malaysia is generally allowed, but with a few restrictions.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

The principal tax laws governing the corporate tax provisions in Malaysia include the Income Tax Law, Sales Tax Act, and Service Tax Act. In general, all companies in Malaysia, regardless of their tax residence, are subject to corporate income tax (CIT). There is no value added tax (VAT) in Malaysia; instead sales tax and service tax are levied on certain goods and services sold and rendered in Malaysia.

Companies in Malaysia are generally taxed on income derived from activities in Malaysia only. However, businesses in the banking, insurance, air transport, or shipping industries will be taxed on worldwide income.

A. Corporate Income Tax (CIT)[1]

Tax Calculation

The year of assessment (YA) is the calendar year. The basis period for a company is the fiscal year that ends in a particular YA. CIT is levied on taxable income. This includes all gains or profits from a trade or business, dividends, interest, royalties, and other earnings.

Applicable Tax Rate

The standard tax rate for resident companies is 24%.

Those with paid-up capital of MYR 2.5 million or less, and not part of a group of companies where a related company has a paid-up capital of more than MYR 2.5 million, are instead taxed at the following rates:

Taxable Income	Tax Rate
The first MYR 500,000	17%
Amounts in excess of MYR 500,000	24%

Non-resident companies will be taxed according to the following rates:

Type of Income	Tax Rate
Business income	24%
Royalties	10%
Rental of moveable properties	10%
Technical or management service fees	10% *(Note 1)*
Interest	15% *(Note 2)*
Dividends	Exempt
Other income	10%

Note 1: Only services rendered in Malaysia are liable for taxation.

Note 2: Paid to a non-resident by a bank or a finance company in Malaysia

Deductions

In general, expenses are tax deductible if they are wholly and exclusively incurred in the production of income. However, some expenses are specifically non-deductible, such as:

- Domestic, private or capital expenditures;
- Lease rentals for cars exceeding MYR 50,000 per car, or MYR 100,000 if the vehicle cost MYR 150,000 or less and has not been previously used;
- Employer's contributions to unapproved schemes, or approved schemes in excess of 19% of the employee's remuneration;
- Non-approved donations; and
- Payments made to non-residents where the withholding tax is not paid.

Consolidated Filing

There is a group relief provision in Malaysia. A company may surrender a maximum of 70% of its adjusted loss for a YA to one or more related companies. This provision is limited to a company's first three YAs after the completion of its first full basis period. There are certain conditions that must be met by both the surrendering company and the related claimant company, including but not limited to:

- Be a resident and incorporated in Malaysia;
- Have paid-up capital of MYR 2.5 million or more at the beginning of the basis period;
- Use the same accounting period; and
- Be "related companies" as defined in the law, and remain "related" throughout the relevant basis period as well as the 12 previous months.

Companies that enjoy certain incentives such as pioneer status (PS), investment tax allowance (ITA), reinvestment allowance etc. are not eligible for group relief. Companies which have unutilised ITA or unabsorbed pioneer losses upon the expiry of their PS or ITA incentives, are also not eligible for group relief.

Taxable Losses

In Malaysia, any business losses can be set off against income from all sources in the current year. Unutilised losses in a YA can only be carried forward for a maximum period of seven YAs to be used against future income. If a dormant company has any substantial change of shareholders, the unutilised losses will be written off. Carryback of losses is not permitted.

Tax Return and Payment

Tax returns must be filed within seven months of the end of the basis period. Advance CIT can generally be paid in 12 monthly installments. In general, tax of a non-resident company is collected through withholding tax, which is payable within one month of payment.

Double Tax Agreement (DTA) with Hong Kong[2]

Malaysia has entered into DTAs with 74 countries as of June 2019. The DTA between Malaysia and Hong Kong has been in effect since December 2012.

DTAs aim to eliminate double taxation. The table below illustrates the tax rates applied on various sources of income stipulated in the DTA between Malaysia and Hong Kong:

Category	Rate
Interest	10% or 0% *(Note)*
Royalties	8%
Technical Fees	5%

Note: Interest derived from certain government bodies are exempt from taxation.

B. Value Added Tax (VAT) and Sales and Service Tax (SST)[1,3]

Sales Tax

Effective Date and Scope of Taxation

The Sales Tax is one of the taxes implemented on 1 September 2018 to replace the previous Goods and Service Tax (GST). Sales Tax is levied on all imported or manufactured goods, unless specifically exempt.

Special treatment is given to transactions involving Designated Areas (Labuan, Langkawi and Tioman) and Special Areas (free zones, licensed warehouses, licensed manufacturing warehouses and the Joint Development Area).

Applicable Tax Rate

Class of Goods	Rate
Fruit juices, certain foodstuffs, building materials, personal computers, telephones, and watches	5%
All other goods (except petroleum, and goods specifically exempted)	10%

Goods Exempted

Certain goods are specifically exempted from Sales Tax, including:

- All goods manufactured for export;
- Live animals, certain food items including meat, seafood, milk, eggs, vegetables, fruits, and bread;
- Bicycles, and bicycle parts and accessories;
- Natural minerals, and chemicals; and
- Pharmaceutical products.

For a complete list of goods exempted from Sales Tax, please refer to the official Sales & Service Tax website by the Royal Malaysian Customs Department (mysst.customs.gov.my).

Service Tax

Effective Date and Scope of Taxation

The Service Tax is the other tax implemented on 1 September 2018 to replace GST. Service Tax is charged on any taxable services provided in Malaysia, including sale of food and drink, telecommunications services, certain professional services, and domestic air transport, among other services. Imported taxable services acquired by businesses in Malaysia from providers outside the country will also be subject to Service Tax.

Service Tax should be paid when payment for the taxable services is received. If payment is not received within 12 months after issuing the invoice, Service Tax will be due on the day immediately after the 12 month period.

Like the Sales Tax, special treatment will be given to transactions involving Designated Areas (Labuan, Langkawi and Tioman) and Special Areas (free zones, licensed warehouses, licensed manufacturing warehouses and Joint Development Area)

For a complete list of taxable services, please refer to the official Sales & Service Tax website by the Royal Malaysian Customs Department (mysst.customs.gov.my).

Applicable Tax Rate

The standard Service Tax rate is 6%.

The exception is the provision of charge or credit card services, for which the Service Tax is MYR 25 per year on each card.

Tax Incentives

Malaysia offers a wide range of tax incentives for domestic and foreign companies wishing to invest. The two main incentives are the Pioneer Status (PS) and Investment Tax Allowance (ITA) incentives. The PS provides tax exemptions for companies participating in promoted activities. The ITA is granted based on the capital expenditure incurred for promoted activities. Both incentives are generally given for a period of five or 10 years, and are mutually exclusive. For more information on tax incentives, please refer to section 9 of this report.

C. Transfer Pricing Provisions

Malaysia's transfer pricing (TP) provisions adopts the arm's length principle of the Organisation for Economic Co-operation and Development's (OECD) TP Guidelines. There is no de minimis rule in Malaysia's TP provisions. Taxpayers that do not meet the following thresholds, may be allowed to prepare limited documentation:

- Companies with gross income of MYR 25 million or more, and related party transactions totaling MYR 15 million or more; and
- The threshold for financial assistance is MYR 50 million.

Malaysia has adopted the three-tiered documentation outlined in the OECD's Action Plan on Base Erosion and Profit Shifting. The three levels of documents required to be kept are the master file, local file, and country-by-country report. An ultimate parent company, or domestic parent of a multinational company, must file a country-by-country report for the entire financial year within 12 months of the end of the company's basis period.

D. Statutory Auditing Requirements and Accounting Standards[1]

Audit Requirements

A foreign company desiring to establish a place of business or to carry on business within Malaysia is required by the Companies Act 2016 to register with the Companies Commission of Malaysia (CCM). All registered companies are required to keep accounting records that can sufficiently explain the transactions and financial position of the company, and enable proper audits of the company. These records must be kept at the company's registered office or other places that the directors deem appropriate. The records must be retained for seven years.

Public companies must appoint an auditor before the first annual general meeting of the company. Private companies must appoint an auditor at least 30 days before the end of the first period when they need to submit financial statements. Private companies can be exempted from appointing an auditor by the CCM.

Financial Statements

The directors must present a set of financial statements in accordance with the approved accounting standards issued or adopted by the Malaysian Accounting Standards Board (MASB), and the requirements of the Companies Act 2016. The financial statements should be presented in MYR. Publicly listed companies are additionally required to provide quarterly reports within two months after the end of each quarter, and audited financial statements within four months of the end of the basis period to their shareholders. These quarterly reports and financial statements should include an income statement, balance sheet, cash flow statement, and explanatory notes.

Financial Reporting Framework

The MASB is the sole authority in Malaysia for issuing accounting standards and other financial reporting requirements. All financial statements prepared have to comply with approved accounting standards issued by the MASB.

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)[4]

Bank Account Setup Requirements

In general, a resident is allowed to open foreign currency accounts with licensed onshore banks, or non-resident financial institutions for any purpose. Opening bank accounts for foreigners is usually regarded as convenient and easy in Malaysia. Documents required will differ according to each bank, but general documents necessary include:

- Residency permit, visa documents, or other proof of right to be in Malaysia;
- Employment details to prove business activities in Malaysia;
- Minimum deposit amounts, which differ by bank and by account type; and
- Certain other personal information such as passport or fingerprints.

FDI Restrictions

In Malaysia, there are certain limits on the amount of equity a foreign business can own in certain sectors. For example, foreign companies can only own 70% of a business in the investment bank, Islamic bank, insurance, and telecommunications industries. Foreign companies are also only allowed to own 49% of oil and gas businesses. For more information on FDI restrictions, please refer to section 8.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[5]

Local Currency

Foreigners are generally allowed to use MYR in Malaysia without many restrictions. For example, both resident and non-resident individuals may bring in MYR up to the equivalent of USD 10,000 without needing approval. However, amounts above this threshold will require approval from the Central Bank of Malaysia. Investments may also be made freely using MYR within Malaysia, buying or selling ringgit against foreign currency with licensed onshore banks.

However, taking MYR out of Malaysia will be subject to more restrictions. For example, foreigners may remit their profits, dividends, or other income from businesses in Malaysia. However, the remittance may only be done in foreign currency, and not in MYR.

Foreign Currency

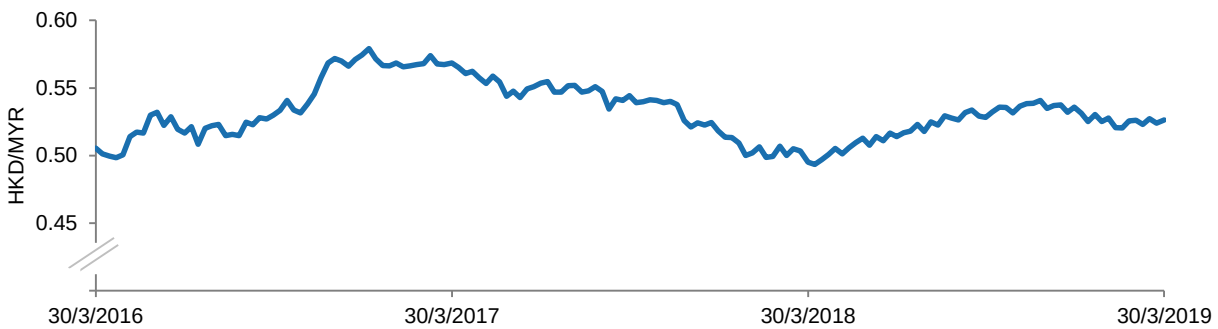
The use of foreign currency is also generally allowed in Malaysia. Foreigners are generally allowed to bring into or take out of Malaysia any amount of foreign currency. Foreign currency accounts can also be opened with licensed onshore banks, and funds remitted abroad in foreign currency. However, most activities involving foreign currencies such as obtaining foreign currency financing, buying or selling foreign currency, or buying or selling financial instruments in foreign currencies, will need to be performed with licensed onshore banks, and not overseas banks.

For a detailed list of restrictions on local and foreign currency in Malaysia, please refer to the Foreign Exchange Administration rules issued by the Central Bank of Malaysia (www.bnm.gov.my/index.php?lang=en&ch=fea&pg=en_fea_overview&ac=100)

C. Policy on Foreign Exchange Rate and Three-year Historic Trend[6]

Malaysia's official currency has been the Malaysian Ringgit (MYR) since 1975. The currency's value to the US dollar fluctuated from 3.80 to 4.40 before the Central Bank of Malaysia pegged the Ringgit to the US Dollar in September 1998, which was maintained until 2005. Today, the MYR remains a controlled currency by the Central Bank of Malaysia.

Three-year Exchange Rate Trend for HKD to MYR



Date	HKD/MYR Rate
30/03/2016	0.5018
30/03/2017	0.5695
30/03/2018	0.4923
30/03/2019	0.5200

D. List of Banks from Foreign Investments[7]

As of 1 June 2019, there were 26 fully licensed commercial banks in Malaysia. Of those 26, the 18 shown in the below table are foreign-owned.

#	Bank Name
1	BNP Paribas Malaysia Berhad
2	Bangkok Bank Berhad
3	Bank of America Malaysia Berhad
4	Bank of China (Malaysia) Berhad
5	China Construction Bank (Malaysia) Berhad
6	Citibank Berhad
7	Deutsche Bank (Malaysia) Berhad
8	HSBC Bank Malaysia Berhad
9	India International Bank (Malaysia) Berhad
10	Industrial and Commercial Bank of China (Malaysia) Berhad
11	J.P. Morgan Chase Bank Berhad
12	MUFG Bank (Malaysia) Berhad
13	Mizuho Bank (Malaysia) Berhad
14	OCBC Bank (Malaysia) Berhad
15	Standard Chartered Bank Malaysia Berhad
16	Sumitomo Mitsui Banking Corporation Malaysia Berhad
17	The Bank of Nova Scotia Berhad
18	United Overseas Bank (Malaysia) Berhad

Source:

[1] *2018/2019 Malaysian Tax Booklet, PricewaterhouseCoopers*

[2] *Comprehensive Double Taxation Agreement – Malaysia, Inland Revenue Department*

[3] *Malaysia Sales & Service Tax official website, Royal Malaysian Customs Department*

[4] *How to open a bank account in Malaysia, TransferWise*

[5] *Foreign Exchange Administration, Bank Negara Malaysia*

[6] *Bloomberg*

[7] *List of Licensed Financial Institutions, Bank Negara Malaysia*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Malaysia's labour law system is mainly based on common law. However, employers and employees are given a great degree of flexibility to negotiate terms on labour contract.

Specific low income employees are protected with maximum working hours, minimum wages and welfare by the Employment Act.

Foreign employees are generally welcomed to work in Malaysia as long as the sponsoring company satisfies the minimum paid-up capital requirements. In addition, expatriate workers are required to obtain a work permit for legal employment in Malaysia.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2,3,4,5,6]

Based on the common law legal system, the employment laws in Malaysia are mainly based on the following sources:

- Statues: the Parliament makes laws or the Act of Parliament, examples include the Employment Act, Industrial Relations Act, Trade Unions Act, Employees Provident Fund Act etc.;
- Subsidiary legislation: ministerial orders or regulations made under relevant statutes, examples include Employment (Part-time Employees) Regulations and Minimum Wages Order etc.; and
- Case law from other jurisdictions, in particular the commonwealth jurisdictions.

Minimum Legal Working Age

The minimum legal working age for full-time employment is 15 years old. However, under certain conditions, younger people can be employed:

- Children: people under the age of 15 can only engage in certain non-hazardous light work, and are subject to working hours restrictions according to the Children and Young Persons (Employment) Act.
- Young person: people aged between 15 and 18, can only be employed in non-hazardous work and are also subject to working hour restrictions.

The Employment Act (EA)

Among others, the EA is the major law governing the minimum employment terms and conditions in peninsular Malaysia. The following criteria describe the condition that employees must meet to fall under the EA scope:

- The employee earns a monthly salary of MYR 2,000 or below; or
- The employee earns a monthly salary exceeding MYR 2,000 and is:
    - Engaged in manual labour or supervises manual labourers; or
    - Operating or maintaining any mechanically propelled vehicle; or
    - Working in any vessel registered in Malaysia; or
    - A domestic servant.

The employees who fall under the scope of the EA are referred as “EA employee” hereafter. Their employment satisfy the minimum terms and conditions set in the EA. The employment relationship of employees who are not covered by the EA (“Non-EA employee” hereafter) is bound by the employment contract, as well as subject to other statues and case law applicable.

The states of Sabah and Sarawak have equivalent legislation as the EA, although some of the provisions may differ.

Labour Contract

Under the EA, labour contracts can be in written or oral form. However, EA employees who worked for more than one month must enter into a written contract with their employer.

There are no restrictions on the maximum employment duration by law. Thus fixed term contracts are allowed in Malaysia.

Part-time Employment

Part-time employees are defined as employees working 30% to 70% of a full-time employee's week. Their employment is regulated under the Employment (Part-time Employees) Regulations 2010.

Part-time employees enjoy similar statutory rights and benefits as full-time employees (e.g. overtime pay, social insurance and pension etc.). However, their rights related to sick leave and public holiday defer.

Probation

There is no legal requirement around the duration of the probation period. It usually ranges from one to six months, depending on the industries but can be extended. At the end of the probationary period, a new contract needs to be negotiated to confirm the permanent role of the employee. Termination of employment during probation period must be subject to the same 'just cause and excuse' as normal employment.

Payment of Wages

Every employer shall pay each of his employees not later than the seventh day after the last day of any wage period. By law, an employer is not required to pay his employees in MYR.

Termination of Employment

The EA requires that there shall be a termination clause for both employee and employer in the labour contract. The Industrial Relation Act 1967 stipulates that an employee may only be terminated for just cause or excuse. "Just cause or excuse" is not defined explicitly by the legislation. In general, misconduct, poor performance, redundancy or closure of business are accepted as "just cause" for termination.

Notice Period

A notice period shall be given by either the employer or the employee to terminate the labour contract, except for the case where employees are terminated for misconduct or poor performance. The notice period depends on the employee's tenure of service as follows:

Tenure of Service	Minimum Notice Period
Less than two years	4 weeks
Between two and five years	6 weeks
More than five years	8 weeks

Severance Payment

Severance payments are paid only when the dismissal is due to retrenchments or transfer of business assets. Only EA employees are eligible for statutory severance payments (which are calculated on a pro-rata basis in an incomplete year). The payment varies according to the employees' tenure of service.

Tenure of Service	Severance Payment
Less than two years	10 days/year of service
Between two and five years	15 days/year of service
More than five years	20 days/year of service

Other Termination Cases

Non-EA employee's termination benefits are subject to contractual terms.

By law, collective dismissal does not require regulatory approval. However, a 30-day notice prior to the employee's final employment date must be submitted to the nearest State Labour Department.

B. Minimum Wage Level[3,8]

According to the latest version of the Minimum Wages Order (published in November 2018), the nationwide (including peninsular Malaysia, Sabah and Serawak) minimum wages are: MYR 1,100 per month (around USD 267) or MYR 5.29 per hour (around USD 1.29).

C. Maximum Working Hours and Days[1,2,3]

Only EA employees are subject to maximum working hours. On a labour contract, the number of working hours cannot exceed eight hours per day or 48 hours per week. EA employee shall be entitled to at least 30 minute break for every five consecutive working hour and a paid rest day every week.

In any case, the maximum number of working hours is 12 hours per day or 104 hours per month.

Overtime

Only EA employees are entitled to overtime pay for work carried out in excess of the normal hours of work. The payment for overtime is described in the table below.

Overtime Work	Payment
Normal working days	1.5x hourly pay
Rest days	2x hourly pay
Public holidays	3x hourly pay

Non-EA employee's right to overtime pay is generally written in their employment contract.

D. Mandatory Welfare[3,9,10,11,12]

The Employees Provident Fund Act (EPF Act)

Both employers and employees are required to make monthly contributions to the EPF for retirement benefits. Contributions are mandatory for employees who are Malaysian citizens or permanent residents. Foreign nationals working in Malaysia are not required to contribute to EPF but they may opt to do so.

Certain types of income are excluded from the EPF's calculation: overtime pay, travelling allowance, other retirement benefits offered by employer, gratuity, service charges, etc.

The following tables described the statutory rates of contributions.

		Mandatory Contribution % (by Malaysian citizens and permanent residents)		**Voluntary Contribution %** (by foreign employees)	
Employee Aged	**Monthly Income**	**Employer**	**Employee**	**Employer**	**Employee**
Below 60	< MYR 5,000	13.0%	11.0%	MYR 5/worker	11.0%
	> MYR 5,000	12.0%	11.0%	MYR 5/worker	11.0%
Between 60 to 70	< MYR 5,000	6.5%	5.5%	MYR 5/worker	5.5%
	> MYR 5,000	6.0%	5.5%	MYR 5/worker	5.5%

The Social Security Organisation (SOCSO)

In Malaysia, the SOCSO administers the following three types of compulsory insurance schemes:

- Employment Injury Insurance Scheme (EIIS): covers Malaysian citizens, permanent residents, and foreign employees (excluding domestic workers). It protects against accident or occupational disease arising out of or in the course of one's employment.
- Invalidity Pension Scheme (IPS): covers only Malaysian citizens or permanent residents. It protects employees who suffer from invalidity or death due to any cause not related to employment.
- Employment Insurance System (EIS): covers only Malaysian citizens or permanent residents (except for public servants). It provides financial assistance, job training programme and job seeking assistance to employees who have lost their jobs.

Contribution Rates

Monthly contribution from both employer and employee must be made for each scheme. The contribution is based on the employee's monthly income, including salary, overtime pay, allowances, service charge, paid leave and commission; excluding annual bonus, pension contribution and dismissal benefits.

	Contribution % on Monthly Income (Max. Contribution Cap)	
For Foreign Employees	**Employer**	**Employee**
EIIS	1.25% (MYR 49.4/month)	N/A

		Contribution % on Monthly Income (Max. Contribution Cap)	
For Malaysian Citizens or Permanent Residents		**Employer**	**Employee**
Under EIIS and IPS	First category contribution – covers both EIIS and IPS (For employees <60 years old) *(Note 1)*	1.75% (MYR 69.05/month)	0.5% (MYR 19.75/month)
	Second Category – covers EIIS only (For employees >60 years old)	1.25% (MYR 49.4/month)	N/A
EIS (For all employees aged 18 to 60) *(Note 2)*		0.2% (MYR 8/month)	0.2% (MYR 8/month)

Note 1: Except for employees who have reached the age of 55 and have no prior contributions, they will fall into the second category contribution.
Note 2: Except for employees who have reached the age of 57 and have no prior contributions, they are exempted from contribution.

Other Benefits and Rights

The EA also stipulates other statutory rights for EA employees, including sick leave, paid leaves, public holidays, and maternity rights.

Sick Leave

Full-time and part-time EA employees are entitled to minimum paid sick leave.

Tenure of Service	Paid Sick Leave Entitlement	
	Full-time	**Part-time**
Less than two years	14 days/year	10 days/year
Between two and five years	18 days/year	13 days/year
More than five years	22 days/year	15 days/year

If hospitalisation is required, full-time EA employees are entitled to a maximum of 60 days of paid sick leave per year. Non-EA employees' entitlement is subject to contract.

Holiday Entitlement

Full-time and part-time EA employees are entitled to minimum paid annual leaves.

Tenure of Service	Annual Leave Entitlement	
	Full-time	**Part-time**
Less than two years	8 days	6 days
Between two and five years	12 days	8 days
More than five years	16 days	11 days

Public Holidays

Full-time and part-time EA employees are entitled to at least the following paid public holidays.

Employment	Public Holiday Entitlement
Full-time	Entitled to at least 11 public holidays including: • National Day; • Birthday of the Yang di-Pertuan Agung; • Birthday of the ruler of the state/federal territory of where the employee work; • Workers' Day; and • Malaysia Day.
Part-time	Entitled to at least seven public holidays including: • National Day; • Birthday of the Yang di-Pertuan Agung; • Birthday of the ruler of the state/federal territory of where the employee works; • Workers' Day.

Non-EA employees' entitlement is subject to contract.

Maternity Rights

Regardless of being an EA or non-EA employees, all employees are entitled to 60 consecutive days of paid maternity leaves for up to five children, given that she is in employment relationship with the employer within four months before her confinement and has been working for the employer for at least 90 days within nine months before her confinement. They are also protected from termination of labour contract during her confinement period. *(Note)*

Note: Confinement is defined as parturition resulting after at least 22 weeks of pregnancy, or the issue of a child or children, whether alive or dead under EA Act.

Others

Besides the abovementioned statutory rights, an employer shall also comply with the Occupational Safety and Health Act 1994, to provide and maintain a safe workplace for the safety and health of all employees.

E. Labour Law Governing Authorities, Enforcements, and Restrictions[1,2,3]

Governing Authorities

The Ministry of Human Resources is the government body responsible for labour, skills development, occupational safety and health, trade unions, industrial relations, industrial court, labour market information and analysis, as well as social security. It is also responsible for the administration of key labour laws in Malaysia.

Labour Law Enforcements

In Malaysia, specific courts have different scopes of employment-related matters:

- All civil courts have the jurisdiction to hear employment related claims;
- The Industrial Court has the jurisdiction to hear cases of unjust dismissal, labour disputes and interpretation, amendment and dispute of collective agreements;
- The Director General of Labour has the power to investigate complaints of discrimination related to foreign employee, sexual harassment as well as a breach of employment terms (applicable to EA employees only);
- The Employees Provident Fund Board and the Social Security Organisation are empowered to examine, make inquiries and prosecute for offences under the EPF Act and the SOCSO Act respectively;
- The Employment Services Officers under the EIS Act have powers to inspect, examine, investigate and enforce the provisions of the EIS Act; and
- The Personal Data Protection Commissioner has the authority to inspect, make recommendations pursuant to inspections, investigate complaints and issue enforcement notices pursuant to investigations.

Employment Restrictions

Female Employment

In Malaysia, female employees shall not:

- Engage in any industrial or agricultural activity at night (between 10 pm and 5 am) or commence work without a rest period of 11 consecutive hours free from such work. These rules are subject to exemption granted by the Director General of Labour; and
- Engage in any underground work.

Foreign Employment

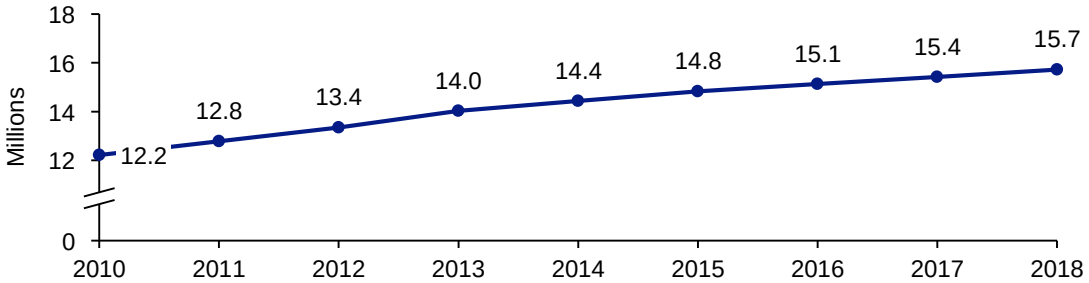
In order to hire a foreign employee, the companies must comply with the minimum paid-up share capital requirements. The requirements vary according to the type of company:

- 100% Malaysian owned company: MYR 250,000;
- Malaysian and foreign owned company: MYR 350,000;
- 100% foreign owned company: MYR 500,000;
- Company undertaking distributive trade and foreign-owned restaurant: MYR 1 million.

II. Local Labour Supply Market Condition

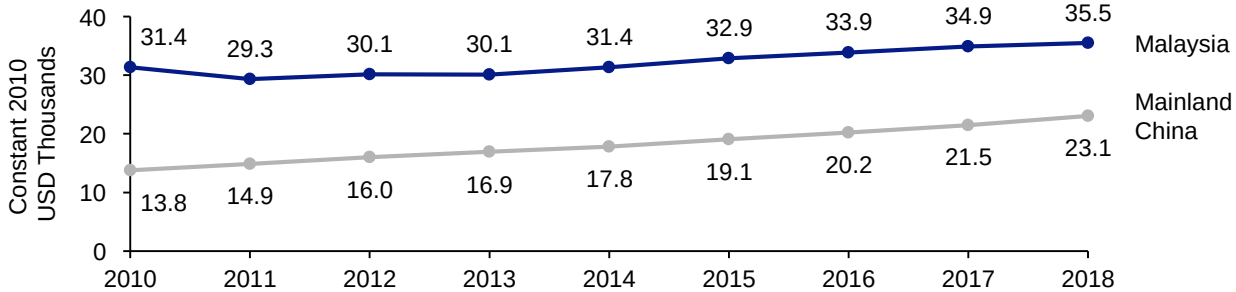
A. Supply Situation for Total Labour Force[13,14,15]

Malaysia's Total Labour Force (2010 – 2018)



The estimated total labour force was around 15.7 million in 2018. As of 2017, around 63% of the employed population worked in service industry, followed by 26% in the industrial and 11% in agriculture sectors.

Malaysia's Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)

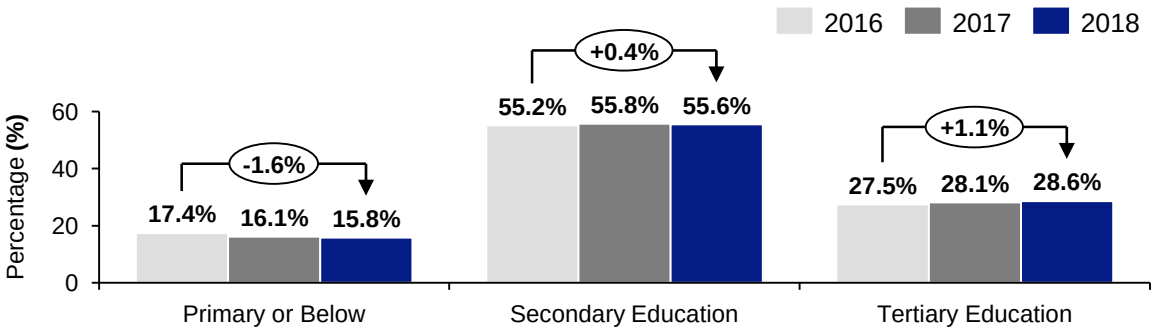


Even though Mainland China's productivity grew at a higher rate (around 6.7%) than Malaysia's (around 1.5%) between 2010-2018, Malaysia's industry value added per worker was around 54% higher than Mainland China's in 2018. Malaysia's productivity is the third highest among the ASEAN countries (i.e only lower than Brunei and Singapore).

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply of Employees with Higher Education[16]

Malaysia's Estimated Employed Population % by Education Attainment (2016 – 2018)



The employed labour force in Malaysia with at least tertiary education was around 4.2 million in 2018, accounting for around 29% of the employed population.

C. Government Support on Employee Training[1,2,3]

According to the Pembangunan Sumber Manusia Berhad Act (PSMB Act), the Human Resources Development Fund (HRDF) was established to fund the development of a competent workforce to contribute to Malaysia's vision of becoming a high income economy.

Human Resources Development Fund (HRDF)

All employers with at least 10 Malaysian employees must contribute to the HRDF at a rate of 1% of each employee's monthly wage. This only applies to companies in certain industries (e.g. electronics, textile, apparel and footwear， etc.). Please refer to Appendix 1 for the full list of sectors.

Employers who contribute to the HRDF and are registered with the Pembangunan Sumber Manusia Berhad (PSMB), are eligible to apply for training grants. These grants can subsidise training costs of certain certified vocational trainings attended by their employees.

The following are some examples of vocational training schemes eligible for HRDF subsidies:

Training scheme	Financial Assistance under HRDF
Future Workers Training (FWT): trains future workers with the required skills and competencies before entering employment	• MYR 1,000/day/group to pay internal/external trainers • MYR 25/hour/trainee to pay the internal/external trainers if there are less than five trainees • MYR 1,000/month/trainee for trainee's monthly allowance • Other claimable cost e.g. meal allowance, daily allowance etc.
Industrial Training Scheme (ITS): targets trainees undergoing practical trainings at the employer's premise before graduating	• Monthly allowance: a maximum of MYR 500/month/trainee • Employers are allowed one set of personal protective equipment per trainee • Financial assistance for insurance coverage (if any)
Computer Based Training (CBT): enables employers to purchase/develop training software to upgrade the knowledge and skills of their workforce	• 100% approval (subject to the balance in employers' levy accounts)

For more information on eligible training schemes, please visit the Pembangunan Sumber Manusia Berhad homepage (www.hrdf.com.my/employer/hrdf-schemes/).

D. Labour Unionisation and Related Government Regulations[3,17]

General unions covering multiple industries are not permitted in Malaysia. However, trade unions representing a specific industry do exist and are permissible. The Industrial Relations Act prohibits any person from interfering with or restraining an employee from forming, assisting in the formation of or joining a trade union. Nevertheless, it is not mandatory for workers to join a union.

Trade Union Recognition

All trade unions are required to be registered with the Director-General of Trade unions and must comply with the requirements set out in the Trade Unions Act 1959, including the rules for the conduct of union business, the use of union funds, and the election of officers, etc. The Minister of Human Resources reserves the final authority to refuse or accord recognition of the trade union.

Collective Bargaining

Only registered trade unions with the Director-General of Trade unions and recognised by the employer may enter into collective bargaining with the employer.

Strike/Lockout

Industrial actions such as strikes and lockouts are strictly regulated by the Trade Union Act and limited to members of a registered trade union. A strike can be called out legally if 1) at least two-third of the union member vote in favour of the strike; 2) at least seven days lapsed after the submission of secret ballot result; and 3) the proposed strike or lockout complies with the rules of the trade union and other relevant laws.

E. Work Permits and Visa[18,19,20,21]

To legally stay and work in Malaysia, expatriate workers must obtain a valid work visa. It is also the visa used to enter the country. Malaysia differentiates between "foreign workers" who are workers from certain Southeast Asian and Eastern European countries with lower income, and "expatriate workers" who are skilled workers with higher income (at least MYR 3,000 per month). This section only provides information on work visa for "expatriate workers". For information of "foreign workers', please refer to the Official Portal of Immigration Department of Malaysia (www.imi.gov.my).

Employment Pass (EP)

The most common work visa obtained by expatriate workers is EP, which is a multiple entry visa. The approvals of EP for expatriate posts are handled by different authorised government bodies or agencies depending on the type of industries in which the company is engaged in. For example, the Malaysian Investment Development Authority handles EP approvals for foreign employees in the manufacturing industry and its related services or in research and development.

Categories of EP

EP are categorised into three categories with different minimum salary requirement and employment tenure limits.

Category	Minimum Monthly Salary	Maximum Employment Tenure	Allowed Dependents
Category 1	MYR 10,000 *(Note)*	5 years or less	✔
Category 2	MYR 5,000 – 9,999	2 years or less	✔
Category 3	MYR 3,000 – 4,999	Less than 12 months	✘

Key Points to Note in Application

- Application processing time: around 2 to 3 months;
- Online application by the company and a guarantor is needed when applying for an EP; and
- The employer shall prove that the skill, qualification and experience required for the expatriate position cannot be fulfilled by Malaysian employees.

Note: If a foreign employee is paid MYR 8,000 or above per month, its EP approval can be granted automatically under certain conditions.

Besides EP, there are also other types of work visas that allow foreign nationals to work legally in Malaysia.

Type of Visa	Characteristics	Employment Restriction	Max. Length of Stay
Professional Visit Pass	Short-term work pass for professionals e.g. specific projects and technical cooperation.	✔ Applicant must be employed by a company outside of Malaysia.	1 year
Long-term Social Visit Pass	• For temporary stay in Malaysia for a period of not less than 6 months; • It is renewable subject to the approval of Immigration Department of Malaysia; and • Spouse can be given the Social Visit Pass for up to 5 years of validity.	No restriction	Subject to approval
Resident Pass-Talent (RP-T)	• Aims to attract and secure foreign talent in important economic fields; • Upon acquisition of the pass, the spouse is not required to acquire EP to work in Malaysia; and • Children over 18, parents and spouse's parents are eligible for the Social Visit Pass for up to 5 years of validity.	No restriction	10 years

Penalties under Work Permit Violations

For each foreign employee working without a valid visa, a company's top executive (e.g. director, manager) shall be liable to :

- A fine of an amount between MYR 10,000 and MYR 50,000; and/or
- Imprisonment for a term not exceeding 12 months.

If the total number of employees with invalid visas exceed five, the abovementioned individual shall, on conviction, be subject to imprisonment of six months to five years, and shall also be liable to a whipping of not more than six strokes.

Visas

There are other types of visas available for foreign nationals to visit Malaysia (working in Malaysia is not allowed under the following visas):

- Single Entry Visa: issued for the purpose of social visits and is valid for three months;
- Multiple Entry Visa: issued for the purpose of business and is normally valid between three to 12 months and multiple entry is allowed. Each entry is permitted with a maximum stay of 30 days only, without extension; and
- Transit Visa: issued to those traveling to a third country via Malaysia.

Travelling to Malaysia[21]

Hong Kong residents are permitted to stay up to one month in Malaysia without a visa.

F. Religious and Cultural Concerns or Considerations[22]

Religion

Malaysia is a multicultural country with a Muslim majority. The Department for Islamic Advancement of Malaysia monitors the country's religious life, and Muslim religious practices are strictly regulated by law, while other religions are not.

Culture

Local cultural norms for Malays, Chinese, and Indians living in Malaysia vary in great degrees. Behaviours can vary according to gender or ethnicity, e.g. some Malay women may not shake hands with men.

It is advised to dress modestly in Malaysia, as the country remains fairly conservative, particularly in rural areas.

When interacting with Malaysians, it is generally important to be courteous and non-confrontational. Moreover, business relationships take time to build as personal trust is held in high regard in any business partnership.

Source:

[1] *Doing business in Malaysia 2018, PwC*

[2] *Doing business 2019 – Economy Profile Malaysia, A World Bank Group Flagship Report*

[3] *Labour & Employment – Malaysia, Content by Skrine (published by Law Business Research*

[4] *Children and Young Persons (Employment) (Amendment) Act 2010, Federation of Malaysian Manufacturers*

[5] *Implementation Guidance Child Labour (Malaysia), TFT Group*

[6] *Employment Law: Part-Time Employees in Malaysia, Chia, Lee & Associates*

[7] *Asia Pacific Redundancies and Terminations Overview, Baker Mckenzie*

[8] *HR Related Regulatory Requirements – Minimum Wages, National Human Resource Centre*

[9] *Malaysia: Employers required to contribute social security for foreign employees, PwC*

[10] *Contributions of Social Security Protection, PERKESO Prihatin*

[11] *HR Related Regulatory Requirements - PSMB (HRDF), National Human Resource Centre*

[12] *HR Related Regulatory Requirements – SOCSO, National Human Resource Centre*

[13] *Total Labour Force, World Development Indicators*

[14] *Dashboard & Data Mart – Key Indicators of Labour Market, Ministry of Human Resources*

[15] *Industry (including construction), value added per worker (constant 2010 US$), The World Bank*

[16] *Labour Force Survey Report, Malaysia, 2010-2018, Department of Statistics Malaysia*

[17] *Employee Relations – Union Matters, National Human Resource Centre*

[18] *The Official Portal of Immigration Department of Malaysia*

[19] *Malaysia Labor Laws, Persol HR Data Bank in APAC, PersolKelly Consulting*

[20] *Employment Pass Re-classification, MYXpats Centre*

[21] *Visa-free access or visa-on-arrival for HKSAR Passport, Immigration Department of HKSAR*

[22] *Doing Business in Malaysia, Institute of Export & International Trade*

5. Research and Development Environment

Executive Summary

Malaysia is considered to be an upper-middle income country, it is therefore one of the most advanced economies in Southeast Asia. The country successfully diversified its economy by leveraging science, technology and innovation as a major development thruster. The national government is currently implementing the 11th Malaysian Development Plan designed to strengthen the overall economic growth by focusing on five major emerging technologies.

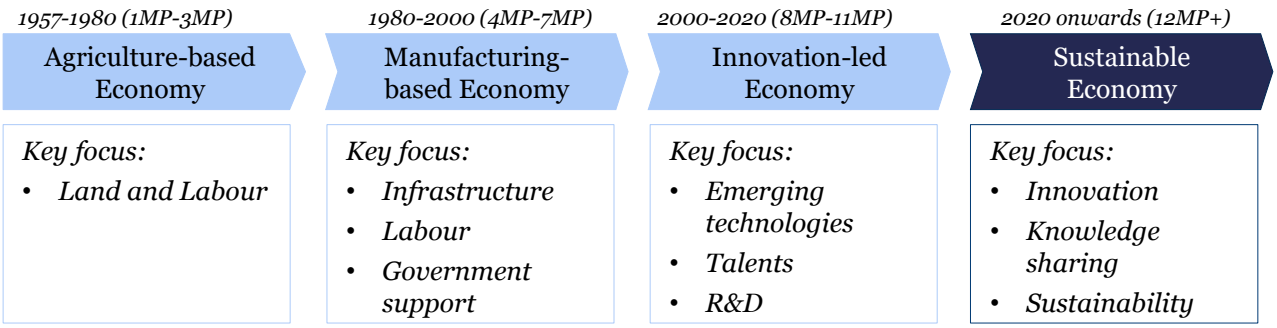
Malaysia has a strong research and development (R&D) ecosystem in comparison with its peers. R&D expenditure represents around 1.5% of the GDP, its workforce is considered skilled and educated, and intellectual property protection is strong. However, the country may lack well established science and technology infrastructure (i.e. Science Parks) and clear incentives for foreign investors.

5. Research and Development Environment

I. The Science and Technology (S&T) in Malaysia

Since 1957, Malaysia has been relying on comprehensive five-year development plans to shape its economic growth. Under the guidance of these plans, Malaysia successfully managed to evolve from an agriculture dependent economy, to a manufacturing country. Currently, the government is implementing the 11th Malaysian Plan (11MP) designed to leverage innovation as the main driver of economic development and diversification. The final objective is for Malaysia to become a high income country.

Malaysia's Economy Transformation Timeline[1]



A. Policies and Trends in S&T

The 11th Malaysian Plan (11MP)[2]

Launched in 2015, the 11th Malaysian Plan (11MP) is a five-year development plan designed to enhance every aspect of the country's economy in order to transform Malaysia into a high-income country by 2020. This plan focuses on six major pillars: enhancing efficiency of public services, fostering an inclusive development, pursuing a balanced development, empowering human capital, promoting green growth and strengthening the overall economic growth.

In order to accelerate economic growth, the government identified Innovation and Technology as a major driver. The priorities set for 2015-2020 are:

- Harnessing the Fourth Industrial Revolution to boost productivity and competitiveness;
- Increasing technology adoption to produce high value added products;
- Aligning research and innovation to accelerate innovation driven growth; and
- Enhancing capacity building to train a skilled workforce.

In 2018, the Malaysian government carried out a mid-term review of the 11MP and defined some new priorities. For innovation and technology, Malaysia identified five key areas to develop: biotechnology, digital technology, green-technology, nanotechnology and neurotechnology. Therefore, the majority of R&D efforts should focus on these specific areas.

To reach the multiple objectives defined in the 11MP, the government drafted a number of S&T policies.

The National Policy on Science, Technology & Innovation (NPSTI), 2013-2020[3]

The NPSTI is in its third stage of implementation. The first wave, named National Science and Technology Policy (STP1), started in 1986. It fostered the integration of S&T in national development plans, and built the base of Malaysia's R&D funding and S&T infrastructure. The second stage, the STP2, enhanced the first policy and focused on creating a dynamic S&T environment. The NPSTI 2013-2020, is the continuity of STP1 and STP2. It acts as a strategic guideline for science, technology and innovation (STI). The main goals of the policy are the following:

- Promoting scientific R&D and fostering results commercialisation (e.g. R&D expenditure must represent 2% of the 2020 GDP);
- Enhancing and developing S&T talents (e.g. reach a ratio of 70 researchers for 10,000 labour force in 2020);
- Revitalising industries using R&D and S&T (e.g. promote public and private collaboration);
- Transforming STI governance (e.g. strengthen STI related councils); and
- Enhancing international alliances and cooperation (e.g. develop domestic and international S&T networks).

The policy also highlights nine priority areas for R&D efforts: biodiversity, cyber security, energy security, environment & climate change, food security, medical & healthcare, plantation crops & commodities, transportation & urbanisation and water security.

Supporting Policies[4]

To support the implementation of the NPSTI, the Malaysian government drafted additional polices which focus on developing a specific aspect of the S&T framework. Below are examples of two supporting policies.

- The Science to Action (S2A) Programme is a national initiative designed to promote Malaysia's sustainable growth beyond 2020 using S&T. Various stakeholders (public or private sector) are encouraged to participate in the programme in order to apply S&T solutions in the day to day business operations or government institutions. The objective is to reach socioeconomic well-being.
- The Higher Education Strategic Plan aims to train a skilled workforce to fuel economic development. In order to do so, it focuses on expanding access to education, improving education quality (including higher education), promoting internationalisation and enhancing R&D institutions.

Outlook[5,6]

Overall, the government initiatives designed to boost the S&T ecosystem appear to have a positive effect on Malaysia. The country ranked 30th out of 140 countries in the "Innovation Capability" criteria of the 2018 Global Competitiveness Index. The country was ranked second among the ASEAN countries. Malaysia especially ranked high in multi-stakeholder collaboration (6th), buyer sophistication (8th) and state of cluster development (9th). However, the country scored low on trademark applications (55th), scientific publication (44th) and patent applications (42nd).

Nevertheless, a lack of transparency in R&D expenditure data has been highlighted. The latest available data dates back to 2016; that year the R&D expenditure reached 1.44% of the GDP. This figure is still far behind the country's target of 2% of GDP in 2020.

B. S&T Related Organisations

In Malaysia, the government plays a key role in S&T policymaking and in R&D implementation. There is one major Ministry in charge of S&T matters in the country – the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC), with two other divisions that strengthen this ecosystem.

Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC)[7]

The MESTECC is a new body created in 2018, merging various government ministries, including the Ministry of Science, Technology and Innovation. This new institution's vision is to use S&T to promote wealth creation, environment and energy sustainability. Its main missions are:

- Developing an S&T ecosystem to support Malaysia's economic interests (e.g. increase new technology commercialisation);
- Fostering research, development & innovation strategic collaboration between the public and private sectors (e.g. increase industrial productivity);
- Managing energy resources to ensure a sustainable and affordable energy supply (e.g. increase renewable energy electricity generation to 20% of total generation); and
- Preserving the environment to create new growth opportunities (e.g. reduce pollution through education and enforcement).

The missions are mainly carried out by divisions/bodies that operate under the MESTECC.

The Malaysian Science and Technology Information Centre (MASTIC)[8]

Created in 1992, the MASTIC is a division that operates under the MESTECC. The centre acts as a knowledge platform gathering strategic STI information. Each player of the S&T ecosystem (e.g. private and public sector) can access this reliable and up-to-date information, and provide inputs for the development of national STI policies.

The Office of Science Advisor (OSA)[9]

This Office serves as the national advisor to STI. The OSA operates in direct contact with the Prime Minister of Malaysia and advises him on government policies and national strategies concerning R&D in S&T.

The OSA's secondary mission is to manage/chair the Malaysian Industry-Government Group for High Technology (MIGHT). The latter is composed of industry professionals and government representatives who assist the OSA in its operations. For example, the MIGHT drives the Science to Action programme. In addition, the two bodies (the OSA and MIGHT) also focus on promoting investment in R&D, strengthening STI human capital and promoting science diplomacy.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[10,11,12]

The government is one of the most important players in the R&D ecosystem. It publishes strategic guidelines or national policies and uses its investment power to develop the corresponding infrastructure.

In Malaysia, the central government manages two major R&D centres:

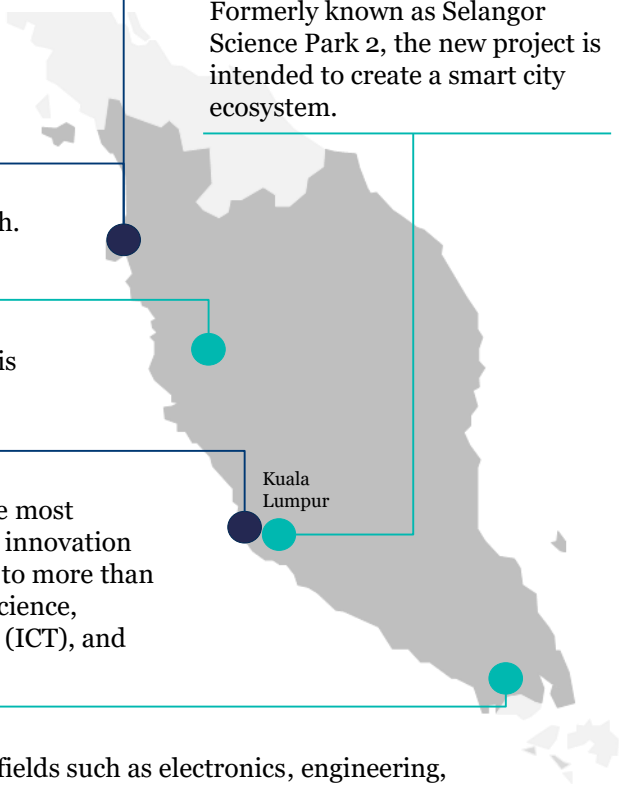
- MIMOS (located at Technology Park Malaysia) is a national applied R&D centre which plays a key role in Malaysia's digital transformation. It has twelve main focuses: accelerative technology, advanced computing, artificial intelligence, cognitive analytics, information security, intelligent informatics, microelectronics, nanoelectronics, photonics, strategic advanced research, user experiences and wireless communications; and
- SIRIM is a national industrial research and technology organisation, carrying out research in energy management, smart manufacturing and nanotechnology. It also hosts technology centres focusing on biotechnology, environmental technology and machinery technology.

The central government and local state authorities also support five science park projects in Malaysia.

Location of Science Parks in Peninsular Malaysia

Park Under Construction Existing Park

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.



Kulim Hi-Tech Park
Target companies working in semiconductors, green energy, advanced electronics, medical instruments, biotechnology, aerospace and emerging technologies.

Selangor Cyber Valley
Formerly known as Selangor Science Park 2, the new project is intended to create a smart city ecosystem.

Penang Science Park Malaysia
Focuses on strategic industries such as hi-tech or biotech.

Perak Hi-Tech Industrial Park
Designed as a hi-tech innovation area, the construction is expected to commence in 2019.

Technology Park Malaysia
Created in 1996, it is operated by the MESTECC. It is the most advanced park in the country, designed to be Malaysia's innovation facilitator and technology enabler, and offering services to more than 3,000 companies working in biotechnology, computer science, hardware, information and communications technology (ICT), and software engineering.

Nusajaya Tech Park *(private)*
The park can host up to 200 companies with a focus on fields such as electronics, engineering, pharmaceutical and medical devices, food processing and fast-moving consumer goods.

B. University-based R&D Institutes[13,14]

Apart from the government, universities are also important players in the R&D field. According to the 2019 QS Asia University Rankings, Malaysia has 21 universities ranked in the top 300, indicating a moderate research and teaching quality. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The top Malaysian institution ranked 19th, with another five universities ranked in the top 100. The ranking implies that R&D carried out in the universities has a reasonable/moderate impact on the S&T international scene.

Out of the 20 public Malaysian universities, five have been chosen by the government to be Research Universities. This status grants them additional funding for R&D activities and enables them to commercialise their research output. The table below provides an overview of these five universities:

University (ranking)	Description and Research Focus
University Malaya (19th)	Hosts four research focused clusters: • Innovative Industry & Sustainability Science (e.g. energy, Industry 4.0); • Frontiers of the Natural World (e.g. biotechnology); • Health & Well-Being (e.g. diseases); and • Social Advancement & Happiness (e.g. smart society, education).
University Putra Malaysia (34th)	Hosts six research centres with a major focus on agriculture and its derivatives: • Agriculture/Food/Forestry and Environment; • Health; • Science Technology and Engineering; and • Social Science.
University Kebangsaan Malaysia (41st)	Hosts four research focused centres: • Langkawi Research Centre focuses on natural resources and tourism; • Southeast Asia Disaster Prevention Research Initiative focuses on climatic, geological and technological hazards; • Research Centre for Sustainability Science and Governance carries out transdisciplinary research in sustainability and sciences; and • Research Centre for Environmental, Economic and Social Sustainability.
University Sains Malaysia (43rd)	Focuses research on: • Pure, applied, pharmaceutical and social sciences; • Building science and technology; and • Humanities and education.
University Teknologi Malaysia (47th)	Focuses on five main areas in line with national priorities: • Frontier Material (e.g. construction materials); • Resource Sustainability (e.g renewable energy); • Health and Wellness (e.g cancer); • Innovative Engineering (e.g. machinery); and • Smart digital community (e.g. telecommunications).

C. Private Business Firms (Research Centres)

Private business firms are important investors in a country's R&D ecosystem. Research carried out in such centres can lead to great innovations benefiting the entire nation. In Malaysia, private businesses are deeply collaborating with the public sector. Numerous firms jointly established research centres, education programmes or partnered with public universities and government agencies.

Selected Major R&D Collaborations Between the Private and Public Sectors in Malaysia

Investor(s)	Research Focus	Description[15,16,17,18]
Ericsson – University Teknologi Malaysia	Telecom and applications (5G)	Opened Malaysia's first Innovation Centre for 5G technology in 2016 in Kuala Lumpur. The centre features: • A research lab focusing on 5G and its applications; • An innovation showcase promoting robotics, internet of things (IoT), augmented reality; and • Learning programmes training 2,000 students over a three-year period on the new digital economy.
Microsoft - MIMOS	Artificial Intelligence, Internet of Things	Cooperation announced in 2018 to help Malaysian small and medium-sized enterprises (SMEs) tackle Industry 4.0 challenges. The partnership focuses on: • Creating an IoT platform for companies; • Fostering the use of Artificial Intelligence (AI) in SMEs; and • Opening two schools delivering trainings in AI and IoT.
Toray - Universiti Sains Malaysia	Green-tech	Toray (which develops technologies in fibres, textiles, plastics and chemicals), invested MYR 4 million to build a knowledge transfer centre on the USM campus. Apart from knowledge transfer, the centre also focuses on research in green technologies.
CIMB - University Utara Malaysia	Banking	CIMB Bank partnered with UUM in 2015 to create the Chair of Banking and Finance. The Chair focuses on developing banking and finance in Malaysia through research. The Chair is also designed to train a highly qualified workforce in banking and finance.

D. Infrastructure Availability for Foreign Investments

Promoting public/private collaboration and enhancing international alliances are two major objectives stated in the NPSTI. As outlined in the previous section ("Private business firms"), various foreign companies are collaborating with government entities and universities in order to create R&D centres or training programmes. This example demonstrates that the Malaysian government is keen on receiving foreign investment in the S&T field. However, at the moment there are no policies incentivising foreign companies to build their own infrastructure or joining existing ones. For example, there is no sign that the Technology Park Malaysia hosts foreign companies on the campus or that it supports them on R&D activities.

III. Priority Areas in Malaysia (major exports)[19]

Malaysia has transformed from a raw natural resources producer to a very diversified economy. In 2018, Malaysia's top five exports were:

Top Five Exports	% of Total Exports (in 2018)
Electrical Machinery and Equipment	33.6%
Mineral Fuels (including oil)	15.5%
Machinery	10.3%
Animal or Vegetable Fats and Oils	4.9%
Optical, Technical, Medical Apparatus	3.8%

With the 11MP Malaysia chose to push the development of new technologies such as biotech, green-tech, digital tech and nanotech in order to upgrade its exports. In 2017, 28% of the country's manufactured exports were labelled as hi-tech products (e.g. products with high R&D intensity, such as in the computers, aerospace, pharmaceuticals industries). This percentage is one of the highest among the ASEAN countries but is lower than that of the Philippines, for example.

IV. Funding for S&T and R&D[20]

R&D companies are eligible for various funding programmes provided by the following government bodies.

Funding from the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC)

Fund	Description	Requirements	Conditions
MESTECC Research & Development Fund	• Funding for businesses and researchers carrying out projects that lead to economic growth or social benefits.	• The fund is open to SMEs • Project must at least have a proof of concept which is scientifically valid, and competitive with current technologies	• Maximum funding of MYR 3 million (around USD 700,000) • Maximum support for 2 years
Malaysia Social Innovation Fund	• Grant for projects improving/developing existing or new innovative products and services for the sake of improving the well- being of rural communities.	• Company commits to helping communities of the B40 (urban and rural poor)	• Maximum funding of MYR 300,000 (around USD 70,000) • Maximum support for 2 years
International Collaboration Fund	• Grant for international joint R&D projects between researchers from Malaysia and other countries	• The funding is open to researchers employed by the Government Research Institutions (GRIs); Government Science, Technology and Innovation Agencies; and Public and Private Institutions of Higher Learning (IHL)	• Maximum funding of MYR 500,000 (around USD 120,000) • Maximum support for 2 years

Funding from the Malaysian Technology Development Corporation Sdn Bhd (MTDC)

Fund	Programme	Description	Requirements	Conditions
Commercialisation of R&D Fund (CRDF): funding for commercialisation of technologies undertaken by private or public Malaysian companies	CRDF 1	• Grant for the commercialisation of R&D output from public and private University (PPU) or Government Research Institute (GRI) by a spin-off company	• Company must be at least 51% Malaysian-owned • Technology must belong to the Priority Technology Clusters identified by MOSTI excluding ICT	• Partial grants with a maximum of MYR 500,000 (around USD 120,000) or 90% of the eligible expenses (whichever is lower) • Maximum support for 2 years
	CRDF2	• Grant for the commercialisation of R&D output from Public and Private University (PPU) or Government Research Institute (GRI) by a Start Up company	• Company must be at least 51% Malaysian-owned • Technology must belong to the Priority Technology Clusters identified by MOSTI excluding ICT	• Partial grants with a maximum of MYR 500,000 (around USD 120,000) or 70% of the eligible expenses (whichever is lower) • Maximum support for 2 years
	CRDF3 (a)	• Grant for the commercialisation R&D by SMEs	• Company has less than MYR 25 million annual turnover or less than 150 employees • Company must be at least 51% Malaysian-owned	• Partial grants with a maximum of MYR 4 million (around USD 1 million) or 70% of the eligible expenses (whichever is lower) • Maximum support for 2 years
	CRDF (b)	• Grant for the commercialisation of public sector R&D by a non-SME	• Company has more than MYR 25 million annual turnover and more than 150 employees • Company must be at least 51% Malaysian-owned	• Partial grants with a maximum of MYR 4 million (around USD 1 million) or 50% of the eligible expenses (whichever is lower) • Maximum support for 2 years

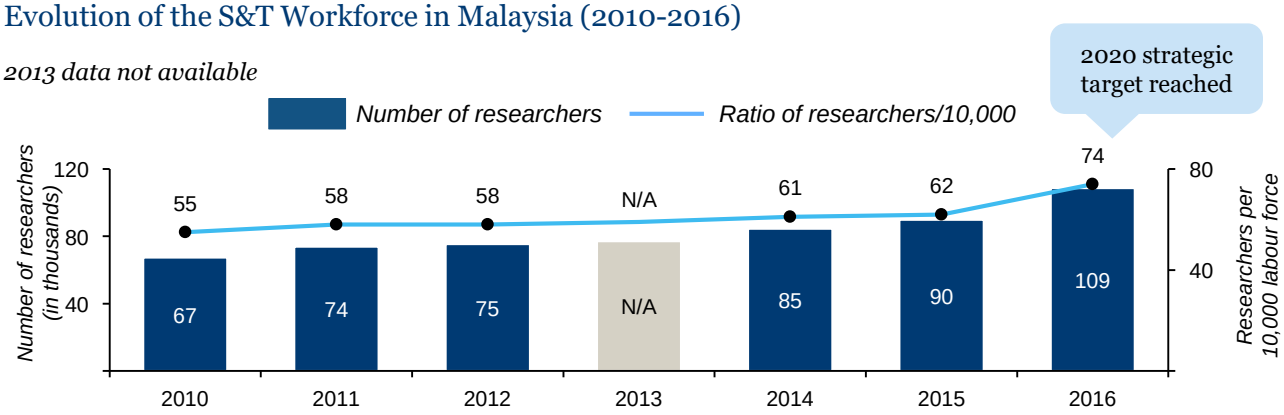
Funding from the Cradle Fund Sdn Bhd

Fund	Programme	Description	Requirements	Conditions
Cradle Investment Programme (CIP): funding for pre-seed /prototype development or technology commercia-lisation	CIP Catalyst	• Pre-seed fund designed to help entrepreneurs develop ideas into prototypes • Focus on technology-based ideas in the ICT, non-ICT and high growth technology industries	• Team of 5 people maximum (min 2) • Main applicant is Malaysian aged 18 years and above and resides in the country	• Conditional grant up to MYR 150,000 (around USD 30,000)
	CIP 500	• Technology commercialisation fund for budding companies (i.e. companies with promising prospects towards success)	• Company must be at least 51% Malaysian-owned • Company in operation for less than 3 years; with revenue of less than MYR 5 million • Company owns IP of prototypes	• Grant up to MYR 500,000 (around USD 120,000)

V. Human Resources for S&T[21,22]

Malaysia's workforce is regarded as highly educated, multilingual and productive when compared with its Southeast Asian peers. In the NPSTI, the government set S&T human resources (HR) development and training as a priority. It also fixed a target ratio of 70 researchers for every 10,000 people in the labour force to be reached in 2020. As a result of supporting policies, the number of researchers grew significantly between 2010 and 2016, meeting the 2020 objective four years in advance. In 2016, Malaysia had around 109,000 researchers, which is a ratio of 74 researchers for every 10,000 people in the labour force.

Evolution of the S&T Workforce in Malaysia (2010-2016)



Malaysia has a relatively established S&T workforce. In the 2019 Global Innovation Index, Malaysia ranked 36th out of 126 countries in the criteria "Researchers, FTE/million population". The country ranked second among the ASEAN countries.

In addition, it can leverage its strong base of S&T educated people. The country ranked eighth worldwide in the criteria "% of graduates in science and engineering", with around 32% of the total number of tertiary graduates graduated in science and engineering *(Note)*.

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Supports in Testing and Verification[23]

The Malaysian government provides support in testing and certification through its national research centre SIRIM. SIRIM QAS International is regarded as Malaysia's leading certification, inspection and testing body. It acts as a one-stop solution for companies, by providing a comprehensive range of services related to testing, inspection and certification. The main benefits of using SIRIM QAS International services are:

- A greater compliance to market standards for products sold in Malaysia or abroad;
- Access to over 37 countries around the world via the International Certification Network (IQNet); and
- A guaranteed up-to-date certification scheme with continuous updates, specifically focused on consumers and the environment.

VII. Intellectual Property Policy[24]

Intellectual property (IP) rights are an important factor to consider when entering a country. Some nations have trouble implementing a strong framework to protect IP rights which can lead to serious damages to the companies. Each year the Global Intellectual Property Center publishes a worldwide ranking which analyses eight IP protection related categories: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, as well as membership and ratification of international treaties. According to the 2019 IP Index published by the Global Intellectual Property Center, Malaysia's IP Protection is relatively average. Globally, the country is ranked 24th out of 50 analysed countries. Regionally its performance is in line with other Asian countries. Overall Malaysia scored 50% compared with 52% for the Asian Average (as a reference the top five world economies averaged 92% on the index).

The report underlines areas where Malaysia's IP protection is strong:

- The Malaysian government puts a strong focus on IP protection and uses it as a commercial asset and a technology transfer lever;
- Existence of the Intellectual Property Corporation of Malaysia (MyIPO), a central body responsible for managing IP protection;
- Efforts to strengthen IP enforcement especially against infringing goods in transit; and
- Generous R&D and IP-specific tax incentives in place.

However, some areas of improvements are also noted**:**

- Malaysia does not offer patent term restoration; and
- Lack of full term protection for new products.

Source:

[1] *Science and Technology Foresight Malaysia 2050, Academy of Science Malaysia, 2017*

[2] *Mid-Term Review of the Eleventh Malaysian Plan, Ministry of Economic Affairs, 2018*

[3] *National Policy on Science Technology & Innovation (NSPTI), MESTEEC, 2013*

[4] *Science to Action, MIGHT, 2019*

[5] *The Global Competitiveness Report 2018, World Economic Forum*

[6] *National Research And Development (R&D) Survey, MASTIC*

[7] *About Us, MESTEEC*

[8] *Introduction, MASTIC*

[9] *Office of Science Advisor, MIGHT, 2019*

[10] *Focus Area, MIMOS*

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[15] *Ericsson and UTM establish Innovation Centre for 5G in Malaysia, Ericsson, 2016*

[16] *Malaysia R&D centre and leading tech company partner to provide IoT and AI to SMEs, Opevn Gov, 2018*

[17] *Knowledge Transfer Centre (USM)*

[18] *CIMB partners UUM to launch the CIMB-UUM Chair of Banking and Finance, CIMB, 2015*

[19] *Trade Map, International Trade Centre*

[20] *Research & development services, MIDA, 2017*

[21] *National Research And Development (R&D) Survey, MASTIC*

[22] *Global Innovation Index 2019, INSEAD*

[23] *Our Services, SIRIM QAS International*

[24] *GIPC IP Index, Global IP centre, 2019*

6. Supply Chain Environment

Executive Summary

Malaysia has a diversified economy with a focus on manufacturing. In recent decades, the manufacturing sector has grown significantly. The next phase of the evolution is referred to as Industry 4.0, which focuses on transforming the manufacturing process from a labour intensive one to an automated one with robotics.

As compared with other countries in the region, Malaysia has relatively established infrastructure. The country benefits from strategic access to the Straits of Malacca, one of the most important shipping lanes in global trade. Further infrastructure development should help Malaysia to become a major logistics hub in Southeast Asia.

6. Supply Chain Environment

I. Industry Profiles in Malaysia

Breakdown of 2018's Top 10 Exports[1]

Malaysia's major sectors by gross domestic product (GDP) in 2017 are services (53.6%), industry (37.6%) and agriculture (8.8%).

The major industries in Malaysia are the electronics, construction, and automotive industries. The service sector includes financial services and tourism. The primary products dominating the agricultural industry in Malaysia are palm oil, rubber, paddy, and coconut.

In 2018, Malaysia's total global shipments amounted to USD 247.3 billion of which 80% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Electrical machinery and equipment	USD 83.0 billion	33.6%
2. Mineral fuels including oil	USD 38.4 billion	15.5%
3. Machinery	USD 25.4 billion	10.3%
4. Animal or vegetable fats and oils	USD 12.1 billion	4.9%
5. Optical, technical, medical apparatus	USD 9.4 billion	3.8%
6. Plastics and related products	USD 9.4 billion	3.8%
7. Rubber and related products	USD 7.5 billion	3.0%
8. Organic chemicals	USD 4.9 billion	2.0%
9. Other chemical goods	USD 4.4 billion	1.8%
10. Aluminium and related products	USD 3.9 billion	1.6%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp

The manufacturing sector plays an important role in Malaysia's economy. It provides jobs, attracts investments, and creates business opportunities in the downstream industries and related services sectors. The sector is mainly made up of small and medium-sized enterprises (SMEs), which account for 98.5% of the manufacturing firms. Through the Industry4WRD national policy, the Malaysian government is trying to support these SMEs in adopting the latest technologies, enabling them to play a more important role in the global supply chain.

II. The Key Supported Industries in Malaysia[2]

In 2018, the Malaysian government launched the National Policy on Industry 4.0 (Industry 4WRD) in response to the Fourth Industrial Revolution (4IR). The policy aims to drive the digital transformation of the manufacturing sector and its related services and see Malaysian companies switch from labour intensive mass production lines to automated assembly lines using robotics, increasing efficiency and productivity. Supporting the use of new technologies such as the internet of things (IoT), which allow machine to machine communication, will be a key success factor of the policy.

The Industry4WRD identifies and focuses five high potential sectors: Electrical & Electronics, Machinery & Equipment, Chemical, Medical Devices and Aerospace. Among these, the electronics and machinery industries are two of the most important industries in Malaysia's manufacturing sector.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations

Electronics

As the leading industry in the Malaysia's manufacturing sector, the Electrical & Electronics (E&E) industry has contributed significantly to the country's exports and employment. The Electrical & Electronics Productivity Nexus (EEPN) was formed in 2017 to help further boost the E&E industries in Malaysia.

In general, Malaysia is able to contribute along the whole E&E supply chain, with over 3,000 local suppliers, diverse component manufacture and assembly companies, and even electronics packaging companies. The main challenge facing the E&E industries is the lack of highly skilled engineers. As Malaysia transforms the E&E industries through Industry 4.0, the universities and other training centres in the country, will be needed to help with the training and re-training of the workforce.

Initiatives aiming to improve the hi-tech training in the E&E industry include:

- The MIMOS-NCIA Advanced Competency Development Centre launched by MIMOS Berhad (an agency under the Ministry of Science, Technology and Innovation), and the Northern Corridor Implementation Authority (NCIA).
- A talent development programme between the Malaysian Investment Development Authority (MIDA), and the corporate arm of Universiti Sains Malaysia.

Machinery

Focusing on high value added and hi-tech products, the machinery industry is identified as one of the key areas of growth and economic development for Malaysia as it has strong linkages to various large-scale economic sectors such as manufacturing, construction and services.

However in 2017, the Ministry of Finance reported that Malaysia was ranked 46th out of 137 economies in terms of efficiency in adopting technologies to enhance productivity of industries. One of the main challenges for Malaysia is that the country currently has a large pool of low skill and low cost foreign-workers. While normally a benefit for developing countries, this factor actually discourages employers from moving towards automation, hence resulting in a low adoption of technology. The government aims to change this with Industry4WRD, through working with foreign and local industry leaders to set up Industry 4.0 demonstration labs and enhance knowledge transfer.

III. Key Raw Materials Sourcing Platforms/Channels[3]

The Bohai Commodity Exchange (BOCE) is the main Malaysian e-commerce trading platform. It provides Malaysian and the ASEAN companies a safe and efficient way to do business in Mainland China, so that they can take advantage of the opportunities offered by Mainland China's Belt and Road Initiative (BRI). The platform connects buyers and sellers in the region and facilitates exporters' registration, documentation and bidding. The main advantage of the platform is the unlimited exports volumes.

IV. Procurement Situation (local and overseas) of Raw Materials[4,5]

A. Hurdles or Problems Encountered

Malaysia is an important manufacturing hub in Southeast Asia. The country is ideally located along the Straits of Malacca which facilitates the distribution of manufactured goods. The Malaysian government also offers numerous tax and non tax incentives to foreign manufacturing companies located in the 18 Free Industrial Zones (FIZs). These unique advantages, coupled with adaptable commercial law, make Malaysia an ideal base for export-oriented businesses in Southeast Asia.

According to a 2019 report by the World Bank, Malaysia ranked 15th out of 190 countries in Ease of Doing Business. It ranked second among the ASEAN countries (Hong Kong ranked fourth worldwide in the same report). However, companies intending on expanding to Malaysia should consider the following hurdles:

- Starting a business in Malaysia is very complicated (ranked 122nd on the criteria of starting a business);
- Tax compliance is a difficult process (ranked 72nd on the criteria of paying taxes); and
- Trading across borders is not simple (ranked 48th on the criteria of trading across borders).

B. Efficiency of Customs and Clearance Process

Malaysia applies two systems of tariff classification. ASEAN Harmonized Tariff Nomenclature (AHTN) is used for trade transaction between Malaysia and the other ASEAN countries, whilst the HS Code applies for trade with non-ASEAN countries. All imported and exported goods into/from the country must be categorised based on the Malaysian Customs tariff number.

All the goods imported are liable for Sales and Service Tax (SST), unless specifically exempt. Any queries regarding classification of import and export goods should be made to the particular customs station of which the goods are to be imported. Some products require a licence or Approved Permit (AP) before importing/exporting. These include motor vehicles, iron and steel, heavy machinery and chemicals. The full list can be found on the MITI website (www.miti.gov.my).

For all other products, no AP is required but import/export declarations should be submitted online through eDeclare (www.mytradelink.gov.my). In addition, other supporting documents may be required.

Custom Clearance Process

Customs Declaration

Step 1:

Goods imported or exported are subject to customs declaration. Relevant list of documents are required for submission to the Malaysian Customs at the Customs Station at the place where the goods are to be imported/exported.

Lodging the Goods

Step 2:

Goods shall be lodged to the customs offices at the checkpoint. After acceptance of the customs, goods are permitted to be unloaded to warehouses.

Payment of Duties and Taxes

Step 3:

All duties/custom taxes imposed on imported goods will need to be paid in advance before the goods can be released (import tax and goods and services tax).

Inspection and Release of Cargo

Step 4:

The customs' right of inspection includes the power to take and test samples of the goods. All expenses of unpacking, re-packing and providing specialised facilities must be borne by the importer.

Most consignments are given direct release based on accepted documents presented together with the customs declaration form without physical examination.

The following table shows the supplementary documents needed for customs declaration:

	Import and Export Goods
1	Custom Form No.1
2	Bill of lading/airway bill
3	Commercial invoice or pro-forma invoice
4	Packing list
5	Any other relevant permits, licenses or certificates

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[6,7]

Malaysia's logistics infrastructures are relatively well-established when compared with the other ASEAN countries.

Airports

Malaysia has a total of 40 airports, of which six are international airports: the Kuala Lumpur (KUL), Langkawi (LGK), Kuching (KCH), Penang (PEN), Kota Kinabalu (BKI), Senai (JHB) International Airports.

In 2018, the passenger traffic grew by 3% (compared with 10% in 2017) to reach 102.4 million passenger a year, and the total cargo handled by Malaysian airports reached 0.97 million tonnes, representing a 2% growth compared with 2017.

Seaports

Malaysia has 7,200 kilometres of waterway and benefits from a strategic location along the Malacca Strait. Malaysia has a total of 14 seaports of which only four can handle one million TEUs or more (Penang, Klnag, Tanjung Pelepas, and Johor). In addition there are three others international ports: Kuantan, Kemaman and Bintulu.

In 2018, 24.9 million TEUs were handled through these ports, representing a 5% growth compared with 2017.

Location of Major Airports and Seaports in Malaysia

Kuala Lumpur International Airport

Located near four major cities (Kuala Lumpur, Shah Alam, Seremban and Melaka), it handled around 58% of the country's total passengers and 74% of cargo in 2018. There are plans to upgrade the airport cargo capacity to 2.5 million tonnes by 2050.

Port Klang

Ranked 11th busiest port in the 2019 World Shipping Council Report. In 2018 the port handled 12.3 million TEU, nearly half of Malaysia's total cargo. The port is undergoing an upgrade process to increase its capacity to 16 million TEU by 2020.

Tanjung Pelepas Port

Ranked 19th busiest port in the 2019 World Shipping Council Report. In 2018, the port handled 9.0 million TEU.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Highways

Malaysia's road network is 237,000 km long with 2,100 km of expressways (around 1%). Generally, the country's highways are well maintained and link major cities or industrial areas to other transportation networks such as airports and seaports.

The North-South Expressway is the longest highway of the country, and spans over nearly 800 km extending from the border of Thailand in the north to the border of Singapore in the south. It is an efficient mean to transport cargo across the entire peninsular Malaysia.

Railways

The railway system in Malaysia is run by the state-owned Keretapi Tanah Melayu Berhad (KTMB) and covers nearly 2,000 kilometres. The KTMB is the main passenger train and freight trains operator in Malaysia.

In 2019, the Malaysia Rail Link Sdn Bhd (MRL) signed an agreement with the China Communications Construction Company (CCCC) to continue construction of the East Coast Rail Link (ECRL). The ECRL is a 640km railway aiming to connect Port Klang on the Straits of Malacca to Kota Bharu in northeast peninsular Malaysia.

B. Key Logistics Hubs[8]

The Malaysian government plans to turn the country into an ASEAN logistics hub. In order to do so, the Ministry of Transport is implementing the Logistics and Trade Facilitation Masterplan 2015-2020 to facilitate transportation in Malaysia, increase connectivity between various networks, upgrade the logistics environment and support the freight logistic industry.

As part of this strategy, the government identified e-commerce as an important lever. For this reason, Malaysia has partnered with Alibaba to build a Digital Free Trade Zone (DFTZ) in the country. The DFTZ is intended to increase Malaysian SMEs' access to major global trade partners. Unlike the traditional duty-free zone where goods are stored in physical area, the DFTZ aims to digitalise trade to help SMEs in their cross-border e-commerce activities.

Within the DFTZ, Alibaba is planning to build a regional eFulfilment hub. The hub, located at the Kuala Lumpur International Airport (KLIA), will foster multimodal transportation by leveraging existing air freight infrastructure, sea freight via Port Klang and railway cargo via Bukit Kayu Hitam.

C. Logistics Information Tractability and Transparency[9]

Malaysia has relatively strong logistics performance as compared to other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Malaysia was ranked 41st out of 160 countries for the overall LPI, a drop from the 2016 result (ranked 32nd out of 160). Malaysia ranked fourth amongst the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Malaysia performed well in the International shipments (32nd), and Logistics competence (36th) categories, but performed relatively worse in the Timeliness category (53rd).

Source:

[1] *Trade Map, International Trade Centre*

[2] *Industry4WRD, Ministry of International Trade and Industry*

[3] *Commodities Global Trade homepage*

[4] *Rankings & Ease of Doing Business Score, The World Bank*

[5] *Top 10 challenges of doing business in Malaysia, TMF Group*

[6] *Briefing Developed Infrastructure, Malaysian Investment Development Authority*

[7] *Ministry of Transport official statistics*

[8] *Alibaba to set up regional logistics hub in Malaysia, Reuters*

[9] *Logistics Performance Index (LPI), The World Bank, 2018*

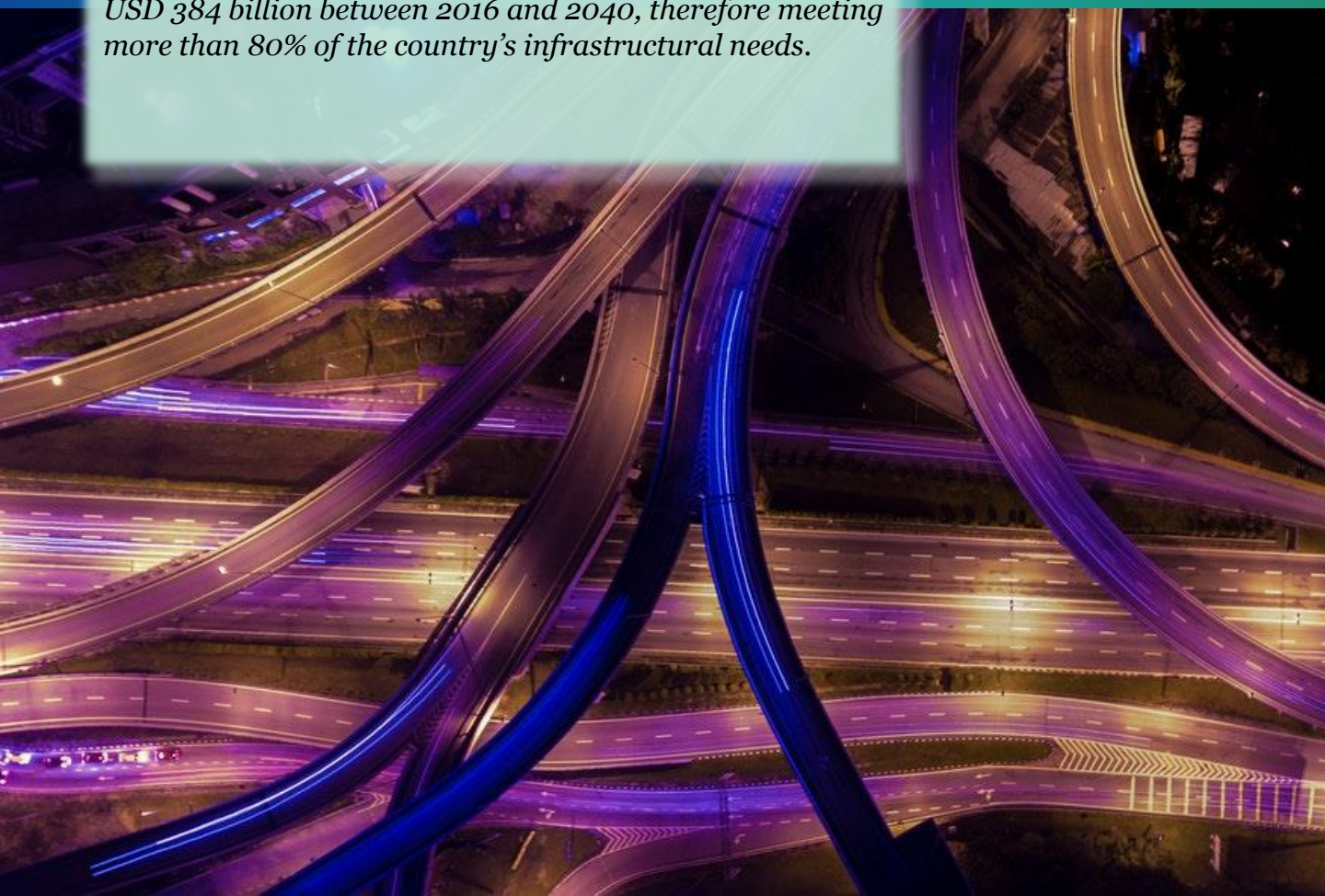
7. Infrastructure

Executive Summary

Malaysia has relatively established industrial and transportation infrastructure.

Domestic and foreign investors can choose to locate their manufacturing activities in over 500 industrial estates across the country. They can also benefit from special facilities offered by industry specific parks or be granted financial and non-financial incentives by doing business in Free Industrial Zones. In addition, the government is pushing industrial parks to upgrade their facilities.

Malaysia also has established transportation infrastructure comparable with other countries in the region. Despite the government's intent to put on hold major infrastructure projects to reduce the national debt, it is estimated that the private and public sectors will invest USD 384 billion between 2016 and 2040, therefore meeting more than 80% of the country's infrastructural needs.



7. Infrastructure

I. List of Major Industrial Parks or Zones and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Parks or Zones[1,2,3,]

Malaysia has over 500 industrial estates throughout the country available for domestic and foreign investments. Some of these industrial parks are designed to fulfil specific industry needs, for example, technology parks or hi-tech parks focuses on attracting companies carrying out activities related to research and development (R&D) or new technologies. In addition, some industrial estates are located in the 18 Free Industrial Zones (FIZs) developed in Malaysia, which are catered for export-oriented companies.

Support and Incentives

Utilities

Generally, industrial estates in Malaysia are equipped with multiple infrastructure such as reliable and stable electricity, clean and potable water, centralised sewage services, telecommunications infrastructure (via fibre-optic gateway) or pipelines to provide industrial gases. The parks also offer additional services such as security surveillance, housing options for employees and other facilities.

Transportation

Industrial parks are generally located within range of multiple transportation infrastructure (e.g. national highways leading to airports or seaport). For example, multiple FIZs are established near Malaysia's greatest ports (e.g. Pasir Gudand FIZ near the port of Johor).

Government Incentives

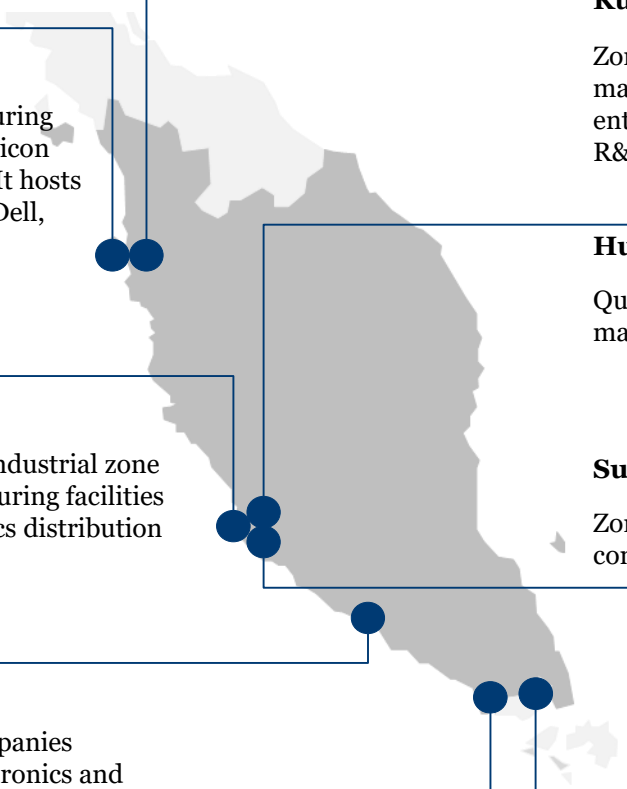
In order to attract domestic and foreign investors and boost its manufacturing sector, Malaysia set up different types of zones and created special status which enable companies to receive financial and non financial incentives:

- Free industrial zones: manufacturing companies located in FIZs are entitled to duty free imports on various commodities needed for manufacturing process (e.g. raw material, parts or machinery and equipment). Enterprises can benefit from relaxed foreign ownership and can repatriate funds with no currency restriction; and
- Licenced Manufacturing Warehouses: status given to companies' manufacturing facilities which enables them to receive nearly the same incentives as if they were located in a FIZ.

In addition, Malaysia launched in 2017 the Digital Free Trade Zone (DFTZ). This physical and virtual zone aims to increase Malaysian capabilities in cross-border e-commerce and should prove beneficial to the country's manufacturing companies. It especially focuses on:

- Facilitating the export process for SMEs; and
- Increasing the visibility and accessibility to Malaysian manufacturers, enabling global marketplaces to source from them.

Locations of the Major FIZs in Malaysia[4]



Bayan Lepas

A hi-tech manufacturing area nicknamed “Silicon Valley of the East”. It hosts companies such as Dell, Motorolla or Bosch.

Kulim Hi-Tech Park

Zone catered for hi-tech manufacturing companies, and for enterprises wishing to carry out R&D.

Hulu Klang

Quite established electronics manufacturing zone.

Port Klang

A commercial and industrial zone providing manufacturing facilities and multiple logistics distribution solutions.

Sungai Way

Zone tailored for manufacturing companies engaging in electronics.

Batu Berendam

The zone hosts companies manufacturing electronics and micro-electronics products.

Port of Tanjung Pelepas

Zone tailored for manufacturing activates in light, medium industries such as food processing or packaging. It also offers, logistics, warehousing, and distribution solutions.

Pasir Gudang

Zone located near Johor Port, hosting companies in the petrochemical and logistics industries.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Foreign Direct Investment (FDI)[5]

In 2018, Malaysia recorded net FDI inflows of around USD 7.9 billion (MYR 32.6 billion). Asia was the leading contributor with a 45% share and within this region, Hong Kong was the top investor (but nearly all of its investments were directed at the service industry). In the country, financial services, insurance, wholesale and retail trade were the sectors that attracted the most FDI. However, when compared with 2017 the country received 19% less FDI (USD 9.8 billion in 2017). According to the Department of Statistics Malaysia, this drop was due to lower investments in the mining and quarrying sector.

Cost of Usage[6]

The price of land (for both rent and sale) in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links as well as proximity and access to raw materials. For more details on the cost of industrial land or ready built factory, please refer to Appendices 2 and 3.

As Malaysia offers various specialised industrial parks, it is important for an investor to select a location that best fits its needs. Indeed, parks catering to specific industry will be likely to charge a premium compared to non-specialised parks, due to the availability of specialised infrastructure. For example, Kulim Hi-Tech Park is likely to charge higher prices due to the availability of top notch R&D infrastructure and the availability of skilled workforce.

In addition to the land cost and facilities rent cost, industrial parks generally charge various fees. Investors can expect to pay domestic waste fees, maintenance fees, general fees and access pass fees.

Outlook[7,8]

According to the Malaysian Investment Development Authority (MIDA), new industrial parks equipped with world-class infrastructure in electricity and water supplies, telecommunications, and with privileged access to national transportation networks are continuously being built by private and public developers. For examples, the Smart Industrial Center, a new industrial estates located in the state of Melaka (along the Strait of Malacca), opened its doors in June 2019. The park has already attracted two Japanese firms: an electronic manufacturer, and a local metal components maker. Total investment in the estate should amount to USD 144 million.

This example is very much in line with the Malaysian government strategy to move the country up the manufacturing value chain thanks to knowledge transfer. The Mahathir administration is implementing the Industry 4WRD policy which focuses on pushing domestic companies to adopt Industry 4.0 technologies (especially automation) by collaborating with foreign investors. In addition, the government is also pushing industrial estates to upgrade their facilities to meet new needs. According to the Deputy Minister of International Trade and Industry “foreign investors are becoming more demanding as they require not only good infrastructure for the manufacturing park but also the amenities within the self-contained township and eco-friendly features of international standards”.

Therefore, park developers are asked to develop the next generation of industrial estates to attract and cater for the next generation of industries. Capturing high quality investments is key to Malaysia’s economic growth.

B. Land or Building for the Major Industrial Parks or Zones[9,10]

Availability for Foreign Ownership and Costs

Foreigners are allowed to rent or buy industrial lands in Malaysia if they get the consent from the state authorities (i.e. not the federal government). However, there are restrictions in some states. For example the Selangor state divides its territory into three zones for which different rules apply. For land located in Zone 1 (Petaling, Gombak, Hulu Langat, Sepang and Klang) and Zone 2 (Kuala Selangor and Kuala Langat), foreigners cannot buy industrial land that costs less than MYR 3 million (around USD 730,000). For Zone 3 (Hulu Selangor and Sabak Bernam), investors can only buy strata properties.

Application Procedures for Business Operation In FIZ

Companies wishing to operate in FIZ need to submit their applications directly to the appropriate zone authority. Below is an example of the steps to be taken in order to register in the Port Klang FIZ.

Investors can apply by filling out the required forms either offline or online. Upon receipt of the business licence, investors can immediately take over the facilities. Investors building their own customised facility in the FIZ can utilise some zone's amenities during the construction period in order to prepare their manufacturing operations.

The normal timeline for receiving all necessary documents to operate in the Port Klang FIZ is as follows:

Business License 1 week	**Work Permits** 2 weeks	**Company Registration** 2 days	**Export Permit** 1 day	**Import Permit** 1 day

II. Potential Infrastructure Shortfall[11,12]

Overall, Malaysia has moderately established infrastructure. In the World Economic Forum's 2018 Competitiveness Report, Malaysia ranked 32nd out of 140 countries. The country came second when compared with other ASEAN countries, only behind Singapore (1st worldwide). However, Malaysian infrastructure has room for improvement:

- Road connectivity is very poor and railroad density is only average (128th in the road connectivity index criteria, 59th in railroad density criteria); and
- People are exposed to unsafe drinking water, and the water supply is also not highly reliable (69th in exposure to unsafe drinking water, 50th in reliability of water supply).

In addition, Malaysia's infrastructure development is facing major political hurdles. Since the new prime minister Mahathir took office in 2018, he has put a number of projects on hold in an effort to cut the national debt, and to review whether the initiatives are beneficial to the country's economy. Overall, the government estimates that it could save USD 50 billion (i.e. one-fifth of the national debt) by scrapping major infrastructure projects. Below are a few examples of main initiatives that are currently suspended by the government:

- The USD 17 billion high-speed rail project between Kuala Lumpur and Singapore which was expected to start operation in 2026.
- A USD 14 billion joint rail project with Chinese partners, aiming to connect the Strait of Malacca to the eastern Thai border, which has access to the South China Sea.

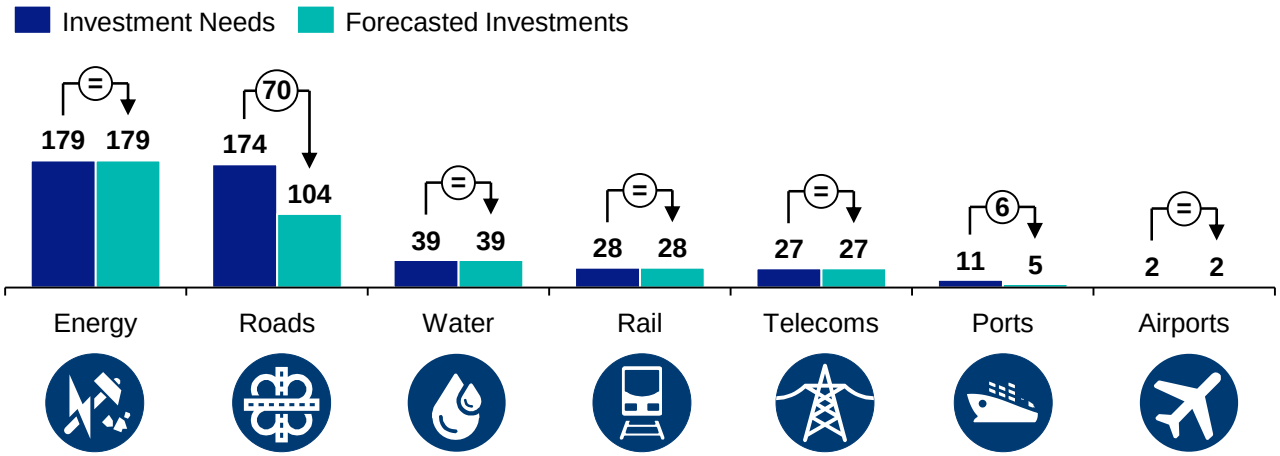
III. Latest and Upcoming Major Local Infrastructure Projects and Spending[13,14]

This section highlights the major infrastructure developments in Malaysia. Please refer to Appendix 4 for a comprehensive list of projects.

Despite the government announcing cuts in public spending on infrastructure, some major development projects are still ongoing. In addition, according to Malaysia's Economic Outlook 2019, private sector investments should increase, therefore remaining a key economic growth driver and softening the effects of lower public spending.

From 2016 to 2040, around USD 460 billion will be needed to upgrade or develop new infrastructure in Malaysia (see chart below for breakdown by sector). Over the period it is forecasted that the country's public and private sectors will invest USD 384 billion, therefore covering more than 80% of the country's needs. However, some sectors will suffer from investment gaps: additional investments of around USD 70 billion and USD 6 billion for roads and ports will be needed respectively.

Malaysia's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



IV. Availability of Natural Resources

Natural Resources	Details
Natural Vegetation, Forests and Timber	• Almost 2/3 of Malaysia is forest. Many forests are heavily exploited for timber • The primary tree species in Malaysia are from the Dipterocarpaceae family • Threats to Malaysian forests include: illegal logging and deforestation for pal oil production
Agriculture	• Agriculture sector represents around 8.8% of Malaysian GDP • The dominant crops in the country are palm oil and rubber • Malaysia is one of the world's largest exporter of palm oil
Fishing/ Aquaculture	• Fishing accounted for 10.5% of the total agricultural GDP in 2017 • Malaysia's fisheries include marine capture, aquaculture and inland capture • Malaysia's most abundant seafood includes: seaweed, cockles, mussels, tilapia, catfish, shrimps
Livestock	• Livestock represented 11.4% of the agricultural GDP in 2017 • Non-ruminant (chicken, duck, pig and eggs) large-scale production and contributes more than 80% of livestock industry • Poultry and eggs dominate the non-ruminant category and is self sufficient
Water Resources	• Endowed with abundant water resources, facing increasing demand • Agriculture sector uses approximately 76% of all available water of which 90% is used for rice production (in 2014) • 98.2% of population have access to drinking water
Minerals	• Minerals found in Malaysia: tin, copper, iron ore, bauxite, monasite, ilmenite, struverite, zircon and silica • Value of major minerals produced during 2016 was around MYR 6.3 billion
Coal, Oil and Fossil Fuels	• Fossil fuel energy consumption represented 96.6% of the total Malaysian energy consumption in 2014 • Petronas (state owned oil and gas company) holds most of the country's petroleum resources • Coal is the most used fossil fuel in the country's energy generation
Renewable Energy	• Malaysia has set a 20% goal of clean energy generation by 2030 • Geographic location is advantageous for solar and hydro energy • Petronas has expressed interest to diversify into renewable energy

Source:

[1] *Developed Industrial Parks, Malaysian Investment Development Authority (MIDA)*

[2.] *Kulim Hi-Tech park homepage*

[3] *Digital Free Trade Zone (DFTZ), Malaysia External Trade Development Corporation*

[4] *List of Industrial Free Trade Zones in Malaysia, Offshore Labuan*

[5] *Malaysia posts net FDI inflows of RM32.6b in 2018, MIDA, 2019*

[6] *Set-up Costs, Port Klang Free Zone*

[7] *Malaysia's newest industrial park draws Japanese investment, Nikkei Asian Review*

[8] *Industrial park developers to step up their game, Focus Malaysia, 2018*

[9] *Foreign ownership of land, clear policy needed, New Strait Times, 2017*

[10] *Basic application process, Port Klang Free Zone*

[11] *2018 Competitiveness Report, World Economic Forum*

[12] *Malaysia PM Mahathir Mohamad announces plan to scrap high-speed rail project with Singapore, South China Morning Post, 2018*

[13] *Malaysia Macroeconomic Outlook*

[14] *Forecasting infrastructure investment needs and gaps, G-20, 2017*

8. Types of Industries Encouraged by the Local Government

Executive Summary

Malaysia is generally open to foreign investments, with incentive programmes supporting many industries, and few prohibited sectors. The Malaysian government aims to elevate the country to a high income nation by 2020 with the help of domestic and foreign investments.

Malaysia provides incentives such as pioneer status and investment tax allowance to various industries to attract foreign direct investment (FDI). Overall, there are only a few sectors that are strictly prohibited for foreigners. Moreover, several sectors require government approval or a minimum ownership by the indigenous ethnic groups, such as distributive trading including wholesalers, retailers or franchise practitioners.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries

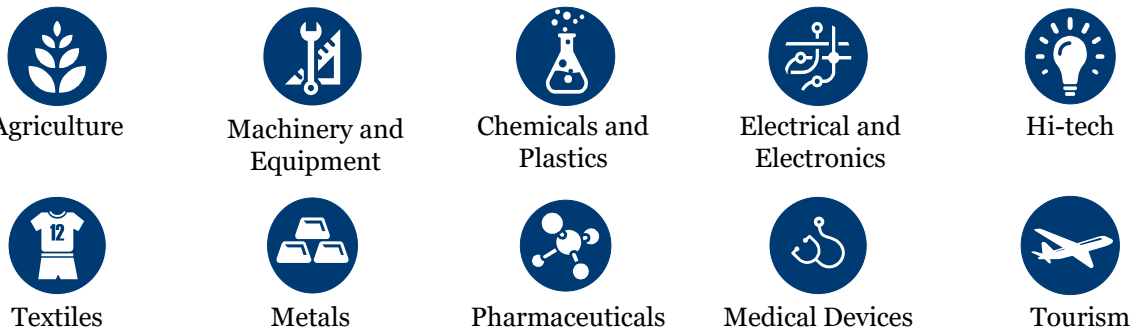
The main authority responsible for promoting and managing investments in Malaysia is the Malaysian Investment Development Authority (MIDA). Aside from the general incentives provided by the MIDA under the Promotion of Investments Act 1986, the Malaysian government also provides several programmes and initiatives to encourage local and foreign investments. The two main programmes are the Economic Transformation Programme (ETP), and the National Policy on Industry 4.0 (Industry4WRD).

Malaysian Investment Development Authority (MIDA)[1]

The MIDA provides general investment incentives for both the manufacturing and services sector. The two main initiatives under the MIDA are the pioneer status, and the investment tax allowance incentives. The pioneer status mainly provides income tax exemption, while the investment tax allowance allows a business to offset capital expenditures against income for tax purposes.

Both the manufacturing and services sectors are eligible for either the pioneer status or investment tax allowance incentives. These two incentives are mutually exclusive, and a business can only benefit from one of the two incentives at a time.

In 2012, the MIDA published a general list of encouraged sectors and products. Each industry may have its own specific criteria that businesses have to meet in order to qualify for the incentives. The list of manufacturing industries that are eligible for these incentives is extensive, and includes but is not limited to, the following industries:



Small and medium-sized companies also have an additional list of activities that are eligible for incentives. For a full list of supported industries and subindustries, please refer to the MIDA (www.mida.gov.my/home/promoted-activities-and-products-for-manufacturing-sector/posts)

The MIDA has also launched the i-Services Portal on its official website. This service aims to connect businesses with local service providers, to assist domestic and foreign investors, and help promote the domestic services sector.

Economic Transformation Programme (ETP)[2]

The ETP was introduced in 2010, aiming to transform Malaysia into a high income nation in 2020 by boosting investment. However, according to the World Bank, Malaysia is only expected to reach this target by 2024. The ETP focuses on 12 National Key Economic Areas (NKEAs), which represent economic sectors that potentially contribute to a quantifiable amount of economic growth in Malaysia. The 12 NKEAs include 11 industries and one geographic area:

Electrical and Electronics

Communications and Infrastructure

Financial Services

Business Services

Wholesale and Retail

Oil, Gas and Energy

Agriculture

Palm Oil

Healthcare

Education

Tourism

Greater Kuala Lumpur/Klang Valley

The National Policy on Industry 4.0 (Industry4WRD)[3]

The National Policy on Industry 4.0 was launched in 2018 to foster digital transformation of the manufacturing sector and relevant services in Malaysia. The policy focuses on the manufacturing sector, as it contributes significantly to the Malaysia economy. Although over 98% of companies in the sector are small and medium-sized enterprises, the policy aims to elevate these companies to equip them with the potential to be global exporters.

The policy encourages the integration of big data, artificial intelligence, cloud computing, internet of things (IoT), and robotics, among other advanced technologies with existing industries in Malaysia. The five focus sectors of Industry4WRD include:

Electrical and Electronics

Machinery and Equipment

Chemical

Medical Devices

Aerospace

These focus sectors are considered to be the leading industries in Malaysia, with high potential growth. As the focus sectors also influence many other supporting industries, growth in the focus sectors will help to drive improvements in other industries in the country.

Other sectors that are also promoted in Industry4WRD include the automotive, transport, textile, pharmaceuticals, metal, food processing and service industries.

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[4,5]

In Malaysia, there are limits to foreign corporate ownership in certain sectors. The cap is set at 70% of equity. A minimum of 30% equity must be held by the indigenous ethic groups (e.g. Bumiputera).

Currently, the 70% limit restriction only applies in strategic economic sectors, including:

- Aviation;
- Freight forwarding;
- Shipping;
- Water; and
- Oil and gas.

In addition, foreign investments in certain industries are subject to different participation restrictions imposed by the relevant authorities. For the following sectors, the permissible foreign shareholding ranges from 30-100%:

- Banking;
- Insurance;
- Takaful operators (a type of Islamic insurance); and
- Stock brokerage and fund management.

Distributive trade is also regulated in Malaysia by the Ministry of Domestic Trade and Consumer Affairs (MDTCA). The MDTCA has issued the Guidelines on Foreign Participation in the Distributive Trade Services to regulate the foreign participation. Distributive traders include wholesalers, retailers, franchise practitioners, direct sellers and suppliers who channel their goods down the supply chain to intermediaries for resale or to end-users. The MDTCA also requests all foreign participations in distributive trade to obtain approval before conducting any activities. Under the guidelines, foreign participation is defined as any party that comprises:

1) An individual who is not Malaysian (including permanent citizen);
2) A foreign company or institutions; and
3) A local company where the parties as stated in item 1) or 2) above holds more than 50% of voting rights.

List of Prohibited or Restricted Activities and Subsectors Within Distributive Trade

Status	List of Prohibited or Restricted Industries
Completely Prohibited	• Supermarket/mini market (<3,000 square meters sales floor area); • Provision shop/general vendor; • Convenience store (that opens for business for 24 hours); • News agent and miscellaneous goods store; • Medical hall (inclined towards traditional alternative medicines plus general dry foodstuff); • Fuel stations (with or without convenience store); • Permanent wet market store; • Permanent pavement store; • National Strategic Interest; and • Textile, restaurant (non-exclusive), bistro, jewellery shops.
Approval Required	• Market research and public opinion polling services; • Management consulting services; • Other business services; • Repair services (metal, machinery and equipment); • Other land transport service; • Supporting services for road transport; • Building-cleaning services; • Photographic services; • Leasing service concerning machinery and equipment; and • Real estate service.
• Requires at least 30% equity participation by Bumiputera • Appoint Bumiputera directors	• All distributive trade companies except departmental stores and specialty stores

In addition, the Industrial Coordination Act 1975 regulates the manufacturing activities in Malaysia and requires manufacturing companies to be licensed by The Ministry of International Trade and Industry. Manufacturing enterprises are exempted from getting a license if 1) their shareholders' fund is smaller than MYR 2.5 million (around USD 0.6 million), and if 2) they have less than 75 full-time paid employees.

The Petroleum Regulations 1974 are the primary legislation governing petroleum activities in Malaysia. Any company participating in the upstream sector of the oil and gas industry have to 1) obtain a license from Petroliam Nasional Berhad (PETRONAS), and 2) comply with the minimum Bumiputera participation requirements (depending on the type of service).

Source:

[1] *Invest in Malaysia, Malaysian Investment Development Authority*

[2] *Economic Transformation Programme, Prime Minister's Department*

[3] *National Policy on Industry 4.0, Ministry of International Trade and Industry*

[4] *Malaysia – Essential Tips for successful investment, Clifford Chance*

[5] *Guide to doing business in Malaysia, Christopher & Lee Ong 2019*

9. Key Government Incentives

Executive Summary

The primary foreign investment initiatives in Malaysia are the Economic Transformation Programme (ETP) and the National Policy on Industry 4.0 (Industry4WRD), each with different set of criteria for eligibility and investment incentives.

Malaysia also has five Economic Corridors and other special zones, for example the Free Industrial Zones (FIZs), Digital Free Trade Zone, and Multimedia Super Corridor, designated to encourage growth in certain locations and industry sectors in Malaysia.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments[1]

In Malaysia, investment incentives are mainly provided by the Malaysian Investment Development Authority (MIDA). There are two major types of incentives available: the Pioneer Status (PS) and the Investment Tax Allowance (ITA). Companies are eligible for the incentives if they are involved in the promoted industries, such as manufacturing, agricultural, hotel, and tourism, or if they participate in a promoted activity or produce a promoted product.

Pioneer Status (PS)

The PS grants companies corporate income tax (CIT) exemption. All applications for PS incentives can be made to the MIDA. In general, companies are exempted from CIT on 70% of their statutory income (SI) for five years. The remaining 30% is taxed at the prevailing CIT rate of 24%. However, specific projects may be eligible for exemption on a larger % of SI, or exemptions for a longer period. Examples of PS incentives for specific projects are shown below.

Projects	Incentive	Tax Relief Period
Projects of national and strategic importance involving heavy capital investment and high technology	100% of SI	5+5 years
High-technology companies engaged in areas of new and emerging technologies	100% of SI	5 years
Companies manufacturing specialised machinery and equipment	100% of SI	10 years
Existing locally owned companies reinvesting in production of heavy machinery, specialised machinery, and equipment.	70% of increased SI	5 years
New companies investing and existing companies reinvesting in utilising oil palm biomass to produce value-added products	100% of SI	10 years

This list of projects is not comprehensive. For a detailed list of possible PS incentives for a specific project, please refer to the MIDA's official website (www.mida.gov.my/home/incentives-in-manufacturing-sector/posts).

Investment Tax Allowance (ITA)

An ITA grants companies tax allowances. All applications for ITA incentives can be made to MIDA. In general, the ITA is granted on 60% of qualifying capital expenditure (QCE) incurred for a period of five years (to be utilised against 70% of the SI). However, specific projects may be eligible for exemption on a larger percentage of QCE. Examples of ITA incentives for specific projects are shown below.

Projects	Incentive	Tax Relief Period
Projects of national and strategic importance involving heavy capital investment and high technology	100% of QCE	5 years
High-technology companies engaged in areas of new and emerging technologies	60% of QCE (against 100% of SI)	5 years
Companies manufacturing specialised machinery and equipment	100% of QCE	5 years
Existing locally owned companies reinvesting in the production of heavy machinery, specialised machinery, and equipment	60% of QCE (against 7% of SI)	5 years
New companies investing and existing companies reinvesting in utilising oil palm biomass to produce value-added products	100% of QCE	5 years

This list of projects is not comprehensive. For a detailed list of possible ITA incentives for a specific project, please refer to the MIDA's official website (www.mida.gov.my/home/incentives-in-manufacturing-sector/posts).

III. Other Government Support Funding Schemes, Including Both Local and Foreign Investments

Other than the PS and ITA investment incentives under the MIDA, the Malaysian government also has other funding programs that provide incentives to both domestic and foreign investors. The two main initiatives are the Economic Transformation Programme (ETP), and the National Policy on Industry 4.0 (Industry4WRD).

The Economic Transformation Programme (ETP)[2]

Private investment is at the core of the ETP. A total of MRY 1.3 trillion (around USD 300 billion) is needed from the private sector to fund the 131 Entry Point Projects (EPP) identified in the ETP. To attract the investment needed to help drive the programme, the Malaysian government has provided numerous fiscal and non-fiscal incentives.

Fiscal Incentives

Businesses will need to apply and negotiate for the investment incentives with the MIDA and other agencies. Approval for investment incentives will be given on a case-by-case basis. The fiscal incentives will vary for different industries, and even for each project, depending on the negotiations. The table below provides some examples of possible incentives in different industries.

Incentive	Possible Incentive per Industry
Tax Credits and Tax Holidays	• Electrical and Electronics: tax exemption for pioneer silicon producers, wafer and cell producers • Healthcare: tax breaks for companies qualifying for Health Metropolis status • Agriculture: tax concession for companies settling in an integrated food park
Investment Tax Allowance	• Electrical and Electronics: tax allowance to upgrade packaging plants • Palm Oil: tax allowance for the acquisition of foreign oleo derivatives and food companies • Tourism: tax allowance for the construction of four-star and five-star hotels, upgrades and refurbishments
Non-tax Incentives	• Electrical and Electronics: research and development (R&D) and training grants for expansion • Agriculture: low-interest financing scheme for rural entrepreneurs • Education: funding for the construction or expansion of schools and training centres

Non-Fiscal Incentives

To sustainably develop the 131 EPPs, the Malaysian government intends to attract talents from overseas (e.g. overseas Malaysian or non-Malaysian). Some major efforts to attract foreign talents include: designing and implementing attractive expatriate packages (e.g. personal income tax incentives) or assisting expatriates with their work applications (e.g. visas, work permits). New immigration regulations intended to ease foreign talent acquisition will also attract foreign skilled workers. These are only some of the incentives provided through the ETP to investing businesses. The table below shows some possible incentives in certain industries that businesses may be eligible for.

Incentive	Possible Incentive per Industry
Simplified and Expedited Application Processes	• Electronics and Electrical: reduced processing time of work permits applications/renewal (between 2 weeks to a month) • Financial Services: online immigration applications and processing • Oil, Gas and Energy: shorter approval times to obtain/renew work and residence permits • Healthcare: shorter process for private hospital to hire foreign doctors, nurses and other healthcare personnel
Removal of Restrictive Immigration Policy	• Electronics and Electrical: automatic approval for foreign talents involved in value added tasks • Business Services: removal of restrictions on expatriates, provide one-year working visa to skilled foreign students

National Policy on Industry 4.0 (Industry4WRD)[3]

Previously, no specific financial support and incentives existed in the country to foster Industry 4.0 technology development (e.g. R&D, prototyping, testing, upgrading facilities). In order to foster investment and adoption of Industry 4.0 technologies, the Industry 4WRD policy includes the following objectives: create outcome based incentives (e.g tax incentives) and provide innovative financial products. As the policy is relatively new, accurate details on these incentives are not yet available. However, in 2019, the government pledges to allocate MYR 2 billion (around USD 480 million) under the Business Loan Guarantee Scheme via the Syarikat Jaminan Pembiayaan Perniagaan (SJPP), a wholly-owned company of the Minister of Finance, and MYR 3 billion (around USD 720 million) under the Industry Digitalisation Transformation Fund (which provides loans with subsidise interest rates of 2%) to accelerate the adoption of smart manufacturing.

Nevertheless, foreign investments/companies are not always eligible for these incentives. The SJPP only gives out funding and loans to majority Malaysian owned companies (i.e. company must be 51% owned by a Malaysian citizen). For more information and specific criteria, please refer to the SJPP website (www.sjpp.com.my/sjppv2e/index.php/services/2-interest-profit-rate-rebate-terms/eligibility-criteria-terms). Foreign majority owned companies are eligible to the Industry Digitalisation Transformation Fund, but will still need a minimum of 40% equity held by a Malaysian citizen. For more information regarding other specific criteria, please refer to the Industry Digitalisation Transformation Fund page on the Malaysia Development Bank website (www.bpmb.com.my/industry-digitalisation-transformation-fund).

III. Scope of Special Economic Zone Scheme and Geographical Location

Economic Corridors (ECs)[4]

In order to promote national economy regional development, the Malaysian government created five economic growth corridors in 2006. Each EC has its own managing authority, and is collectively managed under the MIDA. Therefore, businesses will need to apply for incentives with the specific managing authority of the EC they wish to participate in. Each EC also has its own specific promoted sectors that are eligible for the investment incentives. These ECs aim to promote domestic and foreign investments in the following regions:

1) Iskandar Malaysia in Southern Johor (IRDA);

2) Northern Corridor Economic Region (NCER);

3) East Coast Economic Region (ECER);

4) Sabah Development Corridor (SDC); and

5) Sarawak Corridor of Renewable Energy (SCORE).

Businesses in these areas will be eligible for the PS and ITA incentives under the MIDA, in addition to import duty and sales tax exemption. The periods that these incentives will be available for will differ in each economic corridor. The table below shows examples of incentives and the promoted industries in each economic corridor.

Promoted Industries and Investment Incentives Available in the Economic Corridors (Part 1/2)

Economic Corridors	Promoted Sectors	Examples of Incentives
IRDA	• ICT • Electrical & Electronic • Education • Financial Services • Food & Agro-processing • Healthcare • Logistics • Oil, Gas & Petrochemical • Tourism	1) Pioneer Status (PS): • Exemption for 5 years; 2) Investment Tax Allowance (ITA): • Available for 5 years; 3) Import duty and sales tax exemption on machinery and equipment used. For more details on incentives, please visit (iskandarmalaysia.com.my/).
NCER	• Agriculture • Bio-industries • Logistics • Manufacturing (Electrical & Electronics, and Machinery & Equipment) • Tourism • Services	1) Pioneer Status (PS): • Exemption for 5-15 years; 2) Investment Tax Allowance (ITA): • Available for 5-10 years; 3) Import duty and stamp duty exemption on machinery and equipment used. For more details on incentives, please visit (www.koridorutara.com.my)
ECER	• Agriculture • Manufacturing • Oil, Gas & Petrochemical • Tourism	1) Pioneer Status (PS): • Exemption for 10 years; 2) Investment Tax Allowance (ITA): • Available for 5 years; 3) Import duty and sales tax exemption on machinery and equipment used. For more details on incentives, please visit (www.ecerdc.com.my)
SDC	• Agriculture • Bio-industries • Tourism • Logistics	1) Pioneer Status (PS): • Exemption for 5-10 years; 2) Investment Tax Allowance (ITA): • Available for 5 years; 3) Import duty and sales tax exemption on machinery and equipment used. For more details on incentives, please visit: (www.sedia.com.my)

Promoted Industries and Investment Incentives Available in the Economic Corridors (Part 2/2)

Economic Corridors	Promoted Sectors	Examples of Incentives
SCORE	• Aluminum • Fishing & Aquaculture • Glass Industries • Marine • Oil-based Industries • Steel • Timber • Tourism	1) Pioneer Status (PS): • Exemption for 5 years; 2) All income of investors in SCORE is exempt from income tax for at least 5 years after the commencement of business. For more details on incentives, please visit: www.sarawakscore.com.my

Free Industrial Zones (FIZs)[5]

FIZs are export-focused zones that have been built to cater to export-oriented industries. Many manufacturers in Malaysia will choose to develop in FIZs to take advantage of the readily available infrastructure in the zones. FIZs are developed by the state governments.

The main incentive provided to business in FIZs is exemption on import duties for raw materials, components and parts, machinery, and equipment used in the manufacturing process.

If a business is not located in an FIZ, they can set up Licensed Manufacturing Warehouses (LMW), which can also provide the company with the same investment incentives. However, they will not be able to take advantage of the infrastructure provided in the FIZs.

Digital Free Trade Zone (DFTZ)[6]

The DFTZ was launched in 2017 with Mainland China's Alibaba Group. The DFTZ is an initiative to facilitate seamless cross-border e-commerce activities and develop an internet ecosystem in the country that drives innovation in e-commerce and digital economy. The DFTZ does not have customised incentives but businesses operating in the zone are advised to leverage existing applicable regulatory framework and incentives.

Multimedia Super Corridor (MSC)[7]

The MSC is a special economic zone designated by the Malaysian government to promote information and communications technology (ICT) and enable both domestic and foreign companies to reach new technological frontiers. The MSC covers an area of 15 kilometres wide and 50 kilometres long, starting from the Kuala Lumpur City Centre and extending down south to the Kuala Lumpur International Airport. Companies eligible for MSC status may be able to receive the following investment incentives:

- PS or ITA from the MIDA;
- Freedom to source capital and borrow funds globally;
- Duty-free importation of multimedia equipment; and
- Eligibility for R&D grants (for majority Malaysian-owned MSC Malaysia status companies).

For more details on the MSC, please visit MIDA homepage (www.mida.gov.my)

Source:

[1] *Invest in Malaysia, Malaysian Investment Development Authority*

[2] *Economic Transformation Programme, Performance Management and Delivery Unit*

[3] *National Policy on Industry 4.0, Ministry of International Trade and Industry, 2018*

[4] *Malaysia Economic Corridors, Malaysian Investment Development Authority*

[5] *Developed Industrial Parks, Malaysian Investment Development Authority*

[6] *Guide to doing business in Malaysia, Christopher & Lee Ong, 2019*

[7] *Budget 2019 Multimedia Super Corridor, The Malaysian Institute of Certified Public Accountants,*

10. Environmental Requirements

Executive Summary

In Malaysia, the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) is the main body responsible for environmental policies and standards setting, and the Department of Environment (DOE) under it is responsible for the prevention, control and abatement of pollution through the enforcement of the Environmental Quality Act and its subsidiary legislation.

Business with factories operating in Malaysia may encounter environmental hurdles or problems, such as historical pollution problems, license requirements, and environmental pollution problems.

There are environmental organisations and agencies available in Malaysia that can provide relevant environmental supporting services to those companies requiring assistances.

10. Environmental Requirements

I. Environmental Laws and Regulations in Malaysia

In Malaysia, the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) is the main body responsible for environmental policies and standards setting. The MESTECC is also responsible for sustainable energy, green technology, water supply, sewerage treatment, renewable energy, water purification, air purification, environmental remediation, solid waste management, energy conservation and sustainable engineering.

The Government of Malaysia has passed important environmental laws and policies such as the Environmental Quality Act in 1974 and related regulations in 1989, which together make up the primary environmental law in Malaysia. Other important policies include the Environmental Quality Order 1989, the Protection of Wildlife Act, the National Forestry Act 1984, the Fisheries Act 1985, the National Parks Act 1980, and the International Environmental Laws, etc.

A. The Main Environmental Protection Administrations in Malaysia

Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC)[1]

In 2018, the Ministry of Science, Technology and Innovation (MOSTI), the Green Technology and Energy related departments from the Ministry of Energy, Green Technology and Water (KeTTHA), as well as the Climate Change and Environment related departments from the Ministry of Natural Resources and Environment, were restructured to form the MESTECC.

Department of Environment (DOE)[2]

The Department of Environment is a department under the MESTECC. Established in 1975, the DOE of Malaysia is responsible for the prevention, control, and abatement of pollution in the country through the enforcement of the Environmental Quality Act of 1974, and supporting legislation.

The National Policy on the Environment (Dasar Alam Sekitar Negara, DASN) was established by the DOE to encourage environmentally sustainable development through the following objectives:

- Achieve a clean, safe, and healthy environment for future generations;
- Conserve the country's cultural and natural heritage; and
- Encourage sustainable production methods and lifestyles.

DASN aims to encourage environmental considerations in decision-making, development, and operations of businesses. This is done through the 8 principles listed under DASN:

1) Stewardship of the Environment;
2) Conservation of Nature's Vitality and Diversity;
3) Continuous Improvement in the Quality of the Environment;
4) Sustainable Use of Natural Resources;
5) Integrated Decision-Making;
6) Role of the Private Sector;
7) Commitment and Accountability; and
8) Active Participation in the International Community.

B. The Main Environmental Legislation in Malaysia

The Environmental Quality Act of 1974 is the primary law on environmental protection in Malaysia. Malaysia has also adopted Environmental Impact Assessment (EIA) Procedure and Requirements. The Malaysian government is currently looking to replace the Environmental Quality Act with a new act giving greater environmental enforcement powers, and allow for stricter punishments to polluters. The EIA processes will also be updated in the new act.

Environmental Quality Act[3]

The Environmental Quality Act was enacted in 1974 to control, manage, and punish businesses and individuals who pollute the environment in Malaysia. It also creates the Environmental Quality Council to manage pollution in the country.

Pollution Control

No person shall, unless licensed, emit or discharge any pollutant or noise into the atmosphere, soil or surface of any land, any inland water in contravention of the acceptable conditions specified in the Act.

Penalties

Any company/person that violates or fails to comply with requirements and measures set out under the Act will be punished by a fine and/or imprisonment. For different offence of pollution, there are different penalties regulated in the Act. In cases where the offender to be punished is a juristic person, the directors, managers, or persons in charge of the business operation causing the pollution are jointly liable and can be punished with the same penalties. For the detailed information about penalties, please refer to Part IV (Prohibition and Control of Pollution) of the Act.

Environmental Impact Assessment (EIA) Procedure and Requirements in Malaysia[4]

EIA has been mandatory for prescribed projects since 1 April 1989. The EIA Procedure summarises the EIA process as an aid to environmental planning for new projects or expansion of existing ones.

There are two EIA processes in Malaysia: the Preliminary EIA and the Detailed EIA. The EIA Procedure provides the list of prescribed activities which are subjected to Preliminary EIA, such as chemicals and shipyards industries. Compared with activities subjected to Preliminary EIA, the Detailed EIA is undertaken for projects with major/significant impacts to the environment, such as coal-fired power plants, construction of dams, iron and steel industry etc. The EIA Procedure also provides a list of activities which requires a Detailed EIA.

Other Regulations Against Pollutions

Malaysia has also issued environmental laws such as Solid Waste and Public Cleansing Management Act, Sewerage Services Act, etc. to regulate the corresponding services. In addition, emissions and disposal of air and noise pollution, water pollution, soil pollution, wastes and hazardous materials are clearly regulated by the relevant laws, regulations, and standards. There are corresponding penalties for violation of such laws and regulations.

A detailed list of environmental laws and regulations in Malaysia can be found in Appendix 5.

C. Main Environmental Related Joint Announcements and Statements which Mainland China and HK Have Issued with Malaysia

The Chinese Ministry of Foreign Affairs has issued a joint statement between the People's Republic of China and Malaysia regarding a Comprehensive Strategic Partnership, strengthening cooperation between Mainland China and Malaysia. The statement encourages cooperation in environment related fields.

In addition, there are also a series of statements and plans to further enhance the environmental cooperation between Mainland China and the ASEAN that will affect Malaysia.

Main Environmental-Related Joint Announcements and Statements[5,6,7]

Statements	Impact	Clause
Joint Statement by the Government of the People's Republic of China and the Government of Malaysia on the Framework for Future Bilateral Cooperation	Encourages cooperation in environmental management, sustainable development, clean technology, environmental education, environmental awareness and environmental protection.	Clause 4.10
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establishes the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Malaysia

Malaysia has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Environmental Impact Assessment

An EIA is required for prescribed activities in Malaysia, and is critical for the establishment of a factory.

Environmental Licenses[8]

The following licenses are required by the Environmental Quality Act, 1974:

- License to emit or discharge wastes into the atmosphere in contravention of the acceptable conditions specified under the environmental standards;
- License to emit, cause or permit to be emitted any noise greater in volume, intensity, or quality in contravention of the acceptable conditions specified under the environmental standards;
- License to pollute, cause or permit to be polluted any soil or surface of any land in contravention of the acceptable conditions specified under the environmental standards;
- License to emit, discharge, or deposit any wastes into any inland waters in contravention of the acceptable conditions specified under the environmental standards; and
- License to discharge wastes into Malaysian waters.

II. Environmental Situations in Malaysia

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period		Operation Period
Historical Pollution Issues	**License Requirements**		**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability from historical pollution	EIA	Environmental Licenses	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment.

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be impacted by the environmental risks caused by historical pollution if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help with systematically identifying the environmental risks and responsibilities before corporate investment, acquisitions and mergers, or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct any EDD necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify significant potential environmental risks in a report.

EDD Case

A global manufacturing company appointed SLP Environmental consultants to conduct an Environmental Site Assessment, as a part of the overall transaction due diligence process. The primary objective of the combined study was to determine the contamination status of soil and groundwater at the property pre-acquisition.

The laboratory test results were compared with Malaysian and US EPA Tier 1 Screening Values to determine the contamination status of the property. The Environmental Site Assessment report provided a full record of the works with clear conclusions, recommendations and an overall environmental risk rating for the subject project.

For a list of organisations/agencies providing EDD services in Malaysia, please refer to Section 10.III.A.

Pre-construction Period: Environmental Impact Assessment (EIA)[9]

The local environmental laws have stipulated the activities of industries which are required to conduct an EIA based on the local environmental laws, and these businesses are not allowed to operate without an EIA.

Resolutions

EIA

According to the EIA Procedure and Requirements in Malaysia, EIA reports must be prepared by competent individuals who are registered with DOE under the EIA Consultant Registration Scheme. As the Detailed EIA is less relevant to the key industries, only the Preliminary EIA process will be discussed below.

EIA Processes:

- Supporting agency selection: Hiring a qualified third party to conduct an EIA, which must ensure that all EIA team members are registered with DOE;
- EIA report compilation: Typically lasts one to two months depending on the size and scope of activities/projects;
- Submission: Submitting 12 copies to the DOE State Office and three copies plus a softcopy of the Executive Summary to the DOE Headquarters;
- Review and Approval: The Technical Committee Meeting/Review at DOE State Office will review the report and give a final approval typically in five weeks.

For the key industries and related activities, businesses in the chemical production industry with a designed production capacity above 100 tonnes/day are subjected to a Preliminary EIA.

EIA Case

In 2013, a global manufacturer of chemicals planned to setup a chemical factory in East Coast Malaysia. They appointed Geoscience Ireland to conduct a pre-development EIA. The EIA was designed to document the existing (pre-development) environmental and ecological conditions of the proposed factory site and adjacent habitats, also to enable the design team to make informed decisions regarding development projects and processes to minimize the short term, constructional impacts as well as the long term operational ecological impacts.

This involved assessment of terrestrial and wetland/mangrove habitats as well as the baseline marine environmental survey associated with the proposed marine wastewater discharge pipeline. This program has demonstrated compliance with the "minimal environmental impact" clause of the License to Operate Agreement and has enabled the factory to continue operating for over 20 years.

For a list of organisations/agencies providing EIA supporting services in Malaysia, please refer to Section 10.III.B.

Pre-construction Period: Environmental Licenses

All factories who emit, discharge, or deposit waste or noise to the environment in contravention of the acceptable conditions under the environmental standards are required to have the relevant environmental licenses. Otherwise, these businesses will not be allowed to operate.

Resolutions

Environmental Licenses

- Related department: DOE;
- Application forms: The application forms can be downloaded from the website of DOE (www.doe.gov.my).
- Duration and renewal: A license will last for one year, unless otherwise specified. Licenses must be renewed 3-4 months before the date of expiration.

Operation Period: Environmental Pollution Problems

During the operation period, company may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emission: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leading to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The DOE is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For a list of organisations/agencies providing environmental monitoring and related services in Malaysia, please refer to Section 10.III.C, D and E.

Environmental Pollution Case

As the soil pollution from discharging hazardous waste, a battery factory in Jenjarom, Kuala Langat was ordered to relocate its site and perform the soil remediation. Consequently the factory has to bear all the costs incurred.

In addition, the factory had also been issued six compound notices, involving fines totaling RM12,000, by DOE for breaching regulations on the management of its scheduled waste, and imposed a prohibition order under the Environmental Quality Act since 30 January 2018 for building an extension used for lead melting.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Malaysia

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental-related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment-related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards between Malaysia and Mainland China

Please refer below legend for the understanding of all the comparison tables in this section.

For the Mainland China standards (except for electronic industry and textile industry) and Malaysia Environmental Quality Regulations, values in brackets refer to the limit of effluent discharged into any inland waters within the catchment areas (specified in the Environmental Quality (Industrial Effluent) Regulations 2009 Sixth Schedule), and the values outside the brackets refer to the limit of effluent discharged into any other inland waters or Malaysian waters in Malaysia and water sources not serving tap water supply in Mainland China.

For the Mainland China standards in the electronic and textile industry, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Malaysia.

"↑" indicates the requirement of Malaysia is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Malaysia.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non-industrial areas in Malaysia at the moment, i,e. residential areas. If there are plans to build or operate factories in such area, a business should confirm with local environmental department whether specific regional requirements exist.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Malaysia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH		5.5-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Suspended solid		100 (50)	50	↓ (=)
		COD		200 (80)	80	↓ (=)
		BOD at 20°C		50 (20)	-	N/A
		Mercury		0.05 (0.005)	-	N/A
		Ammonia nitrogen	Special electronic materials	20 (10)	10/20[c]	↓/= (=/↑)
			Electrical units		5	↓ (↓)
			Printed circuit boards		20	= (↑)
			Semiconductor devices		10	↓ (=)
			Display device and photoelectron components		5	↓ (↓)
			Electron terminals products		5	↓ (↓)

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Malaysia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulphide	Special electronic materials	0.5 (0.5)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	↑ (↑)
			Semiconductor devices		1.0	↑ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Malaysia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Zinc	Special electronic materials	2.0 (2.0)	1.5	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓ (↓)
			Display device and photoelectron component		1.5	↓ (↓)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.02 (0.01)	0.05	↑ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↑ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Trivalent chromium		1.0 (0.2)	-	N/A
		Hexavalent chromium	Special electronic materials	0.05 (0.05)	0.2	↑ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↑ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Malaysia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Arsenic	Special electronic materials	0.1 (0.05)	0.3	↑ (↑)
			Electrical units		0.3	↑ (↑)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑ (↑)
			Display device and photoelectron components		0.2	↑ (↑)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.5 (0.1)	0.2	↓ (↑)
			Electrical units		0.1	↓ (=)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron components		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (0.2)	0.5	↓ (↑)
			Electrical units		0.5	↓ (↑)
			Printed circuit boards		0.5	↓ (↑)
			Semiconductor devices		0.5	↓ (↑)
			Display device and photoelectron components		0.5	↓ (↑)
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	0.1 (0.05)	0.2	↑ (↑)
			Electrical units		0.2	↑ (↑)
			Printed circuit boards		0.2	↑ (↑)
			Semiconductor devices		0.2	↑ (↑)
			Display device and photoelectron components		0.2	↑ (↑)
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Manganese	1.0 (0.2)	-	N/A
		Fluoride	5.0 (2.0)	10	↑ (↑)
		Oil and grease	10 (1.0)	-	N/A
		Selenium	0.5 (0.02)	-	N/A
		Silver	1.0 (0.1)	0.3	↓ (↑)
		Tin	1.0 (0.2)	-	N/A
		Boron	4.0 (1.0)	-	N/A
		Iron	5.0 (1.0)	-	N/A
		Aluminium	15 (10)	-	N/A
		Barium	2.0 (1.0)	-	N/A
		Formaldehyde	2.0 (1.0)	-	N/A
		Phenol	1.0 (0.001)	-	N/A
		Free chlorine	2.0 (1.0)	-	N/A
	Air Pollutants mg/m^3	NMVOC	20/150[d]	-	N/A
		TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	L90[e] + 10	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits And Control[12].*
b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[13], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*
c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*
d. *20mg/m^3 (indicated as total organic carbon) in the case of halogenated hydrocarbons and 150mg/m^3 (indicated as total organic carbon) other than halogenated hydrocarbons.*
e. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

Garment & Clothing

Water pollutants and air pollutants are the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH , on a scale of 0-14, colour in ADMI)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0	↓(=)
		Suspended solid	100 (50)	50	↓ (=)
		COD	250 (80)	80	↓ (=)
		BOD at 20°C	50 (20)	20	↓ (=)
		Colour[c]	200 (100)	50	↓ (↓)
		Ammonia nitrogen	20 (10)	10	↓ (=)
		Total nitrogen	-	15	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine dioxide	-	0.5	N/A
		Free chlorine	2.0 (1.0)	-	N/A
		AOX	-	12	N/A
		Sulphide	0.5 (0.5)	0.5	N/A
		Aniline	-	Not be detected	N/A
		Hexavalent chromium	0.05 (0.05)	Not be detected	↓ (↓)
		Cyanide	0.1 (0.05)	-	N/A
		Total surfactant	-	-	N/A
	Air Pollutants mg/m³	NMVOC	20/150[d]	-	N/A
		NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	L90[e] + 10	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits And Control[12].*
b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[15], Integrated Emission Standard of Air Pollutants[16], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*
c. *20mg/m³ (indicated as total organic carbon) in the case of halogenated hydrocarbons and 150mg/m³ (indicated as total organic carbon) other than halogenated hydrocarbons.*
d. *"Colour" is the indicator in Malaysia Standard, while it refers to "Chroma" in Mainland China Standard.*
e. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

Watches & Jewellery

Water pollutants from the washing process and air pollutants from the polishing process are the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH , on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solid	100 (50)	150 (70)	↑ (↑)
		COD	200 (80)	150 (100)	↓ (↑)
		BOD at 20°C	50 (20)	30 (20)	↓ (=)
		Ammonia nitrogen	20 (10)	25 (15)	↑ (↑)
		Cyanide	0.10 (0.05)	0.5 (0.5)	↑ (↑)
		Hexavalent chromium	0.05 (0.05)	0.5 (0.5)	↑ (↑)
		Petroleum	-	10 (5)	N/A
		Animal and vegetable oil	-	15 (10)	N/A
		Oil and grease	10 (1.0)	-	N/A
	Air Pollutants mg/m^3	NMVOC	20/150[c]	-	N/A
		NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	$L90^d + 10$	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits and Control[12].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[17], Integrated Emission Standard of Air Pollutants[16], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*

c. *20mg/m³ (indicated as total organic carbon) in the case of halogenated hydrocarbons and 150mg/m³ (indicated as total organic carbon) other than halogenated hydrocarbons.*

d. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

Toys & Games

Water pollutants from the washing process, air pollutants resulting from production and storage of polymers, and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH , on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solid	100 (50)	150 (70)	↑ (↑)
		COD	200 (80)	150 (100)	↓ (↑)
		BOD at 20°C	50 (20)	30 (20)	↓ (=)
		Ammonia nitrogen	20 (10)	25 (15)	↑ (↑)
		Sulphide	0.5 (0.5)	1.0 (1.0)	↑ (↑)
		Phenols	1.0 (0.001)	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
		Petroleum	-	10 (5)	N/A
		Animal and vegetable oil	-	15 (10)	N/A
		Oil and grease	10 (1.0)	-	N/A
		Cyanide	0.1 (0.05)	0.5 (0.5)	↑ (↑)
	Air Pollutants mg/m^3	NMVOC	20/150[c]	-	N/A
		NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	L90[d] + 10	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits And Control[12].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[17], Integrated Emission Standard of Air Pollutants[16], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*

c. *20mg/m³ (indicated as total organic carbon) in the case of halogenated hydrocarbons and 150mg/m³ (indicated as total organic carbon) other than halogenated hydrocarbons.*

d. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

Hi-tech

Water and air pollutants from the chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH , on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solid	100 (50)	150 (70)	↑ (↑)
		COD	200 (80)	150 (100)	↓ (↑)
		BOD at 20°C	50 (20)	30 (20)	↓ (=)
		Ammonia nitrogen	20 (10)	25 (15)	↑ (↑)
		Sulphide	0.5 (0.5)	1.0 (1.0)	↑ (↑)
		Copper	1.0 (0.2)	1.0 (0.5)	= (↑)
		Zinc	2.0 (2.0)	5.0 (2.0)	↑ (=)
		Formaldehyde	2.0 (1.0)	2.0 (1.0)	= (=)
		Phenols	1.0 (0.001)	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
		Cyanide	0.10 (0.05)	0.5 (0.5)	↑ (↑)
	Air Pollutants mg/m^3	NMVOC	20/150[c]	-	N/A
		NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	L90[d] + 10	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits And Control[12].*
b. *Mainland China Standards: Integrated Wastewater Discharge Standard[17], Integrated Emission Standard of Air Pollutants[16], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*
c. *20mg/m^3 (indicated as total organic carbon) in the case of halogenated hydrocarbons and 150mg/m^3 (indicated as total organic carbon) other than halogenated hydrocarbons.*
d. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. For the COD concentration, there are special limits for fermentation and distillery industries in Malaysia, as regulated in the Environmental Quality (Industrial Effluent) Regulations 2009.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Malaysia, the chemicals & plastics industry should be in compliance with the general environmental standards.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as the logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Malaysia and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Malaysia[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH , on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solid	100 (50)	150 (70)	↑ (↑)
		COD	200 (80)	150 (100)	↓ (↑)
		BOD at 20°C	50 (20)	30 (20)	↓ (=)
		Ammonia nitrogen	20 (10)	25 (15)	↑ (↑)
		Sulphide	0.5 (0.5)	1.0 (1.0)	↑ (↑)
		Formaldehyde	2.0 (1.0)	2.0 (1.0)	= (=)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 60	Daytime 65 Night 55	↓
		Noise emission limits for industrial enterprise which is in areas of existing high environmental noise climate at boundary	$L90^c + 10$	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Malaysia Standards: Environmental Quality (Industrial Effluent) Regulations 2009[10], Environmental Quality (Clean Air) Regulations 2014[11], and the Planning Guidelines For Environmental Noise Limits And Control[12].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[17], Integrated Emission Standard of Air Pollutants[16], and Emission Standard for Industrial Enterprises Noise at Boundary[14].*

c. *L90 is the measured ninety percentile sound level for the respective time period of the existing areas of interest in the absence of the proposed new development.*

III. The Main Local Supporting Organisations/Agencies in Malaysia

Malaysia's environmental laws and regulations system is currently going through a refining process. The overall trend is going to be more stringent to the industries.

To ensure environmental compliance and to maintain a good relationship with the public, the investors should pay attention to the environment survey, license application and must meeting the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environmental related supporting services.

A. Environmental Due Diligence Services in Malaysia

Agency/Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Governance Assessment Practices; • Environmental and Social Risk Management; • Sustainability Assurance; • Carbon Inventory and Reduction Strategy; • Environmental and Social Risk Management; • Supply Chain Management; and • Sustainability Risk Assessment, etc.	+603 2173 0348
SLP Environmental	• Due Diligence, Transaction and Funder Services; • Impact Assessment and Planning; • Regulatory Compliance & Risk Management; and • Contaminated Site Assessment and Management, etc.	+ 66 (0) 2168 7016
AGV Environment	• Environmental Due Diligence; • Environmental and Social Impact Assessment and Planning; and • Environmental Permitting Services, etc.	+603 7931 1455

B. EIA/IEE/EMP Supporting Services in Malaysia

Agency/Organisation	Service Coverage	Contact
Malaysian Environmental Consultants	• Planning & Management; and • Environmental Impact Assessment, etc.	+603 2052 6412/4
Asia Pacific Environmental Consultants	• Environmental Impact Assessment (EIA); • Environmental Management Plans (EMP); • Environmental Management Reports (EMR); and • Environmental Management Compliance Plan (EMCP), etc.	+603 9057 4392
HYDEC Engineering	• Environmental Impact Assessment study; and • Wetlands Study (Conservation and Management), etc.	+603 4106 6088
Envilab	• Environmental Monitoring Programs; • Laboratory Chemical Analysis; and • Environmental Impact Assessment (EIA), etc.	+603 5740 9888

C. Environmental Monitoring Services in Malaysia

Agency/ Organisation	Service Coverage	Contact
Fixone Environmental Services	• Air Quality Monitoring, Water Quality Monitoring, Noise Monitoring, Air Emissions Monitoring; • Wastewater Characteristic Study, Industrial Effluent Characteristics Study; • Monthly Discharge Monitoring Report; and • Ambient Air Monitoring, Boundry Noise Monitoring, On-site Air, Water, Noise Monitoring for EIA studies, etc.	+601 7487 7411
Transwater API Sdn Bhd	• Ambient & Particulate Monitoring (AQMS); • Stack Emission Monitoring (CEMS); and • Industrial Hygiene, etc.	+603 5569 2905
Velcro Envirotech Sdn Bhd	• Water and Wastewater Treatment, Field Sampling, Waste Management, Environmental Monitoring and Environmental Testing; and • Total Waste Management, Air Pollution Control and Wastewater Treatment Design, Tank Cleaning Management, etc.	+605 357 2189
Exact Analytical Sdn Bhd	• Exact Analytical Services; and • Moisture Analysers, NDIR Gas Analysers, Oxygen Analysers, Dust Monitoring Systems, Fire and Gas Detection Systems, etc.	+603 8076 5531

D. Hazardous Wastes Disposal Services in Malaysia

Agency/ Organisation	Service Coverage	Contact
Krubong Recovery	• Collecting and Recycling of Industrial Waste, etc.	+601 2681 2313
Loh Recycle Collection	• Waste and Recycling Services; • Scrap Supply Trading; and • Electronic Waste Trading, etc.	+601 4343 4899
Sekitar Synergy	• Hazardous Waste Minimisation Technique; • Environmental Monitoring; • Effluent Treatment System; and • ISO14001 - Client Tailored Refresher Courses, etc.	+601 9772 5676
Crudesco	• Waste Management; and • Collection, Transport and Disposal of Waste, etc.	+603 2143 2223
Pollution Engineerings (M)	• Industrial Wastewater and Sewage Treatment Systems; • River and Pond Water Purification Systems; • Solid Waste Treatment and Recycling Systems; • Air Pollution Control Systems; and • Renewable Energy Systems, etc.	+603 8961 7999

E. Pollutants Treatment Services in Malaysia

Agency/ Organisation	Service Coverage	Contact
3R Quest	• Contaminated Soil Treatment; • Disposed Containers, Bags or Equipment Treatment; • Contaminated Rags, Gloves, Plastic, Filters, Paper Treatment; and • E-Waste Treatment, etc.	+606 685 3123
5E RESOURCES	• Waste Oil Recovery; • Paint, Ink and Dye Recovery; • Cotton Rags Recovery; and • Wastewater Treatment, etc.	+607 252 1288
Bio Enviro Industries	• Water Treatments Consultations; • Supply of Wastewater Treatment Plant Accessories and Equipment; and • Operational & Maintenance of Water Treatment Plant, etc.	+603 3123 1681

Source:

[1] *Official Portal of Ministry of Energy, Science, Technology, Environment & Climate Change, MESTECC 2019*

[2] *Official Portal of Department of Environment, DOE 2019*

[3] *Environmental Quality Act, 1974 (amended in 2012)*

[4] *Environmental Impact Assessment (EIA) Procedure and Requirements in Malaysia, 2013*

[5] *Joint Statement by the Government of the People's Republic of China and the Government of Malaysia on the Framework for Future Bilateral Cooperation, 1999*

[6] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[7] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[8] *Environmental Quality (Licensing) Regulations, 1977*

[9] *Environmental Requirements: A Guide for Investors, DOE 2010*

[10] *Environmental Quality (Industrial Effluent) Regulations, 2009*

[11] *Environmental Quality (Clean Air) Regulations, 2014*

[12] *The Planning Guidelines for Environmental Noise Limits and Control，2007*

[13] *Emission Standard of Pollutants for Electrical Industry,2nd Edition for Suggestion*

[14] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*

[15] *Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry ,GB 4287-2012*

[16] *Integrated Emission Standard of Air Pollutants, GB 16297-1996*

[17] *Integrated Wastewater Discharge Standard, GB 8978-1996*

[18] *Merchant Shipping (Oil Pollution) Act, 1994*

[19] *Sewerage Services Act, 1993*

[20] *Solid Waste and Public Cleansing Management Act, 2007*

[21] *Town and Country Planning Act, 1976 (amended in 2017)*

[22] *Malaysia Marine Water Quality Standards and Index*

[23] *National Water Quality Standards for Malaysia*

[24] *Standards & Index for Groundwater Quality In Malaysia, 2019*

[25] *New Malaysia Ambient Air Quality Standard*

Appendix

Appendix 1

Schedule of Sectors Covered in HRDF, Contribution Criteria, and Rate of Levy

Manufacturing Sector

Making or processing of an article by labour or machine or both, including the transformation of parts or components into another article of a different nature or character by way of altering, blending, ornamenting, finishing or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal, including the building of a ship or the assembly of parts of a ship.

Service Sector

- Hotel
- Air transport
- Travel Agency (inbound)
- Telecommunication
- Freight Forwarding
- Shipping
- Postal or Courier
- Advertising
- Computer Services
- Energy
- Training
- Higher Education
- Commercial Land
- Transport & Railway Transport Services
- Direct Selling
- Port Services
- Engineering Support and Maintenance Services
- Research and Development
- Warehousing Services
- Security Services
- Private Hospital Services
- Gas, Steam and Air-Conditioning Supply
- Water Treatment and Supply
- Sewerage
- Waste
- Management and Material Recovery Services
- Transport & Railway Transport Services
- Direct Selling
- Port Services
- Engineering Support and Maintenance Services
- Research and Development
- Warehousing Services
- Security Services
- Private Hospital Services
- Gas, Steam and Air-Conditioning Supply
- Water Treatment and Supply
- Waste
- Management and Material Recovery Services
- Production of Motion Picture, Video and Television Programme, Sound Recording and Music Publishing
- Information Service
- Building and Landscape Services
- Event Management Services
- Early Childhood Education
- Health Support Services
- Franchise
- Sale and Repair of Motor Vehicles
- Private Broadcasting Services
- Driving School
- Veterinary Services
- Hypermarket, Supermarket and Departmental Store Services
- Food and Beverage Services
- Tourism Enterprise (outbound)

Mining & Quarrying Sector

- Petroleum and Gas Extraction
- Mineral and Stone Quarrying

Eligibility Criteria	Rate of Levy
Employer with at least 10 Malaysian employees	Mandatory contribution of 1%
Employer with 5 – 9 Malaysian employees	Voluntary contribution of 0,5%

Appendix 2

Cost of Industrial Land per State

Location	Selling Price per sq. ft.	Quit Rent per Annum per 100 sq. m.
Pahang	USD 1.2 – 5.1	USD 300 – 500 *(Note)*
Melaka	USD 3.6 – 7.2	USD 15 – 45
Perlis	USD 1.5 – 2.4	USD 40
Kedah (PKNK)	USD 1.2 – 4.9	USD 20 – 40
Penang	USD 8.5 – 16.3	USD 25 – 30
Terengganu	USD 0.5 – 17.0	USD 2 -5 *(Note)*
Location	**Selling Price per sq. ft.**	**Quit Rent per Annum per ha.**
Selangor	USD 12.2 – 36.6	USD 660 – 5,840 per ha.
Perak	USD 2.4 – 7.3	USD 1,100 – 2,680 per ha.
Negeri Sembilan	USD 1.5 – 12.2	USD 490 – 1,870 per ha.
Kedah (KHTP)	USD 7.3 – 8.5	USD 490 – 730 per ha.
Johor	USD 6.1 – 21.9	USD 390 – 580 per ha
Sarawak	USD 9.7 – 40.3	USD 260 per ha.
Kelantan	USD 3.7	USD 240 per ha
Sabah (KKIP/POIC)	USD 4.9 – 7.3	N/A

Note: This is according to the MIDA official statistics, but this figure is not in line with the benchmark observed in the other states.

For more details please visit the Malaysian Investment Development Authority homepage (www.mida.gov.my/home/starting-a-business/posts)

Appendix 3

Cost of Ready-built Factories per State

Location	Selling Price per sq.ft.	Rental per sq.ft. per Month
Selangor	USD 17 – 122	USD 0.4 – 0.8
Perlis	USD 100	USD 0.1
Penang	USD 34 - 97	USD 0.2 – 0.9
Johor	USD 34 – 97	USD 0.3 – 0.7
Negeri Sembilan	USD 18 – 75	USD 0.2 – 0.5
Melaka	USD 27 - 42	USD 0.2
Kelantan	USD 36	USD 0.1
Pahang	USD 12 – 31	USD 0.1 – 0.2
Perak	USD 24 – 28	USD 0.1 – 0.2
Kedah (PKNK)	USD 12 – 17	USD 0.1 – 0.2
Kedah (KHTP)	N/A	USD 0.5
Terengganu	N/A	N/A
Sabah (KKIP/POIC)	N/A	N/A
Sarawak	N/A	N/A

For more details please visit the Malaysian Investment Development Authority homepage (www.mida.gov.my/home/starting-a-business/posts)

Appendix 4

Malaysia's Selected Infrastructural Development Pipelines

Project	Value (USD billion)	Specifications
Transport – Rail		
Mass Rapid Transit (MRT) Sungai Buloh – Serdang – Putrajaya	7.9	A 52.2km in length (13.5 km is underground) subway project serving a corridor of 2 million people. It will count 35 stations. (MYR 32 billion)
Light Rail Transit Line 3 (LRT3) in Klang Valley	2.2	A 37km project with 26 stations which should benefit 500,000 people. (MYR 9 billion)
Transport – Road		
Pan Borneo Highway in Sabah and Sarawak	6.6	Upgrade of around 1,660km of roads between Sarawak and Sabah with Brunei. (MYR 27 billion)
Central Spine Road in East Coast	2.7	A 6 phase road project over 400km connecting Connecting Pahang and Kota Baru, Kelantan. (MYR 11 billion)
Urban Development		
Tun Razak Exchange (The Exchange TRX)	2.2	A 70 acres projects to develop hotels, offices, residential apartment, retail and leisure facilities (MYR 9 billion)
Bukit Bintang City Centre (BBCC) in Kuala Lumpur	2.1	A 19.4 acre project to develop office towers, business facilities, hotels, shopping centre, residential facilities. (MYR 8.7 billion)
Utilities		
Pasir Gudang Combined Cycle Gas Turbine Power Plants	1.1	A power plant with 2x720MW combined-cycle gas turbines (MYR 4.7 billion)
High Speed Broadband Phase 2 and Sub-Urban Broadband	0.8	Deliver high-speed broadband access speeds (20Mbps to 100Mbps) to nearly 1 million people. (MYR 3.4 billion)
Langkawi Submarine Power Cable	0.3	28 km extra-high-voltage submarine cables connecting Perlis and Langkawi

Appendix 5

The Main Environmental Laws/Regulations in Malaysia

Ministry of Energy, Science, Technology, Environment and Climate Change	Ministry of Water, Land and Natural Resources	Ministry of Housing and Local Government
Environmental Quality Act, 1974 (amended in 2012)	Merchant Shipping (Oil Pollution) Act, 1994	Solid Waste and Public Cleansing Management Act, 2007
	Sewerage Services Act, 1993	Town and Country Planning Act, 1976 (amended in 2017)

The Main Environmental Standards in Malaysia

Ambient Standards	Malaysia Marine Water Quality Standards And Index
	National Water Quality Standards For Malaysia
	Standards & Index For Groundwater Quality In Malaysia
	New Malaysia Ambient Air Quality Standard
Effluent Standards	Environmental Quality (Clean Air) Regulations 2014
	Environmental Quality (Industrial Effluent) Regulations 2009
	The Planning Guidelines for Environmental Noise Limits and Control

Glossary – Section 1 to 9 Operational Requirements

11MP	11th Malaysian Plan
4IR	Fourth Industrial Revolution
AFTA	ASEAN Free Trade Area
AP	Approved Permit
APA Guidelines	Advance Pricing Arrangement Guidelines 2012
APA Rules	Income Tax (Advance Pricing Arrangement) Rules 2012
AR/VR	Augmented Reality/Virtual Reality
ASEAN	Association of Southeast Asia Nations
BOCE	Bohai Commodity Exchange
CCM	Companies Commission Malaysia
DFTZ	Digital Free Trade Zone
DGIR	The Director General of Inland Revenue
E&E	Electrical & Electronics
EA	The Employment Act
ECER	East Coast Economic Region
EIIS	Employment Injury Insurance Scheme
EIS	Employment Insurance System
EP	Employment Pass
EPF Act	The Employees Provident Fund Act
EPP	Entry Point Projects

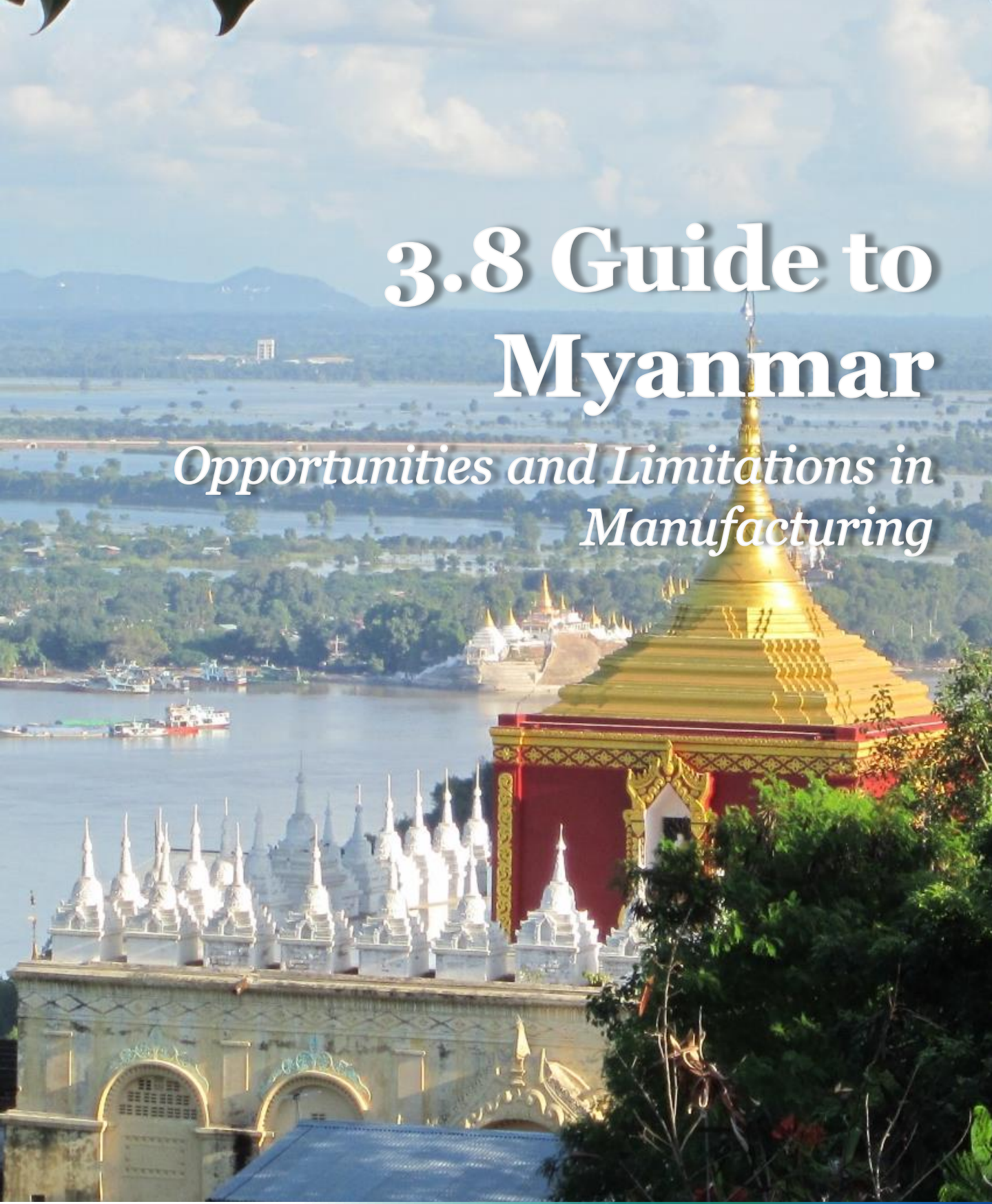
ETP	Economic Transformation Programme
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GST	Goods and Services Tax
HRDF	Human Resources Development Fund
HRDL	Human Resources Development Levy
HS	Harmonised System
ICT	Information Communication Technologies
Industry4WRD	National Policy on Industry 4.0
IoT	Internet of Things
IPS	Invalidity Pension Scheme
IRB	Inland Revenue Bureau
IRDA	Iskandar Malaysia in Southern Johor
ITA	Investment Tax Allowance
JV	Joint Venture
KLIA	Kuala Lumpur International Airport
LFPR	Labour Force Participation Rate
LLC	Limited Liability Company
LLP	Limited Liability Partnership
M&E	Machinery & Equipment
MASB	Malaysian Accounting Standards Board
MASTIC	Malaysian Science and Technology Information Centre

MDTCA	The Ministry of Domestic Trade and Consumer Affairs
MESTECC	Ministry of Energy, Science, Technology, Environment & Climate Change
MIDA	Malaysian Investment Development Authority
MIGHT	Malaysian Industry-Government Group for High Technology
MITI	Ministry of International Trade and Industry
MSC	Multimedia Super Corridor
MyCC	Malaysian Competition Commission
MyIPO	Intellectual Property Corporation of Malaysia
MYR	Malaysian Ringgit
NCER	Northern Corridor Economic Region
NKEA	National Key Economic Areas
NPSTI	National Policy On Science, Technology & Innovation
OSA	Office Of Science Advisor
PDPA	The Personal Data Protection Act
PETRONAS	Petroliam Nasional Berhad
PH	Pakatan Harapan
PS	Pioneer Status
PSMB	Pembangunan Sumber Manusia Berhad
QCE	Qualifying Capital Expenditure
R&D	Research And Development
RMCD	Royal Malaysian Customs Department
S&T	Science and Technology
SCORE	Sarawak Corridor of Renewable Energy

SDC	Sabah Development Corridor
SI	Statutory Income
SME	Small and Medium-sized Enterprises
SOCSO	The Social Security Organisation
STI	Science Technology and Innovation
TEUS	Twenty Foot Equivalent Unit
TP Guidelines	Malaysian Transfer Pricing Guidelines 2012
TP Rules	Income Tax (Transfer Pricing) Rules 2012
UMNO	United Malays National Organisation
USD	United States Dollar
WTO	World Trade Organization
YA	Year Of Assessment

Glossary – Section 10 Environmental Requirements

AOX	Absorbable Organic Halogen
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
EDD	Environmental Due Diligence
EIA	Environmental Impact Assessment
DASN	National Policy on the Environment
DOE	Department of Environment
KeTTHA	Ministry of Energy, Green Technology and Water
MESTECC	Ministry of Energy, Science, Technology, Environment and Climate Change
MOSTI	Ministry of Science, Technology and Innovation
NMHC	Non-methane Hydrocarbon
TVOC	Total Volatile Organic Compounds



3.8 Guide to Myanmar

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

1. Overview of Myanmar

Executive Summary

After more than 50 years of military domination, Myanmar is going through a process of political transition towards democracy. The country is also opening up to international trade by implementing liberalising policies, such as the new Myanmar Companies Law.

The country has not signed any bilateral free trade agreements but has established Bilateral Investment Treaties with 12 countries in Asia Pacific, North America and the Middle East. As part of the Association of Southeast Asian Nations (ASEAN). Myanmar also benefits from six multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia, and New Zealand.

Despite the 2015 democratic general elections, Myanmar's political situation remains under the influence of the military. In 2018, the United Nations (UN) accused the Myanmar government of carrying out an ethnical cleansing against Rohingya Muslims, which has fuelled a state of political instability.

1. Overview of Myanmar

I. Country Profile[1,2,3,4,5,6,7]

Myanmar is a lower-middle income country with strong economic growth. Myanmar's gross domestic product (GDP) is expected to grow at a 6.6% rate between 2020 and 2021, driven by government policies intending to attract domestic and foreign investments. In 2018, the country relied on increasing domestic trade and developing telecommunications sector to offset the slowing growth in transportation, construction, and manufacturing sectors. To attract investments, the government is implementing liberalising policies (i.e. the new Myanmar Companies Law) which open up economic sectors such as wholesale, retail, insurance and banking. However, international scandals, such as the United Nations (UN) accusing Myanmar of genocide against Rohingya Muslims, threaten the country's future economic growth.

GDP *(in USD)*
70.9 bn (2019f)
68.3 bn (2018)

GDP Per Capita *(in USD)*
1,305 (2019f)
1,268 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 24.1%
Industry: 35.6%
Services: 40.3%

External Trade *(% of GDP)*
Import: 28.0% (2017)
Export: 20.0% (2017)

Population
54.34 million (2019)
World ranking: 26/191

Median Age
28.5 (2018)
World ranking: 136/228 (from oldest to youngest)

Language
Burmese (official)

English Literacy
Very low proficiency (2018),
World ranking: 82/88

Government Structure
Constitutional republic

Land Area
650,080 sq. km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[8]

International trade agreements benefit the economies of the participating countries. For example, it may allow two or more companies or countries to trade goods with eliminated or decreased tariffs which enhances economic growth on both sides. As part of its strategy to participate in international trade and attract foreign investments, Myanmar joined the World Trade Organization (WTO) in 1995 and the ASEAN in 1997.

Currently, Myanmar only has seven signed and effective collective trade agreements (including the ASEAN Free Trade Area). As a member of the ASEAN, Myanmar benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia, and New Zealand (2010). In addition, the ASEAN-Hong Kong Free Trade Agreement came into effect in June 2019 (see section below).

Furthermore, the country signed Bilateral Investment Treaties (BITs) with 12 partners: the Philippines (1998), Vietnam (2000), Mainland China (2001), Laos (2003), Kuwait (2008), Thailand (2008), India (2008), Japan (2013), Indonesia (2013), United States of America (2013), South Korea (2014), and Israel (2014). These agreements are designed to promote and protect foreign investments (e.g. the right to establish a business or the right to exit). In addition, Myanmar is also in the process of negotiating two major free trade agreements: the Regional Comprehensive Economic Partnership (RCEP) and the Bay of Bengal Initiative for Multi-Sector Technical and Economic Cooperation (BIMSTEC).

The Regional Comprehensive Economic Partnership (RCEP)[9]

This partnership is being negotiated between the ASEAN members and their FTA partners (i.e. Mainland China, South Korea, Japan, India, Australia, and New Zealand). The RCEP is designed to be a mutually beneficial economic partnership that will foster cooperation and integration between the 16 countries. The agreement aims to lower tariffs and other barriers to promote trade between the partners.

The Bay of Bengal Initiative for Multi-Sector Technical and Economic Cooperation (BIMSTEC)[10]

The BIMSTEC is an organisation created in 1997 with seven members: Bangladesh, Bhutan, India, Nepal, Sri Lanka, Myanmar, and Thailand. It has a population of around 1.5 billion people and represents a total GDP of USD 2.7 trillion. Originally focusing on fostering cooperation in just six different sectors, the BIMSTEC now covers 14 different sectors, namely: trade, technology, energy, transport, agriculture, fisheries, environment, climate changes, poverty alleviation, public health, tourism, culture, people-to-people contact, and counter-terrorism. In order to further enhance this economic cooperation, participating countries are currently negotiating a free trade agreement designed to lower tariffs.

The Association of Southeast Asian Nations (ASEAN)[9]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

ASEAN Members


Indonesia


Singapore


Malaysia


Philippines


Thailand


Brunei


Vietnam


Laos


Myanmar


Cambodia

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

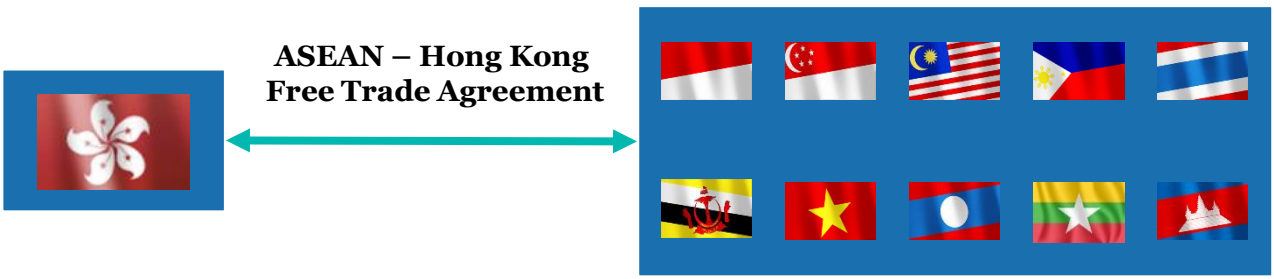
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[12]

Under the 2008 constitution, Myanmar is a constitutional republic with a multiple party democratic system. However, the military junta is still an important power in the country's political landscape.

- The president is elected by the national assembly as head of the state for a five-year term. With the approval of the national assembly, he appoints the cabinet (government) and together they share the executive power.
- The legislative power is held by the national assembly composed of two chambers: the House of Nationalities (Amyotha Hluttaw, the upper house) and the House of Representatives (Pyithu Hluttaw, the lower house). In both houses, 25% of the seats are reserved for the army while the rest of the representatives are directly elected.
- The judiciary power is held by the Supreme Court, as well as the state and district level courts. The Supreme Court's chief of justice and judges are nominated and appointed by the president with the approval of the lower house.

C. Political Uncertainties and Historical Coup Records[13,14,15,16]

Myanmar's political situation is regarded as highly unstable. The country was ranked 168th out of 195 countries in the World Bank's Political Stability Index. Myanmar has been ruled by a military junta for the past 50 years. This dominance ended in November 2015 with a general election won by the party under the leadership of Aung San Suu Kyi, the National League for Democracy (NLD). The party won majority of the seats in both chambers, thereby taking control of the national assembly, earning the power to select the president and create a government independent from the military. Myanmar's current president is Mr. Win Myint, a close aid of Aung San Suu Kyi. His role is being viewed as mainly ceremonial as in practice Aung San Suu Kyi gives the strategic direction (but cannot be elected as president due to a restrictive constitution law). The next general election will take place in 2020.

Prior to 2015, only two elections took place in the country's history, however both of them were flawed.

- The first national election took place in 1990, which saw the victory of the NLD. However, the results were annulled/voided by the military government, which kept its power.
- In 2010, a civilian party, the Union Solidarity and Development Party (USDP) won more than 75% of the national assembly's seat. However, this newly formed party was actually a political vehicle for many of Myanmar's military leaders to get elected. Therefore, the election was largely boycotted and allegations of fraud by the military government were made.

Myanmar is also facing a humanitarian crisis which could adversely affect its trade relationship with international partners. Since 2016, the military has been leading a security operation against Rohingya Muslims living in Rakhine State (in the west of the country). In 2018, the UN accused Myanmar's military of genocide as they found evidence that they were "killing indiscriminately, gang-raping women, assaulting children and burning entire villages". According to the UN, the operation led to around 700,000 people leaving the country and crossing the border to take shelter in Bangladesh. In response to this crime against humanity, countries such as Canada, the US, and the EU are planning economic sanctions against Myanmar.

Source:

[1] *The World Bank, 2019*

[2] *Myanmar 10-Year Forecasts, Fitch Solutions, 2019*

[3] *The World Factbook, CIA*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

[5] *Myanmar population, Worldometers 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Myanmar, Worldatlas*

[8] *Investment Agreements, Directorate of Investment and Company Administration*

[9] *Regional Comprehensive Economic Partnership, ASEAN*

[10] *About BIMSTEC, BIMSTEC Homepage*

[11] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release 2019*

[12] *Myanmar Political Structure, The Economist Intelligence Unit*

[13] *World Bank, Political Stability And Absence Of Violence/Terrorism*

[14] *Myanmar's 2015 landmark elections explained, BBC News, 2015*

[15] *Win Myint elected new Myanmar president, BBC News 2018*

[16] *Myanmar's military accused of genocide in damning UN report, The Guardian, 2018*

2. Legal Environment and Competition Law

Executive Summary

Myanmar enacted a new investment law in 2016 which is a positive signal that the country is putting effort in encouraging foreign investments.

Mainland China and Hong Kong companies can choose to set up different types of business entities in Myanmar, amongst others, it is possible to set up a 100% foreign-owned enterprise such as a Limited Liability Company. In addition, foreign investors can set up a representative office to explore opportunities to expand their manufacturing footprint.

Myanmar has been liberalising import and export regulations, however, the vast majority of the products are still subject to licenses.

2. Legal Environment and Competition Law

Myanmar enacted the new Myanmar Investment Law (MIL) in 2016 which is a consolidation of the Myanmar Citizen Investment Law (2013) and the Myanmar Foreign Investment Law (2012). The MIL sends a positive signal that the country is eager to improve its business environment and to encourage foreign investments. Under the new MIL, 100% foreign-owned companies are generally allowed in most sectors. However, there are still limits and restrictions for foreign investors in different sectors (for more details please refer to section 8 of this report).

Myanmar's law only distinguishes between Myanmar and foreign companies and does not outline special laws for Mainland China or Hong Kong companies.

The Myanmar Investment Commission Lists Out Four Categories of Prohibited or Restricted Businesses (Notification No. 15/2017)[1]

List 1

Investment Activities Allowed to be Carried Out Only by the Government

Examples:

- Air traffic services;
- Administration of electric power system; and
- Manufacturing of products for security and defence.

List 2

List of Economic Activities to be Allowed Only in the Form of Joint Venture with Myanmar Citizens

Examples:

- Manufacturing of various types of food and beverage;
- Manufacturing and domestic marketing of plastic wares, enamelware, cutlery, crockery of all kinds; and
- Packaging.

List 3

List of Economic Activities Permitted with Recommendations of the Relevant Ministry and Required Joint Venture with Citizens

Examples:

- Private hospital, clinic, diagnostic services and manufacturing of traditional drugs;
- Broadcasting and FM radio programmes; and
- Production of seasoning powder.

List 4

List of Economic Activities Permitted with Other Conditions and Required Joint Venture

Examples:

- Importing, producing, constructing and installing of equipment, accessories and part of installations as for exploiting, producing and researching of oil and gas;
- Manufacturing of cigarettes; and
- Manufacture and maintenance of locomotives, carriages, wagons and spare parts.

I. Types of Legal Business Entities Available for Foreign Investment[1,2,3,4,5,6,7,8]

As in most countries, there are several different main structures available for an investor from Mainland China or Hong Kong to expand a manufacturing footprint or a business in Myanmar. The general legislation governing the different business forms is the Myanmar Companies Law 2017 (MCL) that came into force in August 2018 and superseded the Myanmar Companies Act 1914 (MCA). The Directorate of Investment and Company Administration (DICA) administers the MCL and is also the registrar. Under the new law, 100% foreign-owned factories and companies are generally allowed in many sectors. In addition, the simple procedures and minimum capital requirements provided to expand a business are advantageous to many foreign investors, particularly those in the service sector.

Some main forms of doing business or relocating a factory to Myanmar include:

1. Limited Liability Company (LLC);
2. Branch office;
3. Representative office; and
4. Joint Venture (JV).

In addition to these four business types, it is possible to set up a partnership, companies limited by guarantee, unlimited companies or business associations. However, all those types are very rare and therefore will not be discussed in detail. Further information can be found at DICA's official portal (www.dica.gov.mm).

Limited Liability Company (LLC)

LLCs can be 100% foreign owned, however, there are certain industries that are generally restricted for foreign investors as they are carried out by the government only (for further information please refer to section 8 of this report). Under the new Myanmar Companies Law 2017, a foreigner can hold up to 35% of a Myanmar Company without changing the classification to a Foreign Company. LLCs are the most common business type in Myanmar. Its liability can be limited to the amount of capital paid by its members.

A foreigner who wants to expand a business to Myanmar requires a minimum capital of USD 50,000 for service companies and USD 150,000 for other foreign companies. LLCs in Myanmar can be either private or public.

Private Company Limited by Shares

Under this company type, the liability of each member is limited to the amount unpaid (if any) on the shares held by that member. It is a separate legal entity and is relatively straightforward to incorporate in Myanmar. A private company can be incorporated with a minimum of one shareholder and one director, whereas at least one director has to be a Myanmar resident. A wholly Myanmar-owned private LLC may be restricted from transferring shares to a foreign investor and may require approval from the corresponding authorities.

Public Company Limited by Shares

The main difference between a public and a private company is that a public company can also raise funds by offering shares to the public. Therefore, public companies are generally subject to more regulations and reporting requirements. A public company requires a minimum of three directors and at least one of them must be a Myanmar resident. Public companies are getting more popular in Myanmar, however, compared to other countries, the number of listed and traded companies is still very low: the Yangon Stock Exchange has just been set up in 2016 and as of February 2019, only five companies have been listed. In addition, the DICA released a list of 55 public companies whose shares can be traded over the counter.

Registration Process for a Private LLC

The registration process of a LLC is straightforward and can be done online on the official portal of the DICA's Myanmar Companies Online (MyCO) website since the commencement of the MCL 2017 (www.myco.dica.gov.mm). The registration can be summarised as follows:

1. Check availability of the company name through the DICA;
2. Obtain company registration forms from the DICA (not required if applicant decides to use the online portal) and pay stamp duty;
3. Submit signed company registration documents to the DICA. Required information include (non-exhaustive):
    - Particulars on the shareholders and confirmation whether more than 35% of the share will be held by foreigners;
    - Details of the directors and secretaries;
    - Registered office address;
    - Details about the capital structure and the types of shares being issued;
    - Memorandum of Association;
    - Certificate of translation (if any);
    - Statement of company objectives and undertaking not to conduct trading.
4. Pay registration fee of MMK 500,000 (around USD 325);
5. Obtain temporary registration and permit to trade (if desired);
6. Transfer minimum capital and submit other documents if required; and
7. Obtain permanent incorporation certificate and permit issued by the DICA.

Upon registration of the company, applicants also have to register with the Ministry of Labour and with the Social Security Board. In addition, companies have to register for commercial tax.

Setting up a private LLC in Myanmar usually takes between 12 to 14 weeks.

Registration Process for a Public LLC

The process is very similar to the one of the private LLC. However, after obtaining the Incorporation Certificate, a public company has to prepare and obtain a Business Commencement License, which includes amongst other the following steps:

- Confirm registered office address (within one month of registration);
- Publish newspaper advertisements;
- Prepare company prospectus and submit to the Securities and Exchange Commission of Myanmar (SECM) for approval;
- Open bank account; and
- Prepare documents for initial share issue.

These documents have to be submitted to the DICA together with the SECM's approval in order to obtain the Business Commencement Certificate. In addition, a minimum deposit of MMK 50 million (around USD 32,500) is required. It usually takes around 14 weeks to set up a public company in Myanmar.

Branch Office

Foreign companies can also establish a branch office, which only requires one shareholder. Branch offices are 100% owned by the head office and are not separate legal entities, therefore, the parent company is liable for the branch's liability. Non-Myanmar banks that receive banking licenses by the Central Bank of Myanmar can only operate through branches. Foreign companies seldom choose to establish a branch office as the corporate tax rate is higher than that for the LLCs. Registration procedures, fees, and amount of set-up time are similar to that for the LLCs.

Registration Process for a Branch Office

In addition to the information required for LLC registration, the applicant company has to submit the following documents in order to register a branch:

- Memorandum and Articles of Association of the parent company;
- Annual report or audited financial statements of parent company for the previous two years; and
- Appointment letter/power of attorney for authorised persons.

These documents have to be notarised and certified by the appropriate authorities of the resident country and by the Embassy of Myanmar in that country, e.g. in Mainland China or Hong Kong. The minimum capital required is USD 50,000 for service companies and USD 150,000 for other foreign companies. The set up time is usually around 12 weeks.

Representative Office

Representative offices can be used by foreign companies that wish to establish a presence in Myanmar without conducting business activities, i.e. without engaging in direct commercial or revenue generating activities. A Mainland China or Hong Kong company can choose to set up a representative office to collect information on investment opportunities (especially for insurances and banks but also for manufacturing companies), enhance trade relations, or promote export of goods and services. Same as the branch office, it is not a separate legal entity which means that the parent company is liable for the representative office's liabilities. A representative office also has to be registered with the DICA. Setting up a representative office takes on average 12 weeks.

Joint Venture

JVs are relatively common in Myanmar and often chosen by foreign investors that seek to conduct business in industries with limitations on the percentage of foreign ownership. In those industries, a minimum local ownership of 20% is normally required (e.g. manufacturing and marketing of food and beverage, packaging, chemical substances or lease of residential apartments). Therefore, at least one foreign and one local shareholder is required. JVs usually take the form of a private LLC, hence the establishment process is similar. However, if the government is part of the JV, the company is incorporated under the Special Companies Act 1950.

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[9]

In early 2015, Myanmar passed the Competition Law 2015 (Pyidaungsu Hluttaw Law No. 9, 2015), which restricts competitive agreements and market abuse activities. The law entered into force in February 2017. Subsequently, the Myanmar Competition Commission was established in October 2018, which was an important step towards the active implementation of the law.

The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong businesses that want to expand their manufacturing footprint to Myanmar.

The law covers four main areas:

1. Acts restraining competition;
2. Acts which cause monopolisation of the market;
3. Acts considered as unfair trade practices; and
4. Merger control.

In addition, the law outlines penalty levels for infringements and sets the foundation for the implementation.

1. Acts Restraining Competition[10,11]

The new law defines acts that reduce or hinder competition in the market in order to reduce dominant market power. The law includes amongst others the following prohibited activities:

- Fixing the price directly or indirectly in purchase price, selling price or other commercial situation;
- Collusion in tendering or auctioning;
- Abusing by taking advantage of dominance in the relevant market;
- Agreements to restrict competition in the market; and
- Restrictions on sharing of markets or resources, production, market acquisition, technology, and development of technology and investment.

As opposed to many other countries in the region, Myanmar's Competition Law does not differentiate between horizontal agreements between competitors, and vertical agreements between different companies along the supply chain (e.g. retailer and distributor). Nor did the law make a clear distinction between price fixing and the abuse of a dominant market position.

2. Acts Which Cause Monopolisation of the Market[11]

The law also prohibits enterprises from causing monopolies, however, it does not define a monopoly but rather outlines prohibited acts which might lead to a monopoly:

- Controlling prices of goods and services;
- Limiting the availability of a particular good or service with the aim of controlling prices;
- Reducing the availability of goods or services or reducing the quality in order to decrease demand;
- Controlling and restraining the area where goods or services are traded in order to prevent other businesses from entering and controlling the market;
- Controlling or restricting the geographic market for sales to prevent other business from entering the market and controlling market shares; and
- Interfering in the operation of other businesses unfairly.

3. Acts Considered as Unfair Trade Practices[11]

The law also deals with governing prohibited unfair trade practices, such as:

- Misleading customers;
- Disclosing business secrets and information;
- Interfering in the activities of other businesses;
- Advertisements and sales promotions for the purpose of unfair competition;
- Selling at lower than production cost and landed cost; and
- Abuse of business power and encouraging violations of business contracts with a third party.

It is expected that the Myanmar Competition Commission will provide more comprehensive guidance on the competition regulations as some restrictions actually appear to enhance competition when practiced in certain ways (e.g. it is prohibited to sell a good below its production cost, however, there is no guidance on the calculation of costs).

4. Merger Control[12]

The last main prohibited area is the collaboration among businesses if it leads to certain situations.

The collaborations include:

- Mergers;
- Consolidations;
- Purchasing or acquisition of other businesses by a business;
- Joint venture of businesses;
- Performing other means of collaboration among businesses specified by the Commission.

However, the collaborations are only prohibited if they lead to the following situations:

- Collaboration intended to raise extreme dominance in the market within a certain period;
- Collaboration intended to decrease competition for acquiring the market which is a sole or minority of businesses; and
- Collaboration leading to higher market share than those specified by the Commission.

Section 33 of the Competition Law 2015 states circumstances which may lead to exemptions:

- The business after collaboration is still a small and medium-sized enterprise (SME);
- One of the businesses involved is or is at risk of becoming bankrupt;
- The collaboration promotes export, technology or innovation.

Exemptions

The law lists different exemptions that might be granted by the Commission under certain circumstances: for example, if the act raises Myanmar's competitiveness internationally or improves the quality of goods and services through technological upgrade. However, it is not clearly stated in the law whether the exemption only applies specifically to "Acts on restraint of competition", or across the board. It is expected that the newly established Commission will provide more clarification and guidance.

B. Intellectual Property Protection Law on Trademarks[8,13,14,15]

A trademark is generally defined as a device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination thereof, which indicates that a certain goods or services belong to the owner of the trademark. The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong companies.

The Union Parliament of Myanmar has passed the Myanmar Trademark Law in January 2019 which is a positive sign for enhancing business in the country. However, the law will only become effective after a notification has been issued by the President of Myanmar which is still pending. So far, there is no statutory law on trademarks, which would mean very little protection. Also, there is no trademark registration legislation; the only option is to register a trademark under the Registration Act 1908.

Myanmar plans to establish the Myanmar Intellectual Property Office (MIPO) under the Ministry of Commerce to administer the trademark registration when the law enters into force. The MIPO would also be responsible for handling the examination and opposition proceedings. Trademarks that are registered under the old system will also have to be filed again, once the authorities and systems are set up. The registration will be available in both English and Burmese. After applying for registration, the law establishes a statutory publication period of 60 days to file oppositions. According to the law, penalties for infringement can range up to three-year imprisonment and a fine of MMK 5 million.

There are still various uncertainties about the execution of the law and the registration process, as it was only passed recently and has not been implemented yet.

C. Import/Export Regulations and Licenses[16,17]

Myanmar has been liberalising its import and export landscape, which brings new opportunities for international trade. Also, import and export business has become easier and more profitable in Myanmar. Importing and exporting goods are regulated by the Sea Customs Act (1878), the Land Customs Act (1924), the Export Import Law (2012), and the Tariff Law (1992).

All companies from Mainland China and Hong Kong have to register with various authorities to engage in the import and export businesses in Myanmar:

The majority of imported and exported goods in Myanmar require a license, e.g. importing different types of food requires a license from the Food and Drug Administration. The entire list can be found on the Myanmar National Trade Portal (www.myanmartradeportal.gov.mm/en/guide-to-import). In addition to the import license, further documentation (such as bill of lading, packing list, invoice or the cargo release order) or special permissions from certain ministries may be required. Similar requirements and licenses are required if a company wants to export goods from Myanmar. Details can be found on the Myanmar National Trade Portal (www.myanmartradeportal.gov.mm/en/guide-to-export).

D. Jurisdiction System on Business Related Matters[18,19,20]

The Myanmar legal system is based on the English common law and customary law. However, according to the World Economic Forum 2015/16, companies face a high risk of political interference and corruption in Myanmar's judicial sector as the judiciary branch is not independent from the executive branch. In addition, there is no special commercial court handling business-related disputes. Civil, criminal as well as business disputes are governed under the 2008 Constitution and handled in different court levels with defined duties and powers:

- The Supreme Court is the highest instance and it has both appellate and revision powers. It supervises all other courts and also has the power to hear cases as the first instance.
- The High Courts of the Region or State act below the Supreme Court were established under the 2008 Constitution. They also have the jurisdiction to adjudicate on original, appeal and revision cases.
- The District Courts or Self-Administered Division and Self-Administered Zone act under the High Courts. They were also established under the 2008 Constitution and have original criminal jurisdictional powers, criminal appellate and revision jurisdictional powers. District judges hear criminal and civil cases in which the amount in dispute does not exceed MMK 100 million (around USD 65,500).
- Township Courts are mainly courts of original jurisdiction. They handle cases with amounts in dispute not exceeding MMK 10 million (around USD 6,500) and have the power to pass sentences of up to seven-years imprisonment.

Source:

[1] *Myanmar – Business Guide, PwC 2017*

[2] *Myanmar Companies Law in force from 1 August 2018, Allen & Gledhill 2018*

[3] *Doing business in Myanmar – Practical Law, Thomson Reuters 2019*

[4] *Registration of Foreign Companies, Directorate of Investment and Company Administration*

[5] *Business entities in Myanmar, Healthy Consultants Group PLC*

[6] *Registration of Myanmar Public Companies, Directorate of Investment and Company Administration*

[7] *Registration of Branches of Foreign Companies, Directorate of Investment and Company Administration*

[8] *Doing Business in Myanmar, EY 2017*

[9] *Competition Law Update: Formation of the Myanmar Competition Commission, Dentons Rodyk 2019*

[10] *Overview of Competition Law in Myanmar, Competition Policy International 2015*

[11] *Myanmar's New Competition Law: An Important First Step in the Right Direction, DFDL*

[12] *The Competition Law (The Pyidaungsu Hluttaw Law No.9, 2015), Assembly of the Union*

[13] *Enactment of New IP Laws in Myanmar, Tilleke & Gibbings May 2019*

[14] *Trademark Law of Myanmar 2019, Law Plus Ltd.*

[15] *Myanmar Passes Long-Awaited Trademark Law, Tilleke & Gibbings Feb 2019*

[16] *Import and Export Procedures in Myanmar – Best Practices, ASEAN Briefing 2017*

[17] *National Trade and Customs Laws and Rules, Myanmar National Trade Portal*

[18] *The Global Competitiveness Report 2015-2016, World Economic Forum*

[19] *Commercial court and skilled judges crucial, say legal experts, Myanmar Times 2016*

[20] *District Courts, The Supreme Court of the Union*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main taxation on companies in Myanmar include corporate income tax, commercial tax, specific goods tax and capital gain tax, among other business taxes. There is no value added tax or transfer pricing provision in Myanmar as of 2019.

Foreign direct investment is in general subject to approval of relevant ministries. Investments and repatriation of foreign funds into and out of Myanmar are subject to official approval and limitations. Additionally, foreign exchange is also highly controlled by the Myanmar government.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

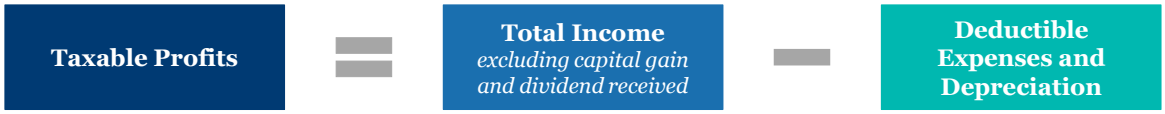
The principal tax laws governing the corporate tax provisions in Myanmar include the Union Tax Law, Income Tax Law and Commercial Tax Law. In general, all companies in Myanmar, regardless of its tax residence, are subject to corporate income tax (CIT). There is no value added tax (VAT) in Myanmar; instead commercial tax (CT) is levied on certain goods and services sold and rendered in Myanmar.

Resident companies in Myanmar are taxed on its worldwide income while non-resident companies are taxed only on income derived from sources within Myanmar.

A. Corporate Income Tax (CIT)[1,2,4,6,8]

Tax Calculation

CIT in Myanmar is levied on taxable profits, including all income from a business, profession, property and other disclosed and undisclosed sources (excluding capital gains and dividends received) either from Myanmar or worldwide depending on the taxable company's residence, deducting therefrom all allowable expenses and depreciation. Capital gains are subject to capital gains tax instead, for details, please refer to part B of this section.



Applicable Tax Rate

The tax residence of a company in Myanmar is determined by its place of incorporation. All companies in Myanmar, regardless of their tax residence, are subject to a uniform CIT rate of 25%.

However tax residence of a company determines the basis of taxation and eligibility of tax incentives. The following table summarises the CIT treatment for different tax residence status:

Taxable Person	Tax Rate *(Note)*	Tax Residence	Basis of Taxation	Tax Incentives
1. Companies incorporated in Myanmar under the Myanmar Companies Act (MCA) or Special Companies Act	25%	Resident company	Worldwide income	N/A
2. Companies registered under the Myanmar Investment Commission (MIC) or operating in a Special Economic Zone (SEZ)		Resident company	Worldwide income	Please refer to section 9
3. Foreign companies registered under the MCA or Special Companies Act, such as a branch of a foreign company		Non-resident company	Only Myanmar income	N/A

Note: Companies listed on the Yangon Stock Exchange are subject to CIT of 20%.

Passive Income

- Dividends paid and received are not taxable.
- Interests paid to resident recipients are not subject to withholding tax but those paid to non-resident companies are subject to withholding tax of 15%.

Taxable Income	Recipients	Withholding Tax Rate
Interests	Residents	0%
	Non-residents	15%
Royalties	Residents	0%
	Non-residents	15%
Dividends	Residents	0%
	Non-residents	

Deductible Expenses

In general, expenses are deductible for tax purposes when such expenses are incurred for the purpose of earning business income, including depreciation up to the prescribed rate by law, approved pension fund contributions and bed debts.

The key non-deductible expenses for CIT computation purpose are as follows:

- Capital expenditure;
- Personal expenditure;
- Provisional expenses (e.g. provisions for bad debts and stock obsolescence); and
- Expenses not commensurate with the volume of business, etc.

Depreciation

Capital assets must be capitalised and depreciated on a straight-line basis in accordance with the rates set out in Notification 19/2016 Second Regulations Amending the Income Tax Regulations. A full-year depreciation allowance can be claimed for the year in which a capital asset is acquired, regardless of whether the asset is used for all or part of that year. The following table sets forth the range of allowed annual depreciation rates for key categories of depreciable assets:

Category of Depreciable Assets	Range of Allowed Annual Depreciation Rate
Building	1.25% - 10%
Furniture and Fixtures	5% - 10%
Machinery and Plant	5% - 10%
Machinery Equipment	2.5% - 20%
Waterway Transport Vehicles	5% - 10%
Road Transport Vehicles	12.5% - 20%
Other fixed assets not prescribed above	5% - 20%

For a detailed depreciation rate schedule for individual assets, please refer to the latest Republic of the Union of Myanmar Associations Income Tax Return issued by the Internal Revenue Department (IRD) of Myanmar.

Consolidated Filing

There are no tax consolidation provisions in Myanmar.

Taxable Losses

- Operating losses can be carried forward against future profits up to three consecutive years but carryback is not allowed; and
- Capital losses shall not be carried forward to set off future capital gains or future profits.

Tax Return and Payment

For ongoing businesses, during the fiscal year, quarterly advance payment of CIT should be paid within 10 days after the end of each quarter. The quarterly advance payment of CIT is calculated based on the estimated total income for the year. Following the end of the fiscal year, companies should file annual CIT return and settle the final tax liability within three months from the end of the fiscal year. The quarterly advance payment of CIT is creditable against the final tax liability.

Failure to file a return and pay tax by the due date results in a 10% penalty of the tax shortfall, except for the provision of reasonable cause.

Double Taxation Agreement (DTA) with Hong Kong

Myanmar does not have a DTA with Hong Kong.

B. Value Added Tax (VAT), Commercial Tax (CT) & Specific Goods Tax (SGT)[1]

There is no value added tax (VAT) in Myanmar.

Commercial Tax (CT) is levied as a turnover tax on goods and services. The commercial tax that a business charges and collects is known as output tax, which has to be paid to the Myanmar tax authorities. Commercial tax incurred on business purchases and expenses are known as input tax. Businesses that are registered for CT can claim commercial input tax if certain conditions are satisfied.

Specific Goods Tax (SGT) is the CT on a list of specific goods that are imported into Myanmar, manufactured in Myanmar, or exported to a foreign country.

The following table summarises the key information for both CT and SGT:

Category	Commercial Tax (CT)	Specific Goods Tax (SGT)
Revenue threshold for taxability	Companies with an annual turnover of at least MMK 50 million (around USD 33,150).	Companies with an annual turnover of at least MMK 20 million (around USD 13,250), except for the local production of tobacco, cheroots and cigars which are subject to SGT without income threshold.

Category	Commercial Tax (CT)	Specific Goods Tax (SGT)
Taxable business activities	• Local manufacturing and distribution; • Provision of services; • Trading (selling, exchange or consignment); • Import of goods; and • Export of certain goods.	Only applies to the local manufacturing, import and export of 17 types of goods, including: • Vehicles; • Timber logs and wood cuttings; • Certain raw gemstones like jade; • Kerosene, gasoline and diesel; and • Natural gas and etc.
Exempted goods and services (The full schedule of CT and SGT exemptions can be found in the latest Republic of the Union of Myanmar Quarterly Commercial Tax Return and Specific Goods Tax Return issued by the Myanmar IRD)	• 10 categories of goods, including food, agriculture and livestock, gems and extracted products, industrial goods etc.; • 10 categories in services, including transportation service, planning and finance etc.; • All exports, except electricity and crude oil; and • Discretionary exemptions granted by the MIC/SEZ Committee on companies registered under the MIC/operating in SEZ.	• All exports, except natural gas, wood logs and wood cuttings, raw gemstones, and processed gemstones; • Specific goods imported for the purpose of re-exporting in the same quantity and condition; and • Discretionary exemptions granted by the MIC/SEZ Committee on companies registered under the MIC/operating in SEZ.

Tax basis	• Goods produced or services rendered in Myanmar:
	  ○ Sale or service proceeds + SGT; and
	• Imports:
	  ○ Cost, Insurance, Freight (CIF) + customs duty + SGT.
		• For goods taxable as per price range:
		  ○ The greater of the factory sales price or the sales price as estimated and specified by the Director General and the Management Committee of the IRD; and
		• For goods not taxable as per price range:
		  ○ Based on the value determined by the Management Committee of the IRD.

Tax return and payment	• Filed quarterly returns within 1 month at the end of each quarter and annual return within 3 months at the end of fiscal year; and • Paid on a monthly basis within 10 days after month end.	• Filed quarterly within 1 month at the end of each quarter; and • Paid on a monthly basis within 10 days after month end.

Applicable CT Rates

Taxable Activities	CT Rate
• Local manufacturing and distribution; • Provision of services; • Trading; and • Import of goods	5% *With exemptions applied*
• Sale of building	3%
• Sale of gold jewellery	1%

Applicable SGT Rates

Taxable Activities	SGT Rate
• Local manufacturing and distribution; • Import of goods	5% - 80% *(Note)*
• Export of uncut jade	15%
• Export of uncut precious stones	10%
• Export of precious stones embedded in jewellery	5%

Note: Some of the individual items are taxed at fixed amount per unit (e.g. Cigarettes: MMK 4 – 16 per cigarette)

Offsetting Input and Output CT/SGT

- CT: All input CT can be offset against output CT, except for the CT paid for any fixed assets or capital assets, up to the amount of output CT. Input CT exceeding the amount of output CT can be deducted as a business expense when calculating CIT; and
- SGT: Exporters and producers can offset output SGT against input SGT. However if the goods exported are not subject to SGT, input SGT paid cannot be used in offsetting output tax.

Other Key Taxes for Manufacturers[6]

- Customs Duty (CD): CD is levied on the assessment value of imported goods at a rate up to 40% according to the tariff schedule published by the Customs Department. Discretionary exemptions may be granted by MIC/SEZ Committee on companies registered under MIC/operating in SEZ;
- Property Tax (PT): PT is split into four categories of taxes, including miscellaneous tax, lighting tax, water tax and sanitation tax. It is levied on the assessed annual value of land and premises. The occupiers/users of the premises are liable to pay PT annually;
- Stamp Duty (SD): SD is levied to give legal effect to chargeable instruments, including sale or transfer of immovable property, shares, bonds and lease agreements. The rates vary according to different legal or financial instruments. If the SD is not paid within one month from the time of execution of the instruments, the IRD will impose an annual penalty of 10 times the amount of the overdue SD; and
- Capital Gains Tax (CGT): CGT is levied on the capital gains from the disposal of a company's capital assets over MMK 10 million (around USD 6,633) (i.e. any land, building, vehicle, and any capital assets of an enterprise, which include shares, bonds, and similar instruments) by way of sale, exchange or transfer. It is assessed independently from CIT. Uniform CGT rate of 10% is applicable to both resident and non-resident companies, except for the companies engaged in upstream oil and gas activities, which are subject to CGT rate of 40% - 50%.

Tax Incentives for Foreign Manufacturers/Traders[6]

Myanmar is a popular destination for manufacturers of garments and processed food and beverages, partly due to the availability of various tax incentives granted by the government. If a company is registered under MIC or SEZ, it will be eligible for various tax incentives, and exemptions in taxes such as CIT and CT, subject to the satisfaction of certain conditions and approval from the MIC and/or SEZ Committee. For details, please refer to Section 8 of this report.

C. Transfer Pricing Provisions[5]

There are currently no transfer pricing provisions in Myanmar.

D. Statutory Auditing Requirements and Accounting Standards[1,2,3,4,6]

Audit Requirements

Myanmar companies must maintain books of account (in Burmese or English) that accurately reflect their transactions, assets and liabilities. The financial statements must be audited. The first auditor of a company can be appointed by the company's directors. Subsequent auditors may be appointed by the shareholders at the annual general meeting.

Financial Statements

Financial statements shall include a statement of financial position (balance sheet), income statement, a statement of comprehensive income, a statement of changes in shareholders' equity, a statement of cash flows and notes to financial statements, prepared on accrual basis.

Fiscal Year and Taxable Period[1,3]

Under the Union Tax Law 2018, the taxable period follows the Myanmar fiscal year, which starts from 1 April and ends on 31 March for 2018/19. No alternative fiscal year is allowed. However, the IRD recently issued a letter confirming the change of fiscal year (thus taxable period), which will take effect from 1 October 2019. The new fiscal year will commence on 1 October and end on 30 September. There will be a transition period from 1 April 2019 to 30 September 2019. CIT shall be assessed and paid separately from 2018/19 and 2019/20 during the transition period.

Filing Requirement

The directors of a company are required to submit a set of audited financial statements at the annual general meeting for approval by shareholders. A new company is required to hold its first annual general meeting within 18 months of incorporation, while subsequent annual general meetings shall be held no more than 15 months after the last one.

Retention Period for Financial Statements and Books of Accounts

Companies are required to maintain books of account for three years in general circumstances. Under SEZ rules, the investor and the developer shall maintain records for a period of seven years starting from the end of relevant financial year.

Accounting Standards

Myanmar Financial Reporting Standards (MFRS), in principle, follow International Financial Reporting Standards (IFRS). However, there are some differences, since MFRS has not yet adopted the following:

- IFRS 9: Financial instruments;
- IFRS 10: Consolidated financial statements;
- IFRS 11: Joint arrangements;
- IFRS 12: Disclosure of interests in other entities;
- IFRS 13: Fair value measurement;
- Interpretations from the Standing Interpretations Committee (SIC) and International Financial Reporting Interpretations Committee (IFRICs);
- IFRS 14 Regulatory Deferral Accounts;
- IFRS 15 Revenue from Contracts with Customers; and
- IFRS 16 Leases.

However, all Public Interest Entities (PIE) including banks, microfinance institutions, insurance companies, are required to prepare financial statements under IFRS from fiscal year 2022/23 onwards.

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)

Bank Account Setup Requirements[12,13,14]

All types of companies can open business bank accounts in Myanmar. Foreign companies may open accounts denominated in Burmese Kyat (MMK), and also open foreign currency accounts mainly denominated in the US Dollar (USD), Singapore Dollar (SGD) and Euro (EUR). As of February 2019, private companies are not allowed to open Renminbi (RMB) accounts in Myanmar.

Each bank will require different minimum deposits (in common case 100 units of foreign currency) to open an account. The following table list out some of the key documents required for opening a bank account for foreign companies. However, the list is for reference only as requirements vary between banks and types of companies. It is advised to check the exact required documents with the desired bank before filing an application with the bank.

General Documents Required When Opening a Bank Account for Foreign Companies
• Account opening application form; • Board of director resolution; • Memorandum of association and articles of association; • Certificate of incorporation; • Form (6 - Return of allotments); and • Form (26 - Particulars of directors, managers and managing agents)/Form (18 - Authorised persons' details), etc.

Foreign Direct Investment (FDI) Restrictions[15,16,17]

The Myanmar Investment Law (MIL) stipulates certain investments which are restricted and prohibited from foreign investments.

A foreign company, which is defined as a company with more than 35% foreign ownership, is not allowed to own land but can lease land and buildings for a maximum of one year. If the foreign company has obtained a Permit or Endorsement of the MIC, it may enter into long-term leases up to 50 years with two extensions of 10 years each. Moreover foreign companies operating in an SEZ can lease land and buildings in the SEZ for up to 50 years with an option to extend for a period of 25 years.

The MIL also classifies restricted business activities into four lists. For further details, please refer to section 8.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[7,16,18,19,20,21]

The government applies a tough capital control in Myanmar. All capital account transactions, including investing new funds into Myanmar and repatriating profits made in Myanmar abroad, require approvals from the Central Bank of Myanmar (CBM) and the Foreign Exchange Management Board (FEXB).

Restriction on Local Currency

Companies and individuals are prohibited from bringing into or taking out any MMK from Myanmar.

Restriction on Foreign Currency

Inbound Transfer

In general, there is no limit for inbound transfer of foreign currency into Myanmar. However foreign nationals or companies must declare any amount of foreign currency over USD 10,000 or equivalent.

Outbound Transfer

In general, there is no limit for remitting foreign currencies out of Myanmar. The MIL guarantees investors the right to remit the income derived from Myanmar and offshore loan repayments abroad. However, this is subject to complying with the requirements of CBM and FEXB. Supporting evidence must be submitted for remittance of funds offshore to demonstrate that the remittance is for a permitted purpose.

Offshore Loan

Myanmar businesses can obtain offshore loans. These loans, including shareholder loans, must obtain prior approval from the CBM. Debt-to-equity ratio will be considered when approving offshore loan. Ratio of 4:1 to 3:1 may be accepted by CBM.

Without prior approval, the borrower is not permitted to make repayments under the loan.

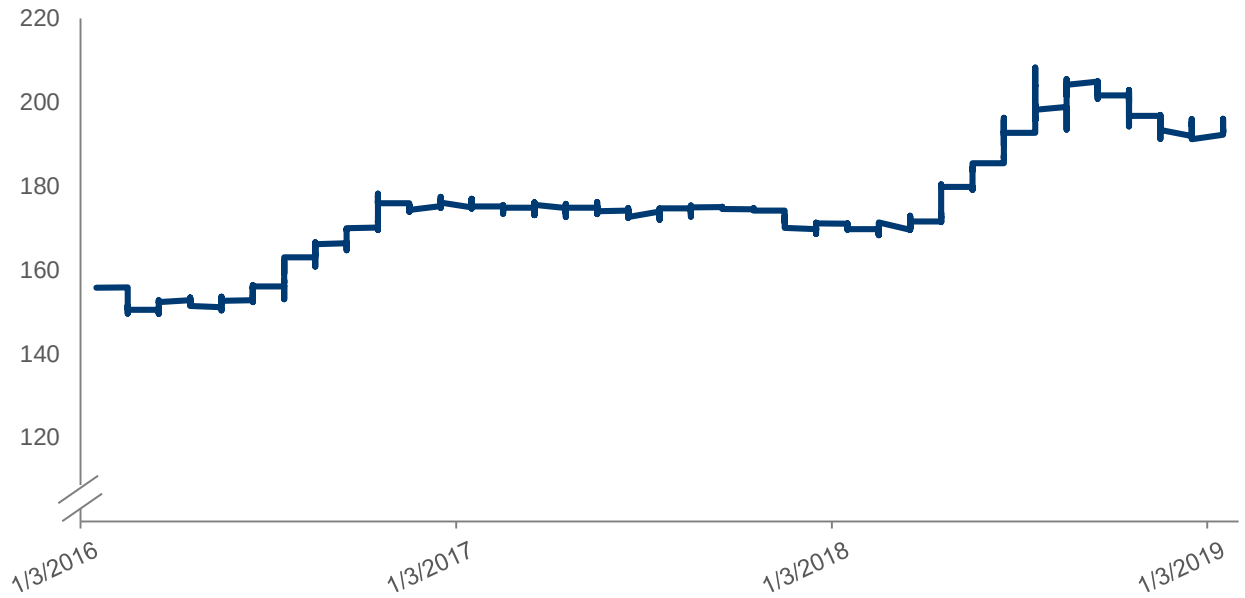
Cash Withdrawal

Holders of foreign currency bank accounts can only withdraw foreign currencies of an amount not exceeding USD 5,000 (or equivalent) each time, subject to a maximum of two withdrawals per week.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

Myanmar's official currency is the Burmese Kyat (MMK). The exchange rate is determined by a managed floating exchange rate system based on demand and supply in the market and the reference rate of the CBM. MMK can only be converted into foreign currencies in Myanmar, and the common permitted convertible foreign currencies include USD, EUR, SGD.

Three-year Exchange Rate Trend for HKD to MMK[23]



Date	HKD/MMK Rate
01/03/2016	157.72
01/03/2017	175.49
01/03/2018	170.70
01/03/2019	194.29

D. List of Banks from Foreign Investments[24,25]

CBM has granted licenses to 13 foreign banks to operate in the country. Foreign banks are limited to providing wholesale banking services to foreign and local enterprises. Foreign banks are still prohibited from providing retail banking services, however, the CBM recently announced that the situation will change by 2020.

The 13 licensed foreign banks in Myanmar are as follows:

	Names of Foreign Bank Branches
	The Bank of Tokyo-Mitsubishi UFJ, Ltd
	Oversea Chinese Banking Corporation Ltd
	Sumitomo Mitsui Banking Corporation
	United Overseas Bank Ltd
	Bangkok Bank Public Company Ltd
	Industrial Commercial Bank of China
Maybank	Malayan Banking Berhad (May Bank)
MIZUHO	Mizuho Bank Ltd
ANZ	Australia and New Zealand Banking Group Ltd
BIDV	The Joint Stock Commercial Bank for Investment and Development of Vietnam (BIDV)
신한은행 SHINHAN BANK	Shinhan Bank
玉山銀行 E.SUN BANK	E. Sun Commercial Bank Limited
	State Bank of India

Source:

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[2] *Myanmar Tax Updates – 30 March 2019, DFDL Legal & Tax*

[3] *Myanmar Tax Update: IRD Confirms Changes to the Financial Year for Cooperatives and Private, DFDL Legal & Tax*

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[8] *2018/2019 Republic of the Union of Myanmar Associations Income Tax Return, Myanmar IRD*

[9] *2019 Republic of the Union of Myanmar Quarterly Commercial Tax Return, Myanmar IRD*

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[24] *List of Foreign Banks Branches, Central Bank of Myanmar*

[25] *Foreign banks set to offer retail services in 2020, Oxford Business Group*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Myanmar's labour law system is mainly based on common law. All employees, regardless of nationalities, are required to adopt the Standard Employment Contract and are protected with maximum working hours, minimum wages and welfare by law.

The supply of highly educated and skilled labour is relatively limited compared to the other ASEAN countries.

Myanmar generally welcomes foreign workers. Only companies registered under the Special Economic Zone Law are subject to a statutory ratio of foreign to domestic employees of 1:4. Foreign workers are required to obtain a valid business visa in order to work in Myanmar. In addition, it is mandatory to obtain a Stay Permit and Foreigner Registration Certificate for long-term stays (over 90 consecutive days).

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2,3]

Based on the common law legal system, the employment laws in Myanmar applies equally to all employees, including full-time employees, part-time employees and foreign employees. The employment relationship in Myanmar is governed by various laws, regulations, policies, and notifications set out by the Ministry of Labour, Immigration and Population (MOLIP).

Minimum Legal Working Age

No child under the age of 14 may be employed.

- A child worker is defined as a person aged between 14 and 15. To be employed, child workers need a fit for work certification provided by a doctor. They can only engage in non-hazardous jobs, are not allowed to work for more than four hours a day, and are restricted from working at night (between 6 pm and 6 am). Child workers are also granted additional benefits compared to adult workers (e.g. more annual leave entitlements).
- An adolescent workers is a person aged between of 16 and 17. They must be qualified as fit to work by a certified doctor to legally engage in non-hazardous jobs. They are subject to the same employment conditions as adults (at least 18 years old).

Employers must keep a register of all workers under 18 years old in the enterprise. The register includes names of workers, names of parents, type of work, details of work shift, etc.

Employment Contract

Employment contracts are the key legal documents stipulating the rights and obligations, terms of agreement, and conditions of the employment relationship. Pursuant to Ministry of Labour Notification No. 140/2017, employers must adopt the Standard Employment Contract (SEC) template published by the MOLIP. The following mandatory terms must be included in the SEC:

- Type of employment;
- Wage/salary;
- Location of working place;
- Working hours;
- Overtime;
- Days-off, holidays and leave;
- Termination/dismissal by employer; and
- Other terms of employment, etc.

Employers and employees are allowed to negotiate on particular terms and conditions. However the negotiated conditions shall not be less favourable than the protections provided by the law; otherwise they will be considered null and void.

Registration of Employment Contract

The Employment and Skills Development Law (ESDL) stipulates that employers must enter into written employment contracts with their employees and that all employment contracts must be registered in the relevant Township Labour Offices within 30 days of employment. Failure to sign an employment contract with employees will be punished with imprisonment up to six months and/or a fine. Non-registered employment contracts may be declared void.

Pre-employment Training & Probation

Employment contracts are not required to be signed or registered during a pre-employment training period or probation, however, it is recommended to at least sign an appointment letter with key terms of employment.

- Pre-employment training: employer and employees may mutually agree upon a training with a separate agreement executed in accordance with the law concerning the attendance of occupational skills training courses. During the training period, at least 50% of the minimum daily wage (i.e. MMK 2,400; around USD 1.60) has to be paid to the employee in training. Since the ESDL does not contain any specific provisions on the resignation of employees who attended training at the employer's expenditure, it is advised to agree on clear reimbursement obligations with any employee receiving training.
- Probation: employer and employees may also agree on a probation period, which cannot not exceed three months. During the probationary period, at least 75% of the minimum daily wage (i.e. MMK 3,600; USD 2.40 as of 2018) has to be paid. However, the law provides no other details on employment conditions within the probation period, e.g. employment after probation period, termination and resignation during probation period, etc. These conditions are subject to negotiations between the employer and employees.

Payment of Wages

The Payment of Wages Law stipulates that permanent employees shall be paid on a monthly basis. Employees engaged for defined period of times (e.g. hour, day, week or temporary) shall be paid upon the completion of the job or by the end of a remuneration period based on mutual agreement, and that the payment should be made within one month.

- If the workforce does not exceed 100 employees, remuneration shall be disbursed on the end date of the remuneration period;
- If the workforce exceeds 100 employees, remuneration shall be disbursed within five days of the end of the remuneration period.

In case of termination by the employer, the remuneration shall be paid within two business days. In case of voluntary resignation by the employee, payment shall be made on the end date of the remuneration period.

Termination of Employment

The conditions and requirements of employment termination are mainly governed by the SEC, and vary depending on the form of termination: unilateral termination by employer, resignation by employee or mutual agreement. The following table summarises the key compliance requirements for employment termination:

Form of Termination	Reasons for Termination	Severance Pay	Notice Period	Additional Requirements
Unilateral termination by employer	Misconduct	✗	Immediate termination	✓ Termination in writing and signed; and ✓ Records with reasons for termination shall be kept
	Others reasons (e.g. closure of business, death of employees etc.) *(Note)*	✓	1 month	✓ Termination in writing and signed; and ✓ Records with reasons for termination shall be kept
	Redundancy	✓	1 month	✓ Coordination with representatives from labour organisations
Resignation by employee	Any	✗	1 month	✗
Mutual agreement	Any	✗	Per mutual agreement	✗

Note: Although there is no provision by law for employers to state any reasons for termination of employment by notice, in practice employer may only dismiss an employee for the reasons specified in the employment contract or work rules, which may be added as an annex to the official employment contract template.

Severance pay or payment in lieu of notice shall be paid depending on the tenure of service of the concerned employee according to the following schedule:

Tenure of Service	Severance Pay (in month's salary)
<6 months	-
6 months – <1 year	0.5
1 year – <2 years	1
2 years – <3 years	1.5
3 years – <4 years	3
4 years – <6 years	4
6 years – <8 years	5
8 years – <10 years	6
10 years – <20 years	8
20 years – <25 years	10
≥ 25 years	13

B. Minimum Wage Level[4]

All companies with more than 10 employees must comply with the Minimum Wage Law. Pursuant to the Notification 2/2018, the current national daily minimum wage is MMK 4,800 (around USD 3.2) for an eight-hour workday.

C. Maximum Working Hours and Days[1,2,3]

The maximum working hours are regulated by different laws depending on the nature of the work:

- The Factories Act (FA) covers manufacturing and maintenance workers and supervisors, as well as other manual labourers (e.g. driver, cleaning worker, cook);
- The Shops and Establishment Law covers employees in various service industries, including wholesale, retail, entertainment, hospitality industry, financial industry etc.

	The Factories Act	The Shops and Establishment Law
Max working hours per day	8 hours	8 hours
Max working hours per week	• Regular workers: 44 hours • Workers working on continuous work: 48 hours	48 hours
Max working days per week	6 days (i.e. one weekly rest day)	6 days (i.e. one weekly rest day)
Min rest period	30 minutes every 5 hours of work	30 minutes every 4 hours of work
Max combined working and rest hours per day	10 hours	11 hours

Overtime

- Overtime hours are usually limited to a maximum of 12 hours per week. In special cases (e.g. regular workers in a factory or workers in offices and shops), it can be extended to 16 hours.
- The overtime pay shall be double the normal wage as calculated in the following formula:

  {(monthly salary x 12 months)/52 weeks/regular weekly working hours (44 or 48)} x 2
- In case of work on the weekly rest day, the employee shall be granted with an alternative rest day.

D. Mandatory Welfare[1,2,3,5]

Social Security Law

According to the Social Security Law, an employer with five or more employees is required to make contributions to the Social Security Fund (SSF). Both employers and employees (including domestic and foreign employees) are required to make monthly contributions to the fund.

- Statutory contribution: employees' contribution shall be withheld from salaries. Employers should file and pay social security every month with the relevant township office of SSF. The statutory contribution are based on total monthly wages, including all recurring allowances and benefits.

Contribution Rates

	Employer	Employee	Total Contribution
Health and social care fund	2%	2%	4%
Work injury fund	*1%*	*0%*	*1%*
Total	***3%***	***2%***	**5%** *(Contribution cap: MMK 15,000)*

Additional Leaves and Benefits under SSF

Employees contributing to social security are eligible for additional leaves and benefits:

- Sickness benefits: eligible employees can enjoy free medical care in permitted hospitals and clinics and, subject to the completion of at least six months of service and four months of contribution, they are entitled to 60% of wages for up to 26 weeks;
- Maternity benefits (subject to the completion of at least 12 months of service and six months of contribution):
  - 14 weeks of paid maternity leaves shall be covered by the SSF (payment of 70% of monthly wage);
  - Free prenatal examinations and medical care services at permitted hospitals and clinics; and
  - One-off maternity bonus of 50% to 100% of the monthly average wages upon delivery depending on the number of new-borns.
- Temporary disability benefits (subject to at least two months of contribution): employees can enjoy 70% of their monthly average wage for up to 12 months; and
- Permanent disability benefits (subject to at least two months of contribution): employees can enjoy 70% of their monthly average wage for a period depending on the level of disability decided by the Medical Board.

Leave and Holiday Entitlements[1,2,3,6]

The Leave and Holiday Act (LHA) also stipulates other statutory rights of employees, including:

- Public holidays: all employees shall be granted paid public holidays (Myanmar has around 20 annual public holidays);
- Annual leaves: all employees are entitled to 10 paid annual leaves after 12 consecutive months of service with at least 20 working days per month. Annual leaves may be accumulated and carried forward for up to three years, subject to the agreement between the employer and the employee;
- Casual leaves: all employees are entitled to six days of annual paid casual leaves. Casual leaves may not be carried forward to next year and may not be spent for more than three consecutive days at a time, except in the case of religious or compulsory social events (e.g. weddings, funerals). Casual leaves may not be enjoyed in conjunction with any other type of leave;
- Medical leaves: all employees are entitled to 30 days of paid medical leaves per year after the completion of six months of service;
- Maternity and paternity leaves: female employees are entitled to 14 weeks of paid maternity leaves and male employees are entitled to 15 days of paternity leaves. Such leaves are paid by the employer unless the worker is covered by the SSF and satisfies the minimum contribution requirements.

Occupational Safety Protection Under the Factories Act (FA)

Under the FA, employers are also obligated to provide protective equipment and facilities to ensure employees' occupational safety and health in factories. Examples include:

- Fire and building safety: every building must have a fire warning system;
- First aid facilities: factories with more than 250 workers shall provide either a first aid room or a clinic containing medical equipment; and
- Workspaces: every worker must have at least 500 cubic feet (5.85 m^2, up to 4.25 m high) of space to work in to prevent overcrowding.

E. Labour Law Governing Authorities, Enforcements, and Restrictions[1,2,3,7]

Governing Authorities

The Ministry of Labour, Immigration and Population (MOLIP) is the governing body of the country's labour law and regulations. It is responsible for protecting the worker's rights, promoting social rights and labour productivity, as well as participating in international labour affairs.

Labour Law Enforcements

There are four major departments under the MOLIP, namely 1) Department of Labour, 2) Social Security Board, 3) Factories and General Labour Laws Inspection Department and 4) Department of Labour Relations. Collectively they enact labour laws and regulations and render labour related services, e.g. labour registration, workplace inspection, handling labour complaints, etc.

Labour disputes in Myanmar are handled by a multilevel resolution system, which includes the following government bodies:

- Township Conciliation Bodies: assist the disputing parties to reach a mutual agreement through neutral third-party intervention;
- Regional/State Arbitration Bodies/Arbitration Councils: act as independent and neutral third parties to handle disputes by imposing a final and binding decision (unless appealed in court); and
- Competent Courts/Supreme Court: final appellate courts for individual and collective disputes.

Employment Restrictions

Restrictions on Female Employment

There are several restrictions on female employment, especially in industrial workplace. For example, female employees shall not:

- Work in any industrial jobs at night (between 10 pm and 5 am) or commence work without a prior rest period of 11 consecutive hours;
- Clean, lubricate, or adjust any machinery while it is in motion, or work between moving parts or moving any fixed parts of any machine that is in motion; and
- Work in the same area as a cotton opener, unless the feed end of the machinery is separated from the delivery end by a partition.

Pregnant employees can only be assigned to light work, without any reduction of their original wage, salary and benefits. After seven months of pregnancy, they shall not work overtime or on night shift.

Restrictions on Foreign Employment

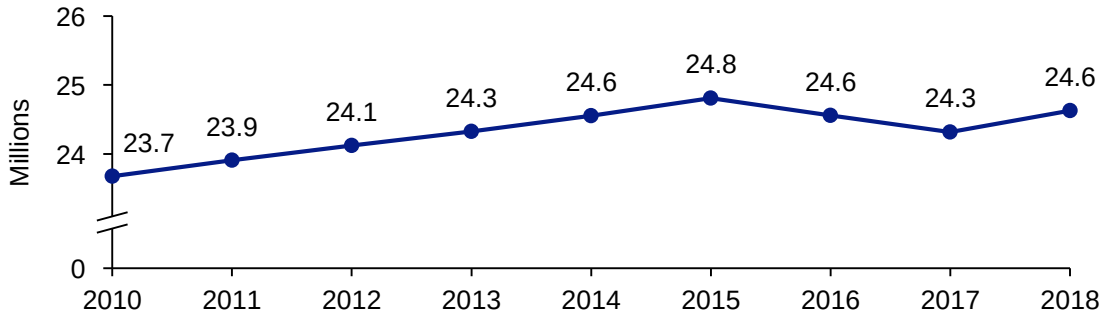
There are no restrictions on the number of foreign employees that can be employed in all types of companies in Myanmar. The only exception applies to enterprises in Special Economic Zones (SEZs). Companies established under the SEZ law and/or operating in SEZs are obliged to:

- Hire only Myanmar citizens for unskilled work; and
- Hire at least 25% of skilled workers and technicians from Myanmar citizens during the first two years of operation; followed by at least 50% for the 3rd and 4th year, and 75% for the 5th and 6th year. The only exception is for technology and management positions, for which a large percentage of foreigners is allowed.

II. Local Labour Supply Market Condition

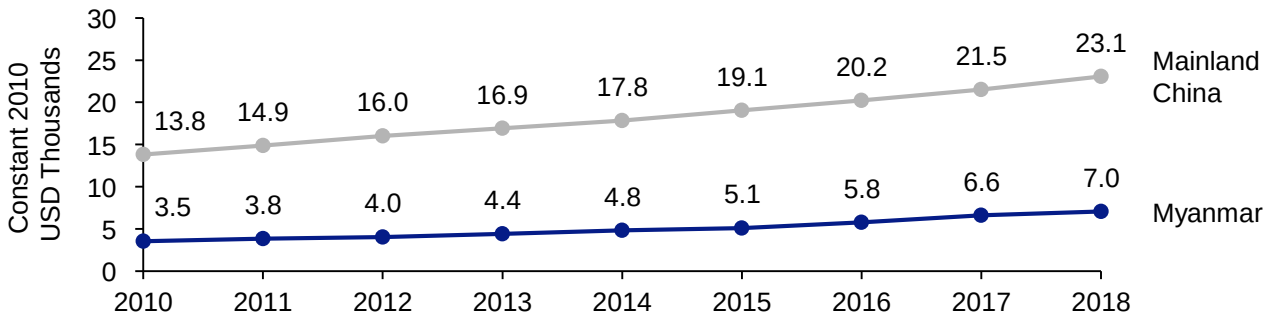
A. Supply Situation for Total Labour Force[8,9]

Myanmar Total Labour Force (2010 – 2018)



The estimated total labour force was around 24.6 million in 2018. The labour force decrease between 2015 to 2017 was largely due to the raise of the minimum employment age from 13 to 14 years old since 2015. Nevertheless, the size of workforce in 2018 was almost equal to the 2015 peak. As of 2017 Q1, around 49% of the employed population were engaged in the agricultural sector, followed by 33% in the service sector and 18% in the industrial sector.

Myanmar Industry Labour Productivity (value added per worker) (2010 – 2018) (*Note*)[9]

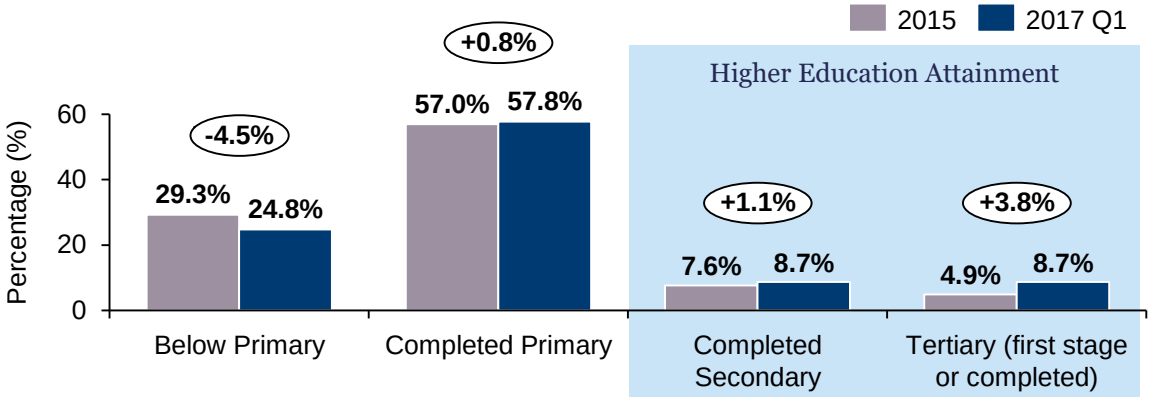


Myanmar's industry labour productivity grew at a higher rate (around 9.0%) than Mainland China's (around 6.6%) between 2010-2018. However Myanmar's industry labour productivity was still around 70% lower than Mainland China's in 2018. Myanmar's productivity is among the lowest in the ASEAN, only higher than that of Vietnam and Cambodia.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply of Skilled Employees[10,11]

Myanmar Labour Force % by Education Attainment (2015, 2017 Q1)



The estimated labour force with higher education (completed secondary schooling or above) was approximately 17% of the total labour force or around 4.1 million.

C. Government Support on Employee Training[1,12,13]

The ESDL establishes a national policy to develop Myanmar's vocational capabilities by promoting Technical Vocational Education and Trainings (TVET). There are over 250 training schools in Myanmar. They provide over 200 TVET courses covering a wide range of technical occupations related to construction, electronics, mechanics, pharmaceutical and agriculture, as well as vocational skills such as tailoring and food processing, among others.

Vocational trainings of a particular industry are managed and financed by the relevant Ministry in charge, e.g. training courses for construction, electronics, and mechanics are managed by the Ministry of Industry. While the government has not yet established a national training fund, the majority of the costs of the TVET courses are still borne by either the employees or employer.

D. Labour Unionisation and Related Government Regulations[1,2,3,6,14]

The Labour Organisation Law (LOL) protects employee's rights to join labour organisations. All types of workers (e.g temporary workers, workers on daily wage or trainees) have the right to join and form labour unions. The law applies to all workers in private and state-owned enterprises, except for organisations related to national and social security.

Labour Union Formation

Labour unions may be formed at factory level if at least 30 workers and at least 10% of all workers approve the relevant constitution and rules of the union (if there are less than 30 workers in the company, workers may form a labour union with any other company of the same nature). Umbrella organisations may be formed at township, regional and national levels, such as Labour Federations.

Labour Union Registration

Labour unions, depending on the scale, should be registered in the township or chief registrar upon establishment.

Rights of Labour Unions

The labour unions in Myanmar are entitled to the following rights in order to protect the rights and interests of their members (non-exhaustive):

- Right to negotiate and settle with the employer in case of labour disputes, including demanding re-employment of certain employees dismissed by the employer due to participation in labour union activities;
- Right to send representatives to the Workplace Coordinating Committee and Township Conciliation Body for the settlement of disputes between employer and employees;
- Support employees in collective bargaining and employment agreements preparation; and
- Engage in industrial action, including strikes (details to be provided in the latter sub-sections).

Employer's Duties

Employers shall not impede employees' participation in a union, dominate or control the union, and shall grant (upon recommendation of the labour union's executive committee) employees up to two days of leaves to participate in the union activities.

Strike/Lockout

Employees organised in a labour union may, under certain conditions prescribed by the LOL and the Settlement of Labour Disputes Law (SLDL), go on strike or lockout after failure of general dispute resolution mechanisms. The following strike requirements are defined in the LOL and the SLDL:

- Strike demands must be within the scope of competence of the union (e.g. higher wages, reinstitution of terminated workers or adequate overtime payment);
- More than 50% of the workers must approve the strike;
- Township labour union must approve the strike; and
- Permission from the Township Conciliation Body must be obtained.

According to the SLDL, employers are not liable to pay salary or allowances to the workers on strike.

F. Work Permits and Visas[14,15,16]

Work Permits

Under current requirements, foreign employees are not required to obtain a work permit to work in Myanmar. However the government is considering to change such requirement. Therefore, it is advised to check with the official authorities before employing any foreigners.

Visas

Foreigners are required to hold a valid business visa in order to legally stay and work in Myanmar. For foreign employees who are working for companies registered with the Myanmar Investment Commission, they are also required to apply for a Stay Permit (it is optional for other foreign employees).

Business Visas

Business Visas are available in two forms:

- A Single Entry Visa is valid for three months from the issue date, within which the holder must enter Myanmar or else the visa will be expired. It allows a single entry into Myanmar and a 70-day stay. By the end of the period, the individual must leave the country and re-apply for a new business visa to enter Myanmar;
- A Multiple Entry Visa can be obtained provided that the applicant has already had at least two Single Entry visas. It is valid for six months from the issue date with multiple entries. Each entry allows 70 days of stay which can also be extended for up to one year, subject to the approval by the Department of Immigration and National Registration.

Business Visas may be applied at Myanmar's foreign embassies, consulates, online or upon arrival at one of Myanmar's international airports.

Stay Permit and Foreigner Registration Certificate (FRC)

Foreign nationals require both a Stay Permit and an FRC to stay in Myanmar for over 90 consecutive days and/or to work for a company established with the Myanmar Investment Committee.

The Stay Permit and FRC should be applied immediately after arriving in Myanmar with the Directorate of Investment and Company Administration and the Department of Immigration and National Registration. The initial stay period granted is usually only three months, followed by six months for the second application and 12 months for the third application and thereafter.

Travelling to Myanmar

As a pilot programme, from 1 October 2018 to 30 September 2020, Hong Kong Special Administrative Region passport holders are granted visa-free travel to Myanmar for a period of up to 30 days. To apply for the visa, please visit the Official Myanmar eVisa website for further information and online application (www.evisa.moip.gov.mm).

E. Religious and Cultural Concerns or Considerations[17]

Religion

Nearly 90% of the Burmese population is Buddhist. Religion is deeply embedded in the Burmese life and personal identity. Religious conflicts remain the major source of friction in Myanmar. The United Nations (UN) accused the military of genocide against the Rohingyas (a small Muslim minority). This minority group has been denied citizenship, government policy restricts their religious practice and marriage rights, and prevents their employment in the social services. Therefore, it remains an extremely sensitive topic to discuss in the country. For more information, please refer to section 1 of this report.

On the other hand, Myanmar's labour force enjoy six days of paid casual leaves every year. They are allowed to attend religious events with the entitled casual leaves.

Culture

Myanmar's society remains relatively conservative and traditional. It is therefore important to observe local customs and traditions practiced by the Burmese, e.g. dressing in modest and neat clothing and taking shoes off when entering someone's home etc. English literacy in Myanmar is among the lowest in the world (ranked 82nd out of 88). The language barrier may pose challenges for Mainland China and Hong Kong companies in communicating with and managing their employees.

Personal relationships are key to a successful deal in Myanmar and the level of closeness with Burmese professionals may take precedence over the offer.

Source:

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[9] Industry (including construction), value added per worker (constant 2010 US$), The World Bank

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5. Research and Development Environment

Executive Summary

Myanmar's government is implementing a 12 years strategy to grow the country in a sustainable way. Under this strategy, neither science and technology (S&T) nor research and development (R&D) are identified as major drivers of economic growth.

The country's S&T ecosystem is still underdeveloped. The government manages a few research centres but involvement from universities and the private sector in R&D is minimal. Furthermore, S&T workforce and funding are very limited in Myanmar.

5. Research and Development Environment

I. The Science and Technology (S&T) in Myanmar

A. Policies and Trends in S&T[1,2,3]

Myanmar is undergoing a process of democratisation coupled with economic changes. In recent years, despite strong economic growth, Myanmar did not manage to achieve balanced and sustainable development, leading to a raise in inequalities and discrepancies in the country. In order to address this challenge, the government released a 12-year national strategy in 2018: the Myanmar Sustainable Development Plan 2018-2030. The vision of the plan is to forge a common path towards a prosperous, peaceful and democratic Myanmar. To achieve this vision, the government identified action plans that will be carried out along three majors pillars in order to meet five specific goals:

Prosperity & Partnership	Peace & Stability	People & Planet
1. Promote job creation and a private sector-led growth.	2. Ensure peace, national reconciliation, security and good governance. 3. Achieve economic stability and a strengthened macroeconomic management.	4. Focus on human resources and social development for a 21st century society. 5. Preserve natural resources and the environment for prosperity of the nation.

Under this comprehensive framework, S&T is not identified as a major driver of economic growth. In addition, only one out of 28 detailed strategies drafted in the Development Plan mentions R&D.

Outlook

The government has pointed out that Myanmar is lagging behind its Southeast Asian peers in key technology adoption, knowledge generation, as well as innovation. To overcome this hurdle, Myanmar seeks to embrace the fourth industrial revolution, encourage innovation, and support R&D activities. However, it is very difficult to assess the level of implementation of these initiatives and generate a comprehensive overview of Myanmar's S&T capabilities, as there is no single agency responsible for collecting R&D data. There is also a lack of transparency on R&D indicators in Myanmar. The latest available figure for R&D expenditures published by the World Bank dates back to 2002, and the number of scientific publications published according to the UNESCO dates back to 2014: the ratio was 1 scientific publication per 1 million inhabitants. Myanmar was not ranked in the World Economic Forum's 2018 Competitiveness Report.

B. S&T Related Organisations[4]

The Ministry of Education is in charge of matters related to S&T. It manages five branches, of which three carry out actions related to S&T, namely the Department of Research and Innovation, the Department of Technology Promotion and Coordination, the Department of Technical and Vocational Education.

Department of Research and Innovation (DRI)

The mission of the DRI is develop science, technology, and innovation in Myanmar by focusing on R&D and related services. Its main functions are: 1) conducting research and innovation activities in: renewable energies and electronic technologies, chemical technologies, biotech, information communication technologies, and material sciences; 2) strengthening national standards and quality trademarks (e.g. standardisation and accreditations); 3) establishing a strong intellectual property (IP) framework; 4) providing testing services to support sectors such as health, education and environment; and 5) cooperating domestically with universities and industries, and internationally with major technology organisations.

Department of Technology Promotion and Coordination (DTPC)

The DTPC aims to promote R&D activities in order to support Myanmar's industrialisation. Its four main missions are: 1) building strong industries in the country; 2) helping industries to exploit their full potential; 3) promoting workforce upskilling (e.g. train expert IT technicians); and 4) cooperating with international partners to upgrade technology.

Department of Technical and Vocational Education (DTVE)

The DTVE is in charge of creating educational opportunities to upskill Myanmar's workforce. Its main goal is to promote employment in the country and to achieve a high income per capita. However, the role of the DTVE in S&T promotion is still very limited.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[5]

Myanmar has few R&D centres. Most of them are managed by specific national departments which operate under different government ministries. Below is an overview of the country's major R&D centres.

Government R&D Institutes (Part 1/2)

Ministry	Department	R&D
Ministry of Health and Sports	Department of Medical Research	Biomedical, Clinical and Sociomedical Research Centres • Research on immunology, bacteriology, epidemiology, nutrition etc.
Ministry of Agriculture, Livestock and Irrigation	Department of Agricultural Research	Agricultural Research Institute: • Research on hybrid crops, production technologies, biotechnologies, etc.
Ministry of Education	Department of Research and Innovation	Renewable Energy Research Centre • Research on solar energy, small hydro power, wind energy, biomass energy, etc.

Government R&D Institutes (Part 2/2)

Ministry	Department	R&D
Ministry of Education	Department of Research and Innovation	Electronic Technology Research Centre • Research on automation, microelectronics, signal processing, etc.
		Chemical Technology Research Centre • Research on polymer, pharmaceuticals, applied chemical, etc.
		Material Sciences Research Department • Research on metals, isolate rare earth elements, Lithium, etc.
		Information and Communications Technology Research Centre • Research on IT, ICT and its applications.
		Biotechnology Research Centre • Research on food security, rural development, environment, etc.

B. University-based R&D Institutes[6,7]

None of Myanmar's universities are ranked in the 2019 QS Asia University Rankings. The ranking comprises around 500 institutes that are evaluated based on criteria such as academic reputation and citation per faculty. Consequently, the few R&D activities carried out in Myanmar's universities have nearly no impact on the regional or international scene. The research focus of the two main universities in the country is provided in the table below.

University	Research Focus
University of Yangon	The university has a science department with a research focus in: • Chemistry and Industrial Chemistry • Physics and Mathematics • Zoology, Botany and Geology • Computer Sciences
University of Mandalay	The University carries out research in: • Physics and Mathematics • Zoology, Botany and Geology • Chemistry and Industrial Chemistry

In 2018, the University of Mandalay announced a partnership with Yunnan University from Mainland China in order to develop its research capabilities. The collaboration between the two is a result of Mainland China's effort to create R&D centres in Belt and Road countries. The partnership's focus lies on research in fields such as resources management, environmental studies, ecology and other related subjects.

C. Private Business Firms (Research Centres)

In Myanmar, private sector engagement in R&D is minimal. However, in 2016, the government drafted the Private Sector Development Framework and Action Plan with the intention of boosting private sector engagement in the country's economy.

D. Infrastructure Availability for Foreign Investments

Myanmar is undergoing a process to open up its economy to foreign investments. To attract foreign investors, specific actions are prescribed in the Myanmar Sustainable Development Plan 2018-2030 such as creating appropriate incentives for foreign firms or building a linkage with foreign companies. The country is therefore relatively keen on receiving investment from foreign companies. However, the availability of specific R&D infrastructure is not mentioned or advertised.

III. Priority Areas in Myanmar (major exports)[8,9]

Myanmar's economy is supported by abundant natural resources and commodities. In 2018, the top five exports from Myanmar were:

Top Five Exports	% of Total Exports (in 2018)
Apparel and Clothing	29.6%
Mineral Fuels (including oil)	23.0%
Other Commodities	6.6%
Mining Products (ores, slag, ash)	6.5%
Metals (copper)	5.3%

The majority of products exported from Myanmar are low-tech and do not require much R&D. The country is struggling to upgrade its exports from low to hi-tech products. In 2017, hi-tech products (e.g. products with high R&D intensity) such as those in aerospace, computers, pharmaceuticals only represented around 6% of total manufactured exports compared to almost 30% in Vietnam or Malaysia.

IV. Funding for S&T and R&D[10]

As R&D activities in Myanmar are very rare, there are no major funding programmes for private companies. For instance, the Department of Research and Innovation does not mention funding schemes in the list of functions and services it provides. However, it appears that there are some public R&D funding initiatives from government to the ministries. In 2017, for the first time in Myanmar history, the government granted MMK 1 billion (around USD 700,000) to the Ministry of Health and Sports to support R&D activities in fields such as food safety and the production of pharmaceuticals.

V. Human Resources for S&T[11]

Myanmar's S&T labour force is very scarce. In 2017, the ratio of researchers in R&D was 15 per 1 million people. At a country level, this adds up to around 800 full-time researchers only. This bottleneck was identified by the Burmese government as one of its major weaknesses preventing international firms from investing in the country. Myanmar is not ranked in the INSEAD 2019 Global Innovation Index.

VI. Support in Testing and Verification

In Myanmar, support in testing and verification can be obtained from the National Standard and Quality Department (NSQD), which operates under the DRI. The NSQD's vision is to promote and provide technical services related to standardisation and accreditation. Its missions are: 1) developing National Standards; 2) providing internationally recognised accreditations; and 3) providing calibration and measurement services to the public and private firms.

VII. Intellectual Property Policy[12]

Myanmar is not ranked in the 2019 Intellectual Property (IP) Index published by the Global Innovation Policy Center (GIPC), which compares IP protection frameworks in 50 different countries. Between January and May 2019, Myanmar enacted four important IP related laws to replace its outdated IP framework: the Trademark Law, the Industrial Design Law, the Patent Law and the Copyright Law. However, as of May 2019, the new administrative structure has not been established. As such, the registration process is not yet possible under the new system.

Trademark Law

All registered trademarks under this law are valid for 10 years from the filling date and renewable in perpetuity. To enjoy the protection of the law, all existing trademarks recorded in Myanmar must be registered under the new system. Applications can be filed in English or Burmese. For more information please refer to section 2.

Industrial Design Law

The new law imposes a novelty threshold that needs to be met for the industrial design to be registered. Additionally, if an employer fails to apply for the industrial design within six months, employees can claim the right for the design. From the application date, registered industrial designs are protected for a period of five years. A renewal for five years can be filed twice, for a total of 15 years of protection.

Patent Law

An invention can be registered under the law if it is new, involves an inventive step, and is industrially applicable. Patents are protected for a duration of 10 to 20 years. However, pharmaceutical patents are exempted from protection until January 2033, while chemical products used in agriculture, food products, and microbiological products are exempt until July 2021 (unless the Myanmar government specifies otherwise).

Copyright Law

The new law protects works created by foreign workers and non-residents, if they were first published in Myanmar or published in the country within 30 days of the first publication abroad. The law mainly focuses on literary and artistic works but also covers technological protection.

Source:

[1] *Myanmar Sustainable Development Plan, Ministry of Planning and Finance*

[2] *R&D expenditure as percentage of the GDP, World Bank, 2017*

[3] *UNESCO Science Report: Towards 2030, UNESCO, 2015*

[4] *Ministry of Education*

[5] *Homepage of the Ministry of Education; Ministry of Agriculture; Ministry of Health*

[6] *QS Asia University Rankings 2019, QS World University Rankings*

[7] *Mandalay-Yunnan unis gear up Belt and Road R&D efforts, Myanmar Times, 2018*

[8] *Trade Map, International Trade Centre*

[9] *High-technology exports as a share of manufactured exports, Knoema*

[10] *Myanmar Gets First Health R&D Funds Since Independence, The Irrawaddy, 2017*

[11] *Researchers in R&D per million people, World Bank, 2017*

[12] *Enactment of New IP Laws in Myanmar, Tilleke & Gibbins, 2018*

6. Supply Chain Environment

Executive Summary

Traditionally, Myanmar's economy has been heavily focused on agriculture. In recent years, Myanmar has been slowly shifting to a more industry and services focused economy, with the help of foreign investments. Garment, oil & gas, precious stones and metals industries are among the key target industries for foreign investments.

Myanmar has an abundance of natural resources and raw materials. However, due to the lack of logistics infrastructure, the cost and time needed to transport these materials within and out of the country are high. To modernise the country's economy and infrastructure, the Burmese government has enacted reforms and programmes designed to attract domestic and foreign investments.

6. Supply Chain Environment

I. Industry Profiles in Myanmar

Breakdown of 2018's Top 10 Exports[1,2]

Myanmar's major sectors by gross domestic product (GDP) in 2017 are services (40.3%), industry (35.6%) and agriculture (24.1%).

In Myanmar, the service sector mainly includes tourism. The major industries are garment, oil & gas, mining and agriculture. The primary products dominating the agricultural industry are rice, beans and nuts, fish and fish products, and sugar.

In 2018, Myanmar's total global shipments amounted to USD 15.4 billion of which over 80% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Mineral fuels including oil	USD 3,530 million	23.0%
2. Apparel and clothing, not knitted or non-crocheted	USD 3,135 million	20.4%
3. Apparel and clothing, knitted or non-crocheted	USD 1,416 million	9.2%
4. Other commodities	USD 1,013 million	6.6%
5. Ores, slag, and ash	USD 1,007 million	6.5%
6. Copper, copper articles	USD 812 million	5.3%
7. Edible vegetables and products	USD 471 million	3.1%
8. Footwear and related products	USD 448 million	2.9%
9. Precious stones and metals	USD 441 million	2.9%
10. Fish and other seafood	USD 375 million	2.4%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to the following link: www.censtatd.gov.hk/trader/hscode/index.jsp

Agriculture remains one of the most important sectors in Myanmar as it employs around 50% of the total labour force (and up to 70% in rural areas). Rice fields occupy 60% of cultivated lands and produce 97% of the total agricultural output by weight.

In Myanmar, the garment, energy, and precious stones industries are also important drivers of economic growth, and are also major targets of foreign direct investment.

II. The Key Supported Industries in Myanmar[3]

Since the transition to a civil government in 2015, Myanmar has been actively promoting foreign investments. Both the Myanmar Investment Law (MIL) and the Myanmar Companies Law (MCL) aim to promote more foreign investments into certain industries. From 2011-2018, Hong Kong was the fifth highest source of foreign direct investment (FDI) into Myanmar, with USD 1.7 billion invested into the country. Together, Mainland China and Hong Kong account for over 35% of Myanmar's FDI since 1988.

Agriculture, transport, communications, energy, garment, precious stones, and other manufacturing industries are amongst Myanmar's incentivised industries for foreign investments. This section will focus mainly on the growing garment and precious stones industries.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations[4,5]

Garment

Most garment production in Myanmar is done under the Cut, Make and Package (CMP) process. In the CMP process, all the raw materials are imported by overseas customers, who also provides design, pattern and instructions. The fabrics are then cut, sewn and packed in local factories, before exporting to the customers. The only payment necessary in this process is a CMP charge paid by overseas customers to the Myanmar garment factories, providing a way for local manufacturers to avoid foreign exchange settlements (a major hurdle for importation in Myanmar).

Major overseas customers for the CMP process include companies in Mainland China, Japan, and Korea.

Currently, 283 companies are registered as CMP companies under the Myanmar Garment Manufacturers Association (MGMA). To be registered, a company must be clearly distinguished as a CMP business (separated from any non-CMP businesses), and export 100% of its CMP products.

Precious Stones and Metals

Mainland China is one of the largest export markets for Myanmar's precious gemstones. Between 2012 and 2016, the Natural Resource Governance Institute (NRGI) reported sales averaging USD 1.2 billion annually. However, around 80% of the raw stones in Myanmar are sold through unofficial channels, as the only official sales channel is the biannual Myanmar Gems Emporium (last held in March 2019). Mainland China itself reported importing USD 2.6 billion per year between 2012 and 2016, and the NRGI itself estimates the actual sales of gemstones to be between USD 3.7 billion and 43.1 billion, with all these figures higher than the official reported number.

In addition, the jade and gemstone industry in Myanmar currently mainly focused on exporting raw stones. Value-added products such as processed stones or jewellery are not yet able to be manufactured in the country.

The Myanmar government is drafting new policies to better regulate the industry, provide more avenues for sales, and opportunities to grow the industry beyond just exporting raw materials.

III. Key Raw Materials Sourcing Platforms/Channels

There are no major official B2B sourcing platforms in Myanmar.

The primary B2B e-commerce platform is BaganMart.com, which is run by a local startup called Bagan Hub. BaganMart.com helps connect local buyers and sellers, and provides a platform for product sourcing in Myanmar.

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered

Myanmar is considered to be one of the last frontier markets in Asia, boasting an abundance of natural resources and a large labour force. In addition, Myanmar is strategically well located between the key economies of Mainland China, India, and Southeast Asia, and is a key country of Mainland China's Belt and Road Initiative (BRI). Myanmar is expected to benefit from an influx of foreign investments, which will drive economic growth.

However, some major hurdles pose issues to foreign investors wishing to do business in Myanmar:

- The first foreign investment law was only enacted in 2012, replaced by the MIL in 2016. The lack of transparency and protection in this investment law and the ongoing political turmoil hinders foreign investments;
- Years of economic isolation has left Myanmar with few skilled workers and low productivity; and
- The country's weak infrastructure and logistics facilities increase the time and costs required for both imports and exports.

According to a 2019 report by the World Bank, Myanmar ranked 171st out of 190 countries in Ease of Doing Business, and is ranked last out of the ASEAN countries (Hong Kong is ranked fourth in the same report). However, Myanmar has been enacting reforms to improve the ease of doing business, and has improved from a 2014 ranking of 177.

B. Efficiency of Customs and Clearance Process[6,7]

Myanmar applies three systems of tariff classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Myanmar and the other ASEAN countries, whilst the 6-digit Harmonised Commodity Description & Coding System (commonly known as the HS Code) applies to trade with non-ASEAN countries. The Myanmar Customs Tariff 2017 additionally adds two more digits to the AHTN for a 10-digit system. All imported and exported goods into/from the country must be categorised based on the Myanmar Customs tariff number.

All the goods imported are liable for Commercial Tax (CT), unless specifically exempt. All businesses must register for CT one month before commencement of business, and CT will be collected along with any customs duty by the Customs Department upon importation. Certain goods may also be subject to a Specific Goods Tax (SGT). For more information on CT and SGT, please refer to section 3 of this report.

Import licenses are issued by the Department of Trade of the Ministry of Commerce, and can be applied online through the Myanmar Trade Net. Certain products will require a recommendation from a relevant ministry or agency. For a full list of products requiring recommendation for an import license, please refer to the Myanmar National Trade Portal (www.myanmartradeportal.gov.mm).

In 2016, the government launched the Myanmar Automated Cargo Clearance System (MACCS), designed to automate parts of the customs process. The MACCS is connected to the Trade Net licensing system and the Port Authority's system. Importers can submit import declaration certifications (IDC) through the MACCS system.

Custom Clearance Process

Customs Declaration

Step 1:

Goods imported or exported are subject to customs declaration. Relevant list of documents are required for submission to the Customs Department at the place where the goods are to be imported/exported.

Classification of Cargo

Step 2:

Goods shall be assessed by the customs officers at the checkpoint. Myanmar Customs has three channels: green, yellow, and red. After acceptance of the customs, goods are permitted to be unloaded to warehouses.

Payment of Duties and Taxes

Step 3:

All duties/custom taxes imposed on imported goods will need to be paid in advance before the goods can be released (import tax and goods and services tax).

If the tax amount is 0, Myanmar Customs will directly release the consignment.

Inspection and Release of Cargo

Step 4:

The custom's right of inspection includes the power to physically examine the goods.

Certain items may also be allowed to enter the country without payment of duties and taxes on special circumstances.

The following table shows the supplementary documents needed for customs declaration:

	Import and Export Goods
1	Invoice
2	Packing list
3	Sales contract
4	Bill of lading
5	Import license or permit, if required
6	Any other documents required for specific products

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[8]

Myanmar is well-positioned to be a key transportation hub with its strategic location between Mainland China, India, and many other Southeast Asian countries. However, its transport infrastructure network is relatively weak. The Asian Development Bank (ADB) estimates that USD 45-60 billion of investments are needed to upgrade the infrastructure network. To address this issue, the government created the National Logistics Master Plan, which aims to develop six logistics corridors, and build and upgrade their logistics facilities and transport infrastructure.

Airports

Myanmar has seen steady growth in air traffic. It grew from 7.6 million to 9.2 million passengers per year between 2014 and 2016, and is expected to reach 30 million by 2030.

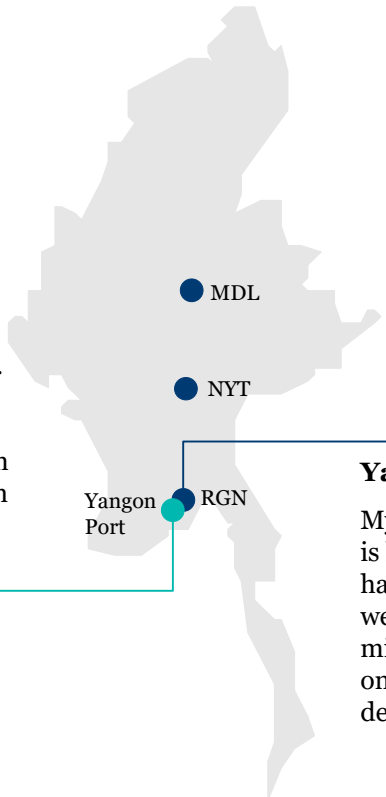
Myanmar has a total of 69 airports, of which only three are international airports: Yangon International Airport (RGN), Mandalay International Airport (MDL), and Nay Pyi Taw International Airport (NYT). A fourth international airport, Hanthawaddy International Airport, is under construction, and is expected to be completed in 2022.

Seaports

Myanmar has nine international ports for seaborne and coastal trade, the largest of which is Yangon Port. The Hong Kong logistics company Kerry Logistics, together with a local Myanmar company, developed two dry ports, Ywar Thar Gyi in Yangon and Myit Nge in Mandalay, both of which started operating in 2018.

Myanmar also has an extensive river network, which is well placed to serve as the primary transport corridor connecting the country. The government announced plans in 2017 to develop six inland maritime port terminals.

Location of Major Airports and Seaports in Myanmar



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Yangon Port

Despite only being a river port, Yangon Port is the largest port in Myanmar, and handles 90% of the import and export cargo in Myanmar, with the other ports mostly having minimal operations. Yangon Port handled over 1.2 million TEU (twenty-foot equivalent units) in 2018. Common destinations for cargo from Yangon Port are the Port of Singapore and Port Klang in Malaysia.

Yangon International Airport

Myanmar's main international airport. It is located 15km from central Yangon and handled 6 million passengers in 2018, well below its handling capacity of 20 million. Qatar Airways is currently the only international airline with a dedicated freight service to Yangon.

Highways

Myanmar's road network is 152,000 km long, but only about 39,000 km (26%) is paved. There are nine major highways in Myanmar, with one expressway connecting Yangon and Mandalay, the two largest cities in Myanmar.

The Yangon-Mandalay expressway is the only expressway in Myanmar. It was opened in 2010 and spans over 587km. There is currently a plan to build a network of ring roads around Yangon, with construction expected to start in 2021.

Railways

The railway system in Myanmar is run by the state-owned Myanmar Railways, and covers around 6,000 km, the longest in ASEAN. The majority of railways in Myanmar are single-tracks, which suffer from poor maintenance.

Myanmar Railways commenced a reform programme in 2016 to upgrade railways with assistance from international agencies such as the Japan International Cooperation Agency and the Import-Export Bank of Korea. The four main projects are the Yangon-Mandalay railway, the Yangon circular rail, the Mandalay-Myitkyina railway, and railway bridges upgrade projects.

B. Key Logistics Hubs[9]

The Myanmar government aims to improve the logistics infrastructure network in the country through the National Logistics Master Plan. This is forecasted to increase the cargo handling capacity from 169 million tonnes in 2015 to 312 million tonnes by 2030.

The National Logistics Master Plan will require a total investment of around USD 30 billion, and focuses on six logistics corridors:

- North-South Corridor, connecting Yangon to Mainland China;
- Southeast Corridor, connecting Myanmar to Thailand;
- Trans-Myanmar Corridor, connecting Kyaukphyu in Rakhine State to Tachileik in Shan State;
- India Corridor;
- Main River Corridor; and
- Coastal Marine Corridor.

The Master Plan aims to upgrade existing or build new logistics infrastructure in these corridors, as well as establish a multimodal hub to improve connectivity in the country.

C. Logistics Information Tractability and Transparency[10]

Myanmar has very poor logistics performance as compared to the other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Myanmar was ranked 137th out of 160 countries for the overall LPI, a drop from 2016 result (ranked 113th out of 160). Myanmar ranked last amongst the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing, and (6) Timeliness. In all categories except Timeliness, Myanmar ranked last amongst all ASEAN countries.

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Burma, Central Intelligence Agency*

[3] *Myanmar tops poor nations' FDI league as China cash flows in, Nikkei Asian Review*

[4] *Selected topics from the Japanese and Myanmar experience in CMP and industrial zone, JICA*

[5] *New jade and gemstone policy expected to boost the industry, Myanmar Times*

[6] *Guide to Importing Goods into Myanmar, Myanmar National Trade Portal*

[7] *Customs Tariff of Myanmar 2017, Myanmar Customs Department*

[8] *Myanmar Business Guide, PwC, 2018*

[9] *Strategy to build up logistics sector, boost national transport plan revealed, Myanmar Times*

[10] *Logistics Performance Index (LPI), The World Bank, 2018*

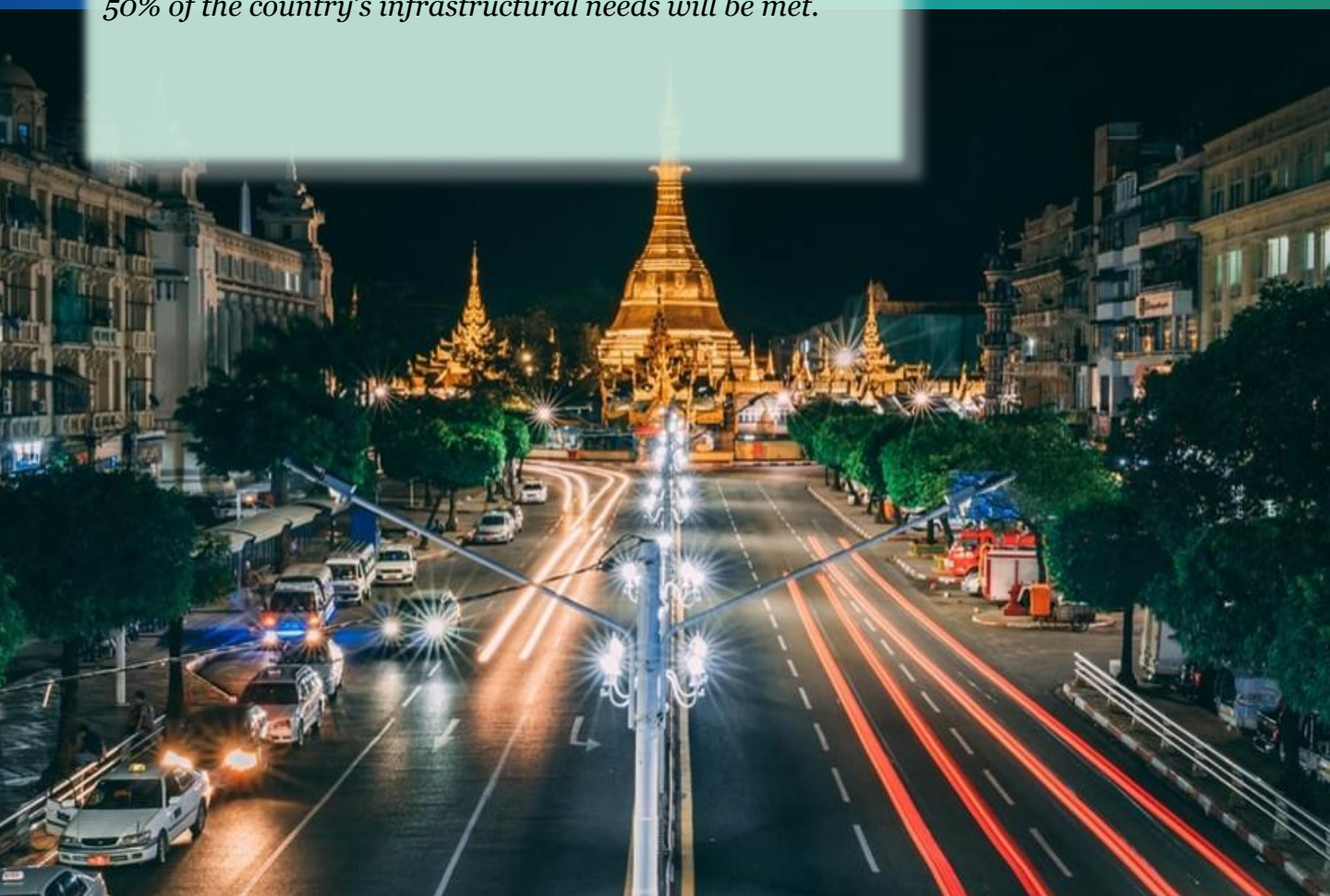
7. Infrastructure

Executive Summary

While Myanmar's rapid economic growth is projected to sustain its momentum in the future, there is a great need for large-scale investment in infrastructure. Myanmar needs to close its infrastructure gap urgently to further integrate with the global economy and to collaborate with neighbouring countries, in order to maximise its economic growth.

Myanmar is in the process of developing industrial zones and three Special Economic Zones with the hope of encouraging industrialisation, and offering incentives for businesses that choose to locate within those zones.

Overall, Myanmar will need to invest USD 224 billion to build or upgrade its infrastructure over the 2016-2040 period. However, it is forecasted that by 2040, less than 50% of the country's infrastructural needs will be met.



7. Infrastructure

I. List of Major Industrial Parks or Zones and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Parks or Zones[1,2,3]

Myanmar currently has 69 industrial zones covering a total area of 25,000 acres of active industrial land. However, over 25% of existing zones are aging and low quality sites located outside of Yangon. In Myanmar, Yangon Region is still home to the majority of the country's active industrial estates: as of December 2018, around 65% of operational industrial estates are located within the region.

Support and Incentives

In Myanmar, there are three key factors to consider when analysing industrial zones: 1) the available infrastructure such as reliable electricity supply and health care facilities; 2) transportation connectivity; and 3) government incentives.

Utilities

Manufactures choosing to locate their operations in Myanmar will be faced with aging industrial zones offering unreliable power supply or poor access to transportation networks. They will also be confronted by a lack of supporting infrastructure such as staff housing, fire stations or information and technology (IT) infrastructure, especially in the state-developed industrial zones.

Transportation

In Myanmar, roads conditions can vary heavily from one industrial zone to another. Some zones offer paved roads which are well-maintained and can support heavy trucks (including container trucks). However, some road sections leading into individual factories within industrial parks can be in poor condition. In addition, a lack of street lights, potholes created by heavy trucks, or the poor drainage infrastructure can complicate driving at night or during the monsoon season.

Government Incentives

Myanmar and Mainland China signed a memorandum of understanding for the China-Myanmar Economic Corridor in 2019, as Mainland China intends to boost bilateral trade and investment ties with the country. The collaboration is expected to benefit the development of industrial estates in central and upper Myanmar.

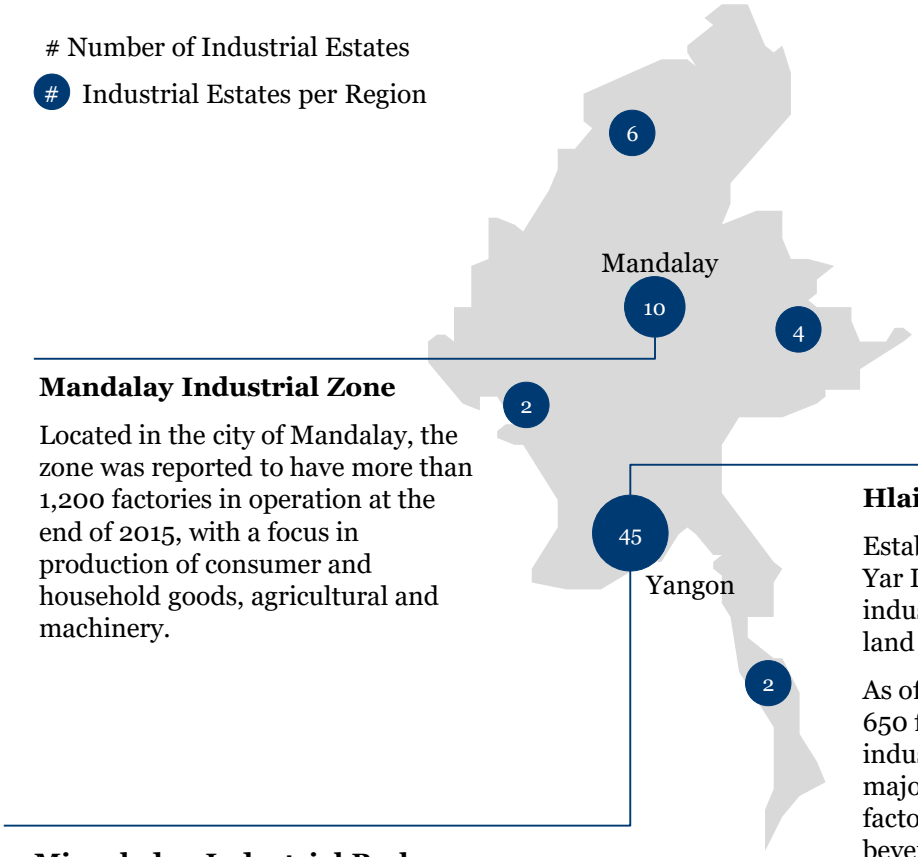
In 2014, the Myanmar Special Economic Zone Law (SEZ Law) was established to facilitate investment in three SEZs: 1) Kyaukphyu SEZ in Rakhine State; 2) Dawei SEZ in the Thanintharyi Region; and 3) Thilawa SEZ. Currently, only the Thilawa SEZ in the Yangon region is fully operational. Manufacturers wishing to settle their operations in Myanmar's SEZs need to seek investment permits from the management committees of the SEZ. In addition, investors must also register their list of materials to be imported with the SEZ management committee.

List of Industrial Estates

Industrial zones were first introduced in the 1990s to foster the development of industrial clusters in Myanmar and encourage private sector participation in manufacturing activities. Many industrial zones host facilities which cater to manufacturers operating in specific sectors. Generally, industrial estates are fairly independent from the government and their daily operations are managed by their own Industrial Zone Committee which is composed of investors and representatives from public agencies.

Most of industrial estates are located near Yangon as it is a strategic location that benefits from Myanmar's most established infrastructure. Estates situated outside of Yangon face difficulties. Specifically, the Myotha Industrial Park in Mandalay Region and the Pathein Industrial City in Ayeyarwady Region suffer from poor transport connectivity to arterial highways and railroads owing to their locations. For a complete list of industrial estates in Myanmar, please refer to Appendix 1.

Major Industrial Estates in Myanmar



Mandalay Industrial Zone

Located in the city of Mandalay, the zone was reported to have more than 1,200 factories in operation at the end of 2015, with a focus in production of consumer and household goods, agricultural and machinery.

Hlaing Thar Yar Industrial City

Established in 1995, the Hlaing Thar Yar Industrial City is the largest industrial zone in Yangon with a land area of about 567 hectares.

As of January 2016, there were over 650 factories operating in this industrial zone, with the top five major industries listed as grain (221 factories), toiletries (127), food and beverage (83), garments (74) and construction materials (28).

Mingaladon Industrial Park

Located about 20 km north of Yangon city centre and 24 km from Yangon Port, the park was developed in the late 1990s under a joint venture between the Myanmar government and a privately owned Japanese company in a bid to attract foreign investments. It is the first industrial park in the country considered to have met international standards in terms of its utility and transport infrastructure.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Foreign Direct Investment (FDI)[4,5,6]

In 2017, among the world's least developed nations, Myanmar attracted the most FDI. In 2018, Myanmar received USD 5.7 billion in FDI for 222 projects, a 14% decrease compared with USD 6.6 billion for 135 projects in 2017.

As of June 2019, Singapore is Myanmar's largest FDI contributor with a 27% share, closely followed by Mainland China with 26%. The next five leading contributors, in order, are Thailand, Hong Kong, the United Kingdom, Korea and Vietnam. The industries attracting the most FDI vary depending on the laws that foreign enterprises choose to operate under. For example, the industry receiving most FDI under the MIL is the oil and gas industry (28% of total FDI under the MIL), whereas under the SEZ Law, the leader is the manufacturing industry (81% of total FDI under the SEZ Law).

Cost of Usage

Businesses and investors are typically charged with three main types of fees in industrial zones and SEZs:

1. Land price and land tax;
2. Management/maintenance fee; and
3. Water, electricity, waste management and other utilities.

The price of land (for both rent and sale) in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links as well as proximity and access to raw materials. Prices of land in industrial estates located in neighboring areas tend to be at similar levels. For more information on specific prices and contact information for each industrial zone, please refer to the Cost of Doing Business in Myanmar report published by the Directorate of Investment and Company Administration (DICA).

It is important to thoroughly evaluate industrial zones and SEZs in Myanmar closely in order to find a location that best suits an investor's criteria. Infrastructure and other facilities are often crafted to meet the needs of the targeted industries in that zone only. Investors in these industries are likely to benefit from these specialised facilities and infrastructure networks, while those operating in other industries may end up paying a premium for required facilities.

Outlook

Since Myanmar underwent significant economic, social and political reforms in 2011, investment conditions for businesses have become increasingly favourable, thereby attracting more private investment initiatives that have contributed to the country's significant growth.

Myanmar expects to receive more investments from Mainland China, Japan, and Korea, to generate more job opportunities and to see progress in local small and medium-sized enterprises. Overall, the growth of Myanmar's industrial zones is set to continue despite the many shortfalls and obstacles.

B. Land or Building for the Major Industrial Parks or Zones – Availability for Foreign Ownership and Terms[7,8,9]

Until recently it was not possible for foreign investors to purchase property in Myanmar. In fact, the Transfer of Immovable Property Restriction Law specifically prohibited the sale of immovable property between citizens and foreigners. However, it is now possible to purchase non industrial land through the recent Condominium Law. Under the new law, a real estate investor may apply for a 70 year leasehold with a Myanmar Investment Commission's permit. However, this is restricted to larger investments and not the purchase of individual apartments or small plots of land.

Except for the above, the sale of any other type of land to foreigners is strictly prohibited.

Application Procedures for Setting up Business Operations in Industrial Estates

Special Economic Zones (SEZs)

Most foreign investors will generally choose to invest in SEZs rather than industrial zones. Currently, the only operational SEZ in Myanmar is the Thilawa SEZ. To benefit from the incentives offered by the zone, investors will need to incorporate their new company at the One Stop Service Centre of Thilawa SEZ. Below are the detailed step to start a business in this specific SEZ.

Starting a Business in Thilawa SEZ

1	Reserve the land with the Developer (i.e. Myanmar Japan Thilawa Development Co., Ltd. - MJTD)
2	Apply for investment approval to the Regulator (i.e. Thilawa SEZ Management Committee)
3	Incorporate the entity at the One Stop Service Center of the Thilawa SEZ. The incorporation takes one day.
4	Process for the application of Environmental Conservation and Protection Plan (ECPP), building permit, fire safety certificate, etc.

II. Potential Infrastructure Shortfall[10]

Quality of infrastructure is a concern for many businesses in Myanmar. According to the Myanmar Business Environment Index 2019 published by the Asia Foundation, only 49% of firms believe road quality and electrical power supply in Myanmar are good or very good. Additionally, power and transportation infrastructure can vary greatly across Myanmar. In general, infrastructure around Yangon and the capital of Nay Pyi Taw are better developed, while rural regions suffer power outages and unpassable roads frequently. These issues provide a huge hurdle to investors wishing to do business in Myanmar.

Land prices in Myanmar also pose a large problem for investors wishing to do business in industrial zones. Many owners of land plots in industrial zones do not develop the land, but instead hold on to it in the hope that improving investment regulations will lead to an influx of investors, particularly from Mainland China. This has led to much of the land in the industrial zones being left idle and undeveloped in the hope that prices will continue to rise. This issue is especially problematic in the Yangon Region.

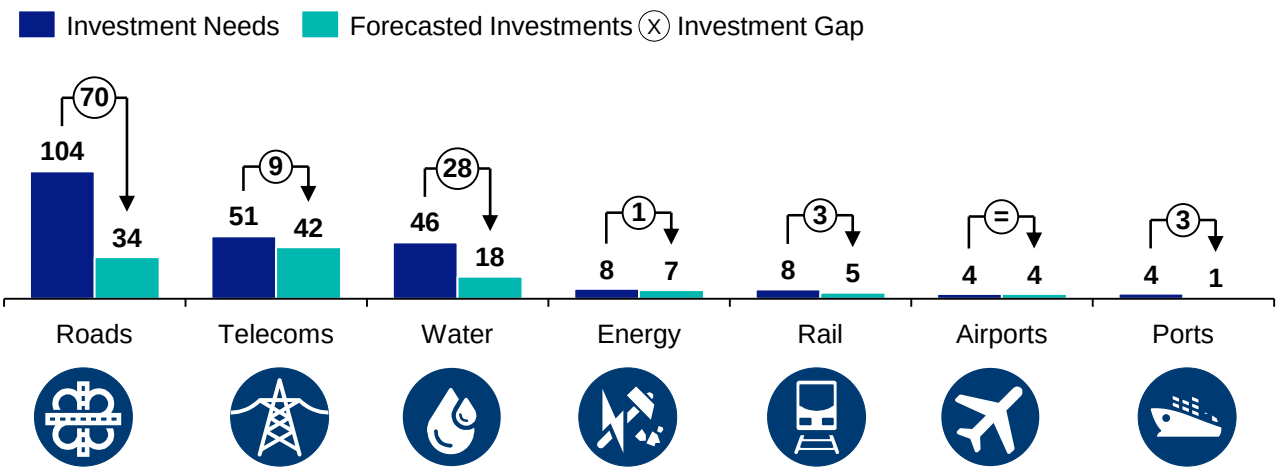
Myanmar was not ranked in the 140 countries in the World Economic Forum's 2018 Competitiveness Report, while all other ASEAN countries were. This is due to the poor infrastructure and lack of development in Myanmar over the past few decades under military rule.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending[11,12]

The development of infrastructure is an important requirement to be able to realise Myanmar's economic potential and sustain the country's economic growth.

While Myanmar's economic growth is projected to sustain its momentum in the future, there is a great demand for large-scale investment in infrastructure. From 2016 to 2040, around USD 224 billion will be needed to finance all infrastructure projects planned by the government (see chart below for breakdown by sector). Over the period it is forecasted that Myanmar's public and private sectors will invest USD 111 billion, therefore covering less than 50% of the country's needs.

Myanmar's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



For the comprehensive list of projects, please refer to Appendix 2.

Transportation

Air

At present, Myanmar has three international airports in Yangon, Mandalay, and Nay Pyi Taw. The government plans to transform more domestic airports into international airports in order to handle the growing number of investors and tourists. A fourth international airport, Hanthawaddy, is currently being built in the Bago region and is scheduled to be completed in 2022.

Ports

Given Myanmar's strategic trade location, the development of port facilities is another attractive investment opportunity for potential investors. The port of Yangon, a downtown river port, which handles about 90% of Myanmar's external trade needs upgrading. Given the rather shallow draft of the rivers surrounding central Yangon, the port is not deep enough to receive large container ships. Frequent cargo ship congestion around the port areas is reported as a result of ongoing growth in trade volumes, poor port infrastructure, and inefficient cargo handling processes. The many river networks in Myanmar can also be developed to provide an alternative form of domestic transportation.

Rail

The railway sector in Myanmar is currently a monopoly operated by state-owned Myanmar Railways. According to the Asian Development Bank's (ADB) initial assessment of the railway sector, the rail network is in poor condition and basic maintenance, such as track renewal replacement of sleepers, and upgrading of signalling and communications systems, has been inadequate. The government has committed to improving railway sections such as the Yangon-Mandalay-Myitkyitna section and the Bago-Mawlamyine section, to increase connectivity within the country.

Roads

The current road network is insufficient to service the country. The ADB estimates that Myanmar needs to increase its road network from 152,000 km to about 260,000 km in order to connect all the villages. The government has indicated that immediate priority will be given to infrastructure projects to improve land connectivity and transportation links with neighbouring countries.

Utilities

Power

There are significant investment opportunities for both foreign and domestic companies to invest in power generation, transmission and distribution. Myanmar faces a shortage of power supply to meet the demands of over 60 million people. According to the World Bank, only 57% of Myanmar's population has access to electricity.

Water

Myanmar is rich in water resources. It has more water per capita than its neighbouring countries, and the country is still to a large extent unspoiled. However, although Myanmar has abundant water resources at the national scale, the main obstacle is the inability to access water and manage it locally. Both droughts and floods negatively affect livelihoods and economic development. The national government has indicated that highest priority will be given to infrastructure projects that boost economic integration, such as developing deep seaports and dredging the inland waterways.

Telecommunications

Myanmar's telecom infrastructure is another area that needs development. According to the International Finance Corporation (IFC)'s calculations, another 10,000 additional telecommunications towers are required to provide Myanmar with full coverage.

The development of telecommunications remains a fundamental pillar in the evolution of Myanmar's economy, and supports the development of other sectors, particularly in financial services. With huge investments in just two years from countries such as Japan, Norway, and Qatar, the telecommunications sector is one of the leading sectors for foreign direct investment in Myanmar.

Funding Infrastructure through Public-Private Partnership

Myanmar urgently needs to close its infrastructure gap, to further integrate with the world economy, and to collaborate with neighboring countries in order to maximise its economic potential growth resulting from investments from the ASEAN Economic Community (AEC) and Mainland China's Belt and Road Initiative (BRI). An important source of investment is private investors, and the government welcomes investments under the Build-Operate-Transfer (BOT) model, or other Public Private Partnership (PPP) agreements.

According to the Myanmar PPP Policy Document, the Myanmar government is "committed to improving the level and the quality of economic and social infrastructure services across the country and is seeking to develop a substantive role for PPP as a means of promoting private sector participation in the provision of public infrastructure and public services."

IV. Availability of Natural Resources

Natural Resource	Details
Natural vegetation, forests and timber	• Around 42% of Myanmar's total land area is forests, mainly deciduous and temperate evergreen trees • Timber is one of the most important natural resources in Myanmar, specifically Myanmar Teak
Agriculture	• In 2017, agriculture contributed to 24% of the country's GDP • Myanmar's agricultural crops include rice, beans and nuts, fish products, and sugar
Fishing/ Aquaculture	• Fishing occurs in both the Bay of Bengal and the freshwater rivers (e.g. Irrawaddy, Chindwin, Sittaung, and Thalwin) • Dried and salted fish are also an integral part of the country's cuisine
Livestock	• Livestock are raised for both food and labour purposes, including cattle, water buffalo, goats, sheep, oxen, chickens, and pigs • Locations where livestock is raised significantly vary depending on the agro-ecological climate
Water resources	• Myanmar has abundant water resources • According to the World Health Organization, in 2015, an estimated 68% of the population had access to drinking water • Myanmar's water bodies are facing increasing pollution from agricultural chemicals, and both droughts and floods negatively affect livelihoods and economic development
Minerals	• Myanmar has extensive mineral resources including metallic minerals such as copper, gold, lead, tin, tungsten, zinc, nickel and silver, as well as precious stones including jade, ruby, sapphire and diamond • Myanmar remains largely unexplored and many of the deposits of natural resources are located in ethnic areas of the country where long-running ethnic conflicts have often generated war economies
Coal, oil and fossil fuels	• Myanmar is a natural gas producer and exports to Thailand and Mainland China • Oil and Gas is one of the largest FDI industries in Myanmar, accounting for 28% of total FDI • Supply of oil and gas does not fully meet the country's demand • Since Myanmar opened up to foreign exploration, significant investment has been made using updated technology to locate new sources
Renewable energy	• Hydropower is an important component of Myanmar's current and future power generation strategy • However, there is widespread opposition to hydropower development. There are concerns that dams will disrupt flow, threaten fisheries and damage livelihoods and ecosystems • Biomass is the major energy supply for cooking and heating in rural areas • Myanmar is also working on utilising solar and wind energy to fulfil the additional energy requirements of the country

Source:

[1] *Myanmar Industrial Zone Review, FMR, 2018*

[2] *Special Economic Zones, DICA*

[3] *Myanmar Rising: Industrial and Special Economic Zones, HKTDC*

[4] *Myanmar tops poor nations' FDI league as China cash flows in, Nikkei Asian Review, 2018*

[5] *FDI forecast to hit USD 5.8B in 2018-19, Myanmar Times, 2018*

[6] *Foreign Investments by Sector and Country, DICA*

[7] *The Transfer of Immoveable Property Restriction Act (1987)*

[8] *Parliament Passes Condominium Law*

[9] *Setting Up a Business in SEZ – Thilawa*

[10] *The Myanmar Business Environment Index 2019*

[11] *Forecasting infrastructure investment needs and gaps, G-20, 2017*

[12] *Myanmar Business Guide, PwC, 2018*

8. Types of Industries Encouraged by the Local Government

Executive Summary

Domestic and foreign investments in Myanmar are regulated by the Myanmar Investment Law (MIL) which came into effect in 2016. The law, along with supplementary government notifications, aims to promote investor's participation in specific industries in Myanmar.

The investment law and notifications also provide an exhaustive list of business activities which foreign participation is either prohibited or restricted in Myanmar.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1]

In 2018, Myanmar's government drafted the Myanmar Investment Promotion Plan (MIPP) with the aim of attracting more than 38 billion USD in foreign direct investment (FDI) between 2020 and 2035. To meet this target, the Myanmar Investment Commission (MIC) enacted a number of policies to encourage investment in relevant industries.

The Myanmar Investment Law (MIL)[2,3]

The MIL, enacted in 2016, consolidates and replaces the Foreign Investment Law (2012) and the Myanmar Citizens Investment Law (2013). The MIL, coupled with the Notification No. 35/2017 of Myanmar Investment Rules (MIR), provides guidance for domestic and foreign investments in the country. In order to encourage foreign investments, the government provides various incentives to companies operating in the sectors listed below.

List of Industries Encouraged by the Government


Agriculture and Related Services


Plantation and Conservation of Forests


Power and Renewable Energy


Education


Healthcare


Construction of Roads, Bridges, Railways, Ports, etc.


Establishment of Industrial Zones and New Urban Areas


City Development Activities


Manufacturing *(Note)*


Aircrafts and Airports


Supply and Transport Services


Information Technology Services


Telecommunications


Technology and Innovation


Hotel and Tourism

Note: The Notification No.13/2017 of the MIL explicitly states that the manufacturing of cigarette, liqueur, beer, and other products harmful to health are excluded from the promoted sector list.

To view the complete list of investment activities included in the promoted sectors, please refer to the relevant law and rules (The Myanmar Investment Law and Notification No. 13/2017) or visit the website of the Directorate of Investment and Company Administration (www.dica.gov.mm).

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[4,5]

In Myanmar, some activities are restricted for foreign investors. The current restrictions are provided in the Myanmar Investment Commission's (MIC) Notification No. 15/2017. The notification categorises activities that foreign businesses are prohibited or restricted from engaging in as follows:

1) Investment activities allowed to be carried out only by the government;
2) Investment activities in which foreign investment is prohibited;
3) Investment activities in which foreign investment is permitted only through a joint venture with Myanmar citizens; and
4) Investment activities in which foreign investment is required to obtain approval from relevant ministries.

In addition, activities that are strategic to the government, capital intensive, impact the environment or local communities, utilise state-owned land or property, or otherwise designated by the government; will require to obtain MIC permits.

Lists of Prohibited or Restricted Industries Under the Myanmar Investment Law (Part 1/3)

Category	Status	List of Prohibited or Restricted Industries
List One	Activities allowed to be carried out only by the government	• Manufacturing of products for security and defence; • Manufacturing and related services of arms and ammunition; • Issuing of national postage stamps, the establishment and hiring of post office and post boxes; • Air Traffic Services; • Pilotage Services; • Management of natural forest except business relating to reduction of carbon emission; • Feasibility study and production of radioactive metals; • Administration of electric power system; and • Inspection of electrical works.
List Two (to be cont'd)	Activities in which foreign investment is prohibited	• Publication and distribution of periodicals in ethnic languages; • Fresh water fisheries and relevant services; • Establishment of quarantine stations for the exportation and importation of animals; • Pet care services; • Manufacturing of forest products from forest areas and government administered natural forest; • Prospecting, surveying, performing feasibility study and developing minerals for small and medium scale businesses;

Lists of Prohibited or Restricted Industries Under the Myanmar Investment Law (Part 2/3)

Category	Status	List of Prohibited or Restricted Industries
List Two (cont'd)	Activities in which foreign investment is prohibited	• Refinement of minerals by small and medium scale; • Printing and issuing stickers for visa and stay permits for foreigners; • Prospection, exploration, and production of jade/gem stones; • Tour-guide services; and • Mini-market, convenience store.
List Three (to be cont'd)	Activities in which foreign investment is permitted only through a joint venture with Myanmar citizens	<u>Manufacturing and Consumer Goods:</u> • Manufacturing and distribution of: o Plastic products; o Chemicals based on available natural resources; o Flammable solid, liquid, gaseous fuels and aerosol; oxidants and compressed gases; corrosive chemicals and industrial chemical gases; o Value added cereal products such as biscuits, wafers, noodles; o Malt and malt liquors; o Purified drinking water and purified ice; o All kinds of confectionary including sweets, cocoa, and chocolate; o All kinds of soap; and o All kinds of cosmetic products. • Manufacturing, distilling, blending, rectifying, bottling and domestic distribution of all kinds of spirits, alcohol, non-alcoholic beverages; and • Processing, canning, manufacturing, and marketing food products, except milk and dairy products. <u>Real Estate:</u> • Development, sale and lease of residential apartments and condominiums.

Lists of Prohibited or Restricted Industries Under the Myanmar Investment Law (Part 3/3)

Category	Status	List of Prohibited or Restricted Industries
List Three (cont'd)	Activities in which foreign investment is permitted only through a joint venture with Myanmar citizens	<u>Services:</u> • Local tour services; and • Transportation agency to overseas hospitals. <u>Others:</u> • Research activities related to fishery; • Veterinary clinics; and • Cultivation of crops in agriculture land, and the distribution of such products to local markets or exports to foreign markets.
List Four	Activities in which foreign investment is required to obtain approval from relevant ministries	<u>Ministry of Transport and Communications:</u> • Production and distribution of radar communications items and related equipment, mobile handsets and telephones; • Construction of new railway track, stations, etc.; • Train operations; • Services for port and waterway (e.g. coastal and inland water transport service for passenger); and • Postal and telecommunications services. <u>Ministry of Health:</u> • Private hospitals, clinics, diagnostic services, and production of pharmaceuticals; and • Research on vaccine and diagnostic test kit production. <u>Ministry of Information:</u> • Cable television; and • Broadcasting programmes. <u>Ministry of Commerce</u> • Retailing and wholesale services.

To view the complete official list outlining prohibited and restricted sectors, please visit the website of the Directorate of Investment and Company Administration (www.dica.gov.mm).

Source:

[1] *Myanmar Investment Promotion Plan, Myanmar Investment Commission*

[2] *Myanmar Investment Law, Assembly of the Union*

[3] *Notification No.13/2017, Myanmar Investment Commission*

[4] *Notification No 15/2017, Myanmar Investment Commission*

[5] *Myanmar Business Guide, PwC*

9. Key Government Incentives

Executive Summary

The main government incentives are provided by the Myanmar Investment Commission (MIC) under the Myanmar Investment Law (MIL). The MIC provides various tax incentives for investments in different industries and geographical areas.

To encourage foreign investments and promote industrial development in the country, the government approved the development of three Special Economic Zones (SEZs), as well as a number of industrial zones. Out of the three SEZs, only one is operational at the moment, the other two are still under construction.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments

Myanmar Investment Law (MIL)[1,2]

In Myanmar, the main investment law governing foreign direct investment (FDI) is the MIL enacted in 2016. The MIL specifies various investment incentives that can be granted to foreign investors who invest in promoted sectors. For more information on promoted industries, please refer to section 8. Investors that invest in the promoted industries will then receive incentives based on the location of their businesses, according to Notification No. 10/2017. This Notification was enacted by the Myanmar Investment Commission in Feb 2017, and classifies three types of development zones:

1) Zone 1 consists of the least developed areas of the country, including 166 townships in 13 states and regions;
2) Zone 2 consists of moderately developed areas, including 122 townships in 10 states and regions, and the Nay Pyi Taw Union Territory; and
3) Zone 3 consists of well developed areas, including 46 townships around the largest cities of Yangon and Mandalay.

The investment incentives differ based on the development zone in which a company is doing business, with Zone 1 receiving the most incentives and Zone 3 receiving the least.

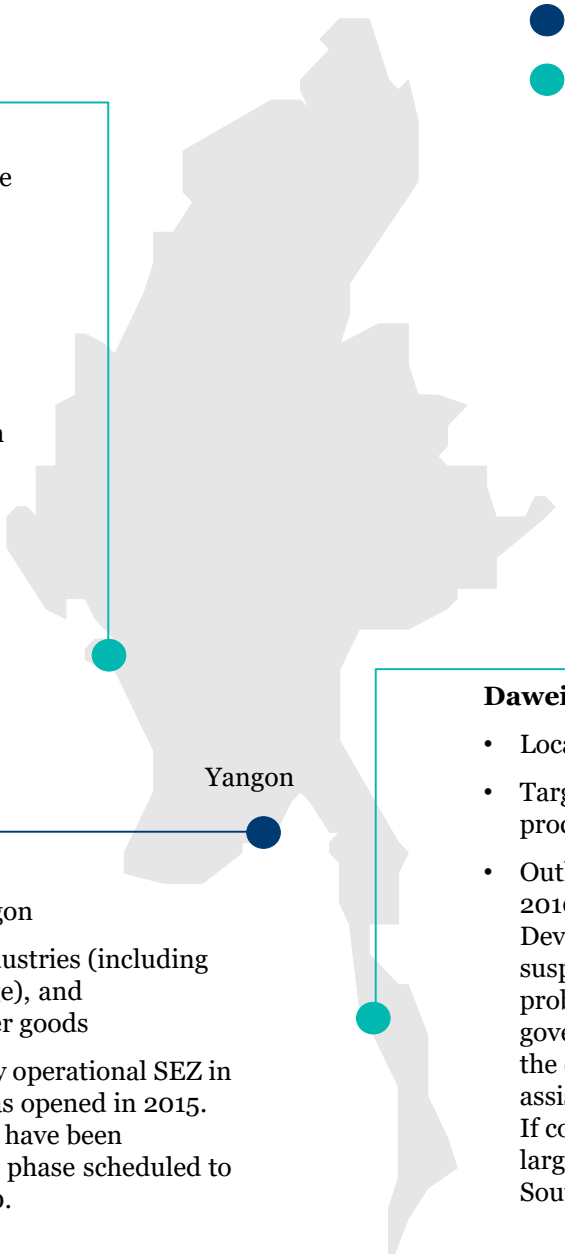
Category	Incentives
Tax Holiday	Promoted business activities may be eligible for tax holidays based on their location: • Zone 1: 7 years; • Zone 2: 5 years; and • Zone 3: 3 years.
Tax-free Profit	Corporate income tax (CIT) exemption for profits reinvested within a year
Income Tax	Foreigners taxed at the same rate as local citizens
R&D	May deduct research and development (R&D) costs from assessable income
Customs Duty	Exemption of customs duty for imports of: • Machinery, equipment, construction materials used for construction and expansion; and • Raw materials, if products are exported after production or processing.
Import Tax Refund	For goods exported, customs duty, and other taxes paid on the import of raw materials will be refunded.

II. Scope of Special Economic Zone Schemes and Geographical Location

Special Economic Zones (SEZs)[3,4]

SEZs were first proposed in Myanmar in 2010 to foster the country's industrialisation. Currently there are three approved SEZs, with one operational (Thilawa SEZ) and two under development (Dawei SEZ and Kyaukphyu SEZ). Any businesses except those in certain prohibited industries may be located in an SEZ. Prohibited industries include military-related production and services, production or processing of products harmful to the environment, and production or processing of products harmful to human health. For a detailed list, please refer to the official Thilawa SEZ website (www.myanmarthilawa.gov.mm/types-business).

Geographical Locations of Special Economic Zones



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Kyaukphyu SEZ

- Location: Rakhine Province
- Target industries: regional logistics, oil and gas, garment, and footwear.
- Outlook: the Myanmar government and CITIC Bank (headquartered in Mainland China) signed an agreement in 2018 to develop the SEZ. The SEZ has operational oil and gas pipelines to the Yunnan Province in Mainland China.

Thilawa SEZ

- Location: outskirts of Yangon
- Target industries: light industries (including garment, food and beverage), and manufacturing of consumer goods
- Outlook: currently the only operational SEZ in Myanmar, Thilawa SEZ was opened in 2015. Three phases of expansion have been completed, with the fourth phase scheduled to begin construction in 2020.

Dawei SEZ

- Location: Tanintharyi Province
- Target industries: garment, food processing and heavy chemicals
- Outlook: started construction in 2010 under the Italian-Thai Development company, but was suspended in 2013 due to financial problems. The Myanmar government is planning to restart the construction with the assistance of Thailand and Japan. If completed, it will be one of the largest industrial zones in the Southeast Asia.

Investment Incentives Available in Special Economic Zones (SEZs)

SEZs are separated into two types of zones, Free Zones and Promotion Zones. Free Zones are for production of goods destined for export, while Promotion Zones are for businesses related to domestic sales.

Category	Free Zone	Promotion Zone
Tax holiday	7 years of CIT exemption	5 years of CIT exemption
	50% CIT rate reduction for next 5 years	
	50% CIT rate reduction for another 5 years if the profits are reinvested within 1 year	
Customs duty and other taxes	Exemption from customs duty and other taxes on imports of: • Raw materials used in production; • Machinery; • Construction materials for factories, warehouses and offices; and • Vehicles and other equipment required for business.	Exemption from customs duty and other taxes for 5 years and 50% reduction for another 5 years on imports of: • Raw materials used in production, if processed goods are exported; • Equipment used in the business; • Construction materials for factories, warehouses and offices; and • Vehicles and other equipment required for business.
Carry forward and offset against losses	Can be carried forward for 5 years	
Land lease	Up to 75 years (50 years initially, renewable for 25 years)	

III. Other Government Support Funding Schemes, Including Both Local and Foreign Investments

Industrial Zones[5]

Industrial zones were first introduced in Myanmar in the 1990s, to promote industrial development in the country. Most of the existing industrial zones in Myanmar were developed in the 1990s and 2000s. There are currently over 60 industrial zones and parks, mostly concentrated around Yangon. This is largely due to the fact that Yangon has the most developed infrastructure and logistic facilities capable of handling trade.

Each industrial zone is managed by its own Industrial Zone Committee, and services available in each industrial zone can differ. Major industrial zones include the Mingaladon Industrial Park and Hlaing Thar Yar Industrial City, both of which located near Yangon.

Most foreign investors prefer to invest in SEZs due to industrial parks' poor infrastructure, logistics and transport facilities, and inadequate supporting facilities. This is particularly an issue for zones located far away from Yangon. For more information on the industrial zones, please refer to section 7 of this report.

Investment Incentives Available in Industrial Zones

Category	Incentives
Tax holiday	5 years of CIT exemption
	50% CIT rate reduction for next 5 years if the profits are reinvested within 1 year
Customs duty and other taxes	Exemption from customs duty and other taxes on imports of: • Raw materials used in production for 3 years; and • Machinery and equipment used for construction.
Land lease	Up to 70 years

Source:

[1] Myanmar Business Guide, PwC, 2018

[2] Myanmar Tax Booklet 2018, VDB Loi

[3] Thilawa special economic zone to launch new phase, Bangkok Post, Jun 2019

[4] Types of Business Allowed in the SEZ, Thilawa SEZ Management Committee

[5] Myanmar Rising: Industrial and Special Economic Zones, HKTDC, Aug 2016

10. Environmental Requirements

Executive Summary

The Ministry of Natural Resources and Environmental Conservation (MONREC) is the main regulatory body responsible for environmental policies and standards setting in Myanmar, with the Environmental Conservation Laws (2012) being the primary environmental law. Any foreign businesses wishing to invest or do business in Myanmar must abide by the Law.

Business with factories operating in Myanmar may encounter environmental hurdles or problems, such as historical pollution, license requirements, and environmental pollution.

There are environmental organisations and agencies available in Myanmar that can provide relevant environmental supporting services to those companies requiring assistances.

10. Environmental Requirements

I. Environmental Laws and Regulations in Myanmar[1,2]

In Myanmar, the Ministry of Natural Resources and Environmental Conservation (MONREC) is the main body responsible for environmental policies and standards setting. The MONREC is a combination of the old Ministry of Mines and Ministry of Environmental Conservation and Forestry. The Environmental Conservation Department (ECD) under the MONREC is the organisation mainly engaged in environmental protection.

The Environmental Conservation Law was enacted in 2012, and is the primary environmental law in Myanmar. The Environmental Conservation Rules enacted in 2014, and National Environmental Quality (Emission) Guidelines enacted in 2015 are other supplementary environment-related regulations in Myanmar.

A. The Main Environmental Protection Administrations in Myanmar

Ministry of Natural Resource and Environmental Conservation (MONREC)[1]

The MONREC is concerned with the preservation, conservation, rehabilitation of natural resources and environment, management and sustainable use of resources and implementation of other government services, which is made up of 13 departments including the Union Minister Office, Forest Department, Dry Zone Greening Department, Environmental Conservation Department, and Survey Department, etc. Of these departments, the ECD is the main body under the MONREC responsible for environmental protection.

Environmental Conservation Department (ECD)[3]

The ECD operates under the MONREC. The ECD's main duties and powers relating to environmental conservation includes the following:

- Implement the environmental conservation policies;
- Implement, carry out, and monitor programs for conservation and enhancement of the environment;
- Prescribe environmental quality standards including standards on emissions, effluents, solid wastes, production procedures, processes and products for conservation, and enhancement of environmental quality;
- Specify categories and classes of hazardous wastes generated from the production and use of chemicals or other hazardous substances through industrial process, agriculture, mineral production, sanitation and other activities;
- Specify categories of hazardous substances that may affect the environment significantly at present or in the long run;
- Prescribe a system of environmental and social impact assessments, to determine whether a project or activity may cause a significant impact on the environment; and
- Manage the penalties of polluters causing environmental impact.

B. The Main Environmental Legislation in Myanmar

The Environmental Conservation Law is the primary law on environmental protection in Myanmar. In addition, Myanmar has also issued the Environmental Impact Assessment Procedure (2015) which specifies the Environmental Impact Assessment (EIA) requirements, and the National Environmental Quality (Emission) Guidelines (2015) which outlines different environmental standards to comply with, including wastewater, noise, and air emissions, etc.

Environmental Conservation Law[2,3]

The Law stipulates the duties of the Ministry of Environmental Protection. The Ministry grants approval for specific projects involving natural resources development, industry, and other fields that require project approval. The Law further stipulates environmental-related responsibilities for enterprises designated in industrial zones and special economic zones, or enterprises designated by the Ministry of Environmental Protection.

Pollution Control

Businesses that cause pollution must install or use a facility or equipment to monitor, control, and reduce the environmental pollution. If this is impractical for the business, the business must instead arrange for the environmental wastes to be disposed using environmentally sound methods.

Penalties

Businesses violating the Environmental Conservation Law will be liable for a punishment of imprisonment for no longer than one year, a fine, or a combination of the two.

Businesses and factories that require project approval, but operate without such approval will be liable for punishment. This punishment may be imprisonment for no longer than three years, a fine between MMK 100,000 to MMK 1,000,000, or a combination of the two.

Environmental Impact Assessment Procedure (2015)

Environmental Impact Assessment (EIA)/Initial Environmental Examination (IEE)[4]

According to the MONREC of Myanmar, investment projects that may have a negative impact on the environment must submit an EIA in advance. Projects on a smaller scale and with less potential impact on the environment will only need to submit an IEE. The Environmental Impact Assessment Procedure specifies the investment project types which require an IEE or EIA. The EIA must be conducted by a third-party organisation with relevant qualifications. The MONREC is responsible for composing an Expert Committee made up of experts, government agencies, professional organisations, and other relevant society groups, to review EIAs.

Environmental Management Plan (EMP)[2,5,6]

An EMP includes commitments and emission limit values for a project, feasible mitigation measures and monitoring activities for the identified adverse impacts, and the schedule and cost of those activities. The EMP can be prepared together with the IEE/EIA, or as a standalone plan.

In accordance with the Procedure, there are two types of EMPs to be prepared, the Construction Phase EMP and the Operational Phase EMP.

In accordance with the Notification issued by the MONREC in 2018, businesses in the following nine prioritised sectors: alcohol, food and beverage production, pesticide manufacturing or formulation, cement manufacturing, textile and dyeing facilities, tanning and leather finishing, foundries, pulp and paper mills, and sugar manufacturing, are now required to prepare an EMP for submission to the MONREC in order to obtain the necessary approvals.

National Environmental Quality (Emission) Guidelines (2015)[7]

Myanmar has issued the National Environmental Quality (Emission) Guidelines in 2015. The Guidelines provide the basis for regulation and control of noise and vibration, air emissions, and liquid discharges from various sources in order to prevent pollution for purposes of protection of human and ecosystem health.

Detailed list of environmental laws and regulations in Myanmar can be found in Appendix 3.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China have issued with Myanmar

Mainland China and the ASEAN have issued a series of statements and plans to further enhance environmental cooperation between them.

Main Environmental-Related Joint Announcements and Statements[8,9]

Statements	Impact	Clauses
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourages cooperation in the conservation of biodiversity and ecological environment, clean production, and awareness of environmental education.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establishes the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Myanmar

Environmental Compliance Certificate (ECC)

Businesses will receive an ECC from the MONREC upon approval of the IEE, EIA, and/or EMP report. The ECC confirms that the IEE, EIA, and/or EMP is in compliance with the requirements of the Environmental Conservation Law.

II. Environmental Situations in Myanmar

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period	Operation Period
Historical Pollution Issues	**License Requirements**	**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability from historical pollution	• EIA/IEE • EMP	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by the previous land users. Companies may be impacted by the environmental risks caused by historical pollution if such issues were not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party services to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify significant potential environmental risks in a report.

EDD Case

A global manufacturer wanted to conduct a project situated in the Thadukan Industrial Zone, Shwepyitha Township, Yangon, Myanmar. In order to assess whether there were any potential environmental liabilities associated with the acquisition of the subject property and to conduct groundwater and surface waters resource evaluation studies. As such, the manufacturer appointed SLP Environmental consultants to conduct an enhanced EDD assessment.

The scope of work includes a detailed inspection of the property and the surrounding environment, interviews with key informants, desktop study, as well as an operational regulatory compliance assessment for the proposed operation. The transaction was completed successfully at the end.

For a list of local organisations/agencies supporting EDD in Myanmar, please refer to Section 10.III.A.

Pre-construction Period: EIA/IEE

The local environmental laws have stipulated the projects from certain industries which are required to conduct an EIA/IEE based on the local environmental laws, and businesses are not allowed to operate without an EIA/IEE.

Resolutions

EIA/IEE

According to the Environmental Impact Assessment Procedure (2015), EIA/IEE must be conducted by a third-party organisation with relevant qualifications.

EIA/IEE Processes:

- Supporting agency selection: Hire a third-party organisation with relevant qualifications to conduct the EIA/IEE, according to the Environmental Impact Assessment Procedure (2015);
- EIA/IEE report compilation: Typically lasts one to two months depending on the size and scope of activities;
- Submission: Submit EIA/IEE report to the MONREC;
- Review and Approval: The IEE report approval will typically last 60 days, while the EIA report approval usually takes around 90 days. The MONREC will grant an ECC after approval.

Types of project/activity requiring an EIA/IEE in the key industries can be found in Appendix 4.

EIA Case

According to promulgation of Myanmar EIA procedure issued in December 2015, all sizes of drilling projects are required to conduct an EIA and submit to relevant authorities for consideration and approval prior to project commencement. PTTEP SA has selected an environmental consultant, International Environmental Management (IEM) Company Limited, and its local partner Environmental Quality Management (EQM) Company Limited to conduct the EIA Study and prepare EIA Report for this project. The specific objectives of this assessment are to:

- Identify all planned activities and potential unplanned events;
- Establish an environmental, social and health baseline of the project area;
- Identify and recommend mitigation measures to minimise potential impacts;
- Recommend a monitoring plan that can track changes in the existing environmental, social and health conditions over time and to ensure compliance with Myanmar legislation.

For a list of local organisations/agencies providing EIA/IEE supporting services in Myanmar, please refer to Section 10.III.B.

Pre-construction Period: EMP[10]

Factories that require an EIA/IEE should prepare an EMP concurrently. For businesses in the nine prioritised sectors in Notification by the MONREC in 2018, an EMP must be prepared.

Resolutions

EMP

According to the Environmental Impact Assessment Procedure (2015), an EMP must be prepared at the same time as an EIA/IEE report, or as a standalone plan.

EMP Processes:

- Supporting agency selection: Project proponent may prepare an EMP themselves or appoint a registered third-party;
- EMP submission: Project proponent should submit the EMP to the ECD in both digital form and complete paper copies, together with the required service fee;
- Review and Approval: ECD will review and submit to the MONREC for it to make a final decision on approval of the EMP. Once the MONREC has approved the EMP, the ECD will deliver the final decision of the MONREC within 30 working days.

For a list of local organisations/agencies supporting EMPs in Myanmar, please refer to Section 10.III.B.

EMP Case

Environmental Resources Management (ERM) was commissioned by the Woodside Energy (Myanmar) Company Limited to conduct an EMP for a drilling program commencing in 2017. The scope of the EMP covers all the activities included in an EIA, with the objective of demonstrating compliance against the relevant national and international legislation, as well as the Woodside Health, Safety, Environment and Quality (HSEQ) Policy and Management System.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management, or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous wastes disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The Pollution Control Department is mainly responsible for monitoring and controlling environmental pollution problems. In case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous wastes;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For a list of organisations/agencies providing environmental monitoring and related services in Myanmar, please refer to Section 10.III.C, D, and E.

Environmental Pollution Case

In 2014, Yangon City Development Committee (YCDC) closed three factories at Shwe Pyi Thar industrial zone due to inappropriate disposal of wastewater.

A pre-2011 YCDC inspection found most of the factories had no systematic waste disposal system. As a result, the government implemented a systematic waste disposal plan in 2012, in cooperation with the Japan International Cooperation Agency (JICA). Wastewater must be disposed of in accordance to the internationally specified standards or YCDC's standard regulations.

That project was finished in 2014, consequently most of the industrial zone factories have built small water treatment machines.

B. Study on the Key Manufacturing Industries in which Mainland China or Hong Kong Companies Have Invested in Myanmar

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental-related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environmental-related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-Tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards Between Myanmar and Mainland China

Please refer to the below legend for the understanding of all the comparison tables in this section.

For the Myanmar standards, values refer to the limit of wastewater pollutants, treated or untreated, that is discharged to surface waters from a treatment plant, sewer, or industrial outfall. With the Mainland China standards for the electronic industry, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Myanmar.

"↑" indicates the requirement of Myanmar is stricter than Mainland China.

"= " indicates the requirement of Mainland China is the same as Myanmar.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non-industrial areas (i.e. residential areas) in Myanmar at the moment. If there are plans to build or operate factories in such areas, it is recommended to confirm with the local environmental department for specific regional requirements.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH		6.0-9.0	6.0-9.0	=
		Total suspended solids		50	50	=
		COD		160	80	↓
		BOD_5		50	-	N/A
		Absorbable organic halogens		0.5	-	N/A
		Ammonia	Special electronic materials	10	10/20[c]	=/↑[c]
			Electrical units		5	↓
			Printed circuit boards		20	↑
			Semiconductor devices		10	=
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	2	0.5/1.0[c]	↓/↓[c]
			Electrical units		0.5	↓
			Printed circuit boards		1.0	↓
			Semiconductor devices		1.0	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		0.5	↓
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display device and photoelectron components		0.5	=
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Zinc	Special electronic materials	2	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron components		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Fluoride		5.0	10	↓
		Mercury		0.01	-	N/A
		Oil and grease		10	-	N/A
		Selenium		1.0	-	N/A
		Silver		0.1	0.3	↑
		Tin		2.0	-	N/A
		Total chromium	Special electronic materials	0.5	1.0	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	=
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Hexavalent chromium	Special electronic materials	0.1	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	=
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	0.1	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display devices and photoelectron components		0.5	=
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Cyanide (Free)	Special electronic materials	0.1	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		-	N/A
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Cyanide (Total)	Special electronic materials	1.0	0.2	↓
			Electrical units		0.2	↓
			Printed circuit boards		0.2	↓
			Semiconductor devices		0.2	↓
			Display devices and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
	Air Pollutants mg/m^3	Volatile organic compounds[d]		20	-	N/A
		TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		Daytime 70 Night 70	Daytime 65 Night 55	↓
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Myanmar Standards: Effluent Levels of Semiconductors and Other Electronics Manufacturing[7], Air Emission Levels of Semiconductors and Other Electronics Manufacturing[7], General Guidelines of Noise Levels[7] .*
b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[11], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The value applying to manufacturers who run aluminum electrolytic capacitors electrode foil .*
d. *Applying to surface cleaning processes.*

Garment & Clothing

Water pollutants and air pollutants are the main pollutants in the garment & clothing industry. The following table compares the effluent and emission standards between Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Myanmar[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, on a scale of 0-14, and colour in m^{-1})	pH	6.0-9.0	6.0-9.0	=
		Total suspended solids	50	50	=
		COD	160	80	↓
		BOD_5	30	20	↓
		Colour	7 m^{-1} (436 nm, yellow) 5m^{-1} (525 nm, red) 3 m^{-1} (620 nm, blue)	50	N/A
		Ammonia	10	10	=
		Total nitrogen	10	15	↑
		Total phosphorus	2.0	0.5	↓
		Chlorine dioxide	-	0.5	N/A
		Absorbable organic halogens	1.0	12	↑
		Sulfide	1.0	0.5	↓
		Cadmium	0.02	-	N/A
		Cobalt	0.5	-	N/A
		Copper	0.5	-	N/A
		Aniline	-	Not be detected	N/A
		Nickel	0.5	-	N/A
		Oil and grease	10	-	N/A
		Pesticides	0.05/0.10	-	N/A
		Phenol	0.5	-	N/A
		Zinc	2.0	-	N/A
		Hexavalent chromium	0.10	Not be detected	↓
		Chromium (total)	0.5	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
		Volatile organic compounds	2-150 [c,d]	-	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 70	Daytime 65 Night 55	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Myanmar Standards: Effluent Levels of Textiles Manufacturing[7], Air Emission Levels of Textiles Manufacturing[7], General Guidelines of Noise Levels[7].*

b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[13] , Integrated Emission Standard of Air Pollutants[14], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*

c. *Calculated as total carbon.*

d. *As the 30-minute mean for stack emissions: 2 mg/Nm^3 for carginogenic or mutagenic volatile organic compounds; 20 mg/Nm^3 for halogenated volatile organic compounds; 50 mg/Nm^3 for waste gases from drying of large installations; 75 mg/Nm^3 for coating application processes for large installations; 100 mg/Nm^3 for small installations; if solvent is recovered from emissions and reused, the guideline value is 150 mg/Nm^3.*

Watches & Jewellery

Water pollutants and air pollutants from washing process and air pollutants from polishing process were the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Myanmar[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH	6.0-9.0	6.0-9.0	=
		Suspended solid	-	150	N/A
		COD	250	150	↓
		BOD_5	50	30	↓
		Ammonia	10	25	↑
		Total cyanide	1.0	0.5	↓
		Hexavalent chromium	0.1	0.5	↑
		Petroleum	-	10	N/A
		Oil and grease	10	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 70	Daytime 65 Night 55	↓
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Myanmar Standards: General Guidelines of Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges[7], General Guidelines of Air Emission Levels[7], General Guidelines of Noise Levels[7].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[15] , Integrated Emission Standard of Air Pollutants[14] , and Emission Standard for Industrial Enterprises Noise at Boundary[12] .*

Toys & Games

Water pollutants from the washing process, air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Myanmar[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH	6.0-9.0	6.0-9.0	=
		Total suspended solid	50	150	↑
		COD	250	150	↓
		BOD_5	-	30	N/A
		Ammonia	10	25	↑
		Sulfide	1.0	1.0	=
		Total cyanide	1.0	0.5	↓
		Hexavalent chromium	0.1	0.5	↑
		Petroleum	-	10	N/A
		Oil and grease	10	-	N/A
		Total nitrogen	15	-	N/A
		Volatile organic halogens	0.1	-	N/A
		Total phenols	0.5	-	N/A
		Volatile phenols	-	0.5	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 70	Daytime 65 Night 55	↓
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Myanmar Standards: Effluent Levels of Metal, Plastic and Rubber Products Manufacturing[7], Air Emission Levels of Metal, Plastic and Rubber Products Manufacturing[7], General Guidelines of Noise Levels[7].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[15], Integrated Emission Standard of Air Pollutants[14] , and Emission Standard for Industrial Enterprises Noise at Boundary[12] .*

Hi-tech (Part 1/5)

Water pollutants and air pollutants from the chemical cleaning process are the major types of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH		6.0-9.0	6.0-9.0	=
		Total suspended solids		50	50	=
		COD		160	80	↓
		BOD_5		50	-	N/A
		Absorbable organic halogens		0.5	-	N/A
		Ammonia	Special electronic materials	10	10/20[c]	=/↑[c]
			Electrical units		5	↓
			Printed circuit boards		20	↑
			Semiconductor devices		10	=
			Display device and photoelectron components		5	↓
			Electron terminals products		5	↓
		Total nitrogen	Special electronic materials	-	20/30[c]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	2	0.5/1.0[c]	↓/↓[c]
			Electrical units		0.5	↓
			Printed circuit boards		1.0	↓
			Semiconductor devices		1.0	↓

Hi-tech (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Total phosphorus	Display device and photoelectron components	2	0.5	↓
			Electron terminals products		0.5	↓
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display device and photoelectron components		0.5	=
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	2	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron components		1.5	↓
			Electron terminals products		-	N/A

Hi-tech (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Cadmium	Special electronic materials	0.1	0.05	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Fluoride		5.0	10	↓
		Mercury		0.01	-	N/A
		Oil and grease		10	-	N/A
		Selenium		1.0	-	N/A
		Silver		0.1	0.3	↑
		Tin		2.0	-	N/A
		Total chromium	Special electronic materials	0.5	1.0	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	=
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.1	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	=
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Arsenic	Special electronic materials	0.1	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	0.5	0.5	=
			Electrical units		0.5	=
			Printed circuit boards		0.5	=
			Semiconductor devices		0.5	=
			Display devices and photoelectron components		0.5	=
			Electron terminals products		-	N/A
		Cyanide (Free)	Special electronic materials	0.1	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		-	N/A
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Myanmar[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	Cyanide (Total)	Special electronic materials	1.0	0.2	↓
			Electrical units		0.2	↓
			Printed circuit boards		0.2	↓
			Semiconductor devices		0.2	↓
			Display devices and photoelectron components		0.2	↓
			Electron terminals products		-	N/A
	Air Pollutants mg/m^3	Volatile organic compounds[d]		20	-	N/A
		TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		Daytime 70 Night 70	Daytime 65 Night 55	↓
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Myanmar Standards: Effluent Levels of Semiconductors and Other Electronics Manufacturing[7], Air Emission Levels of Semiconductors and Other Electronics Manufacturing[7], General Guidelines of Noise Levels[7] .*
b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[11], and Emission Standard for Industrial Enterprises Noise at Boundary[12].*
c. *The value applying to manufacturers who run aluminum electrolytic capacitors electrode foil .*
d. *Applying to surface cleaning processes.*

Food & Beverage, Chemicals & Plastics[7]

For the food & beverage industry, Myanmar has introduced the Effluent Levels and Air Emission Levels of Food and Beverages Manufacturing, which includes a series of standards covering wastewater for the specific industry and processes such as meat processing, sugar manufacturing, vegetable oil production and processing, etc. For the chemicals & plastics industry, the Effluent Levels and Air Emission Levels for Chemicals Manufacturing has included a series of standards covering industry and processing wastewater or air emissions such as nitrogenous fertiliser production and oleochemicals manufacturing, etc.

In general, limits for industry effluent discharged into water sources and air emission in Myanmar are stricter than those in Mainland China.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as logistics & transportation industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Myanmar and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Myanmar[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH	6.0-9.0	6.0-9.0	=
		Total suspended solids	50	150	↑
		COD	250	150	↓
		BOD_5	50	30	↓
		Ammonia	10	25	↑
		Sulfide	1.0	1.0	=
		Formaldehyde	-	1.0	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	Daytime 70 Night 70	Daytime 65 Night 55	↓
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Myanmar Standards: General Guidelines of Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges[7], General Guidelines of Air Emission Levels[7], General Guidelines of Noise Levels[7].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[15], Integrated Emission Standard of Air Pollutants[14] , and Emission Standard for Industrial Enterprises Noise at Boundary[12] .*

III. The Main Local Supporting Organisations/Agencies in Myanmar

Myanmar is one of the countries with most abundant biodiversity, respective requirements for environmental protection and supervision are stricter when compared with the other ASEAN countries.

To ensure environmental compliance during purchasing, constructing and operating processes, the investor should pay attention to the environment survey, license application and reaching local discharge standards in design-build and operation periods.

Following tables list out the main local supporting organisations and agencies providing relevant environment-related supporting services.

A. Environmental Due Diligence Services in Myanmar

Agency/Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Environmental and Social Risk Management; • Supply Chain Risk Management; • Environmental and Health and Safety (EHS) Regulatory Compliance Assessments; and • Independent Assurance, etc.	+95 94 5004 4355
SLP Environmental	• Enhanced Phase 1 Environmental Site Assessment (EDD); • EMP Studies; and • Environmental, Health, Safety and Social (EHSS) Performance Monitoring, etc.	+95 (0) 944 899 6066

B. EIA/IEE/EMP Supporting Services in Myanmar

Agency/Organisation	Service Coverage	Contact
R&E Myanmar	• IEE Report; • EIA Report; and • Environmental and Social Impact Assessment, etc.	+95 9 7301 3448
Myanmar Sustainable Development Engineering Services	• Environmental and Social Impact Assessment; • EMP Studies; • Compliance Check of Proposed EIA Reports ; and • Environmental Monitoring, etc.	+95 (0) 996 516 0905
E Guard Environmental Service	• EIA Report; • EMP Studies; • Waste Segregation & Minimisation Research; and • Development of Environmental Management Systems, etc.	+95 166 7953

For more details, please refer to the following website: http://www.ecd.gov.mm/?q=third-party

C. Environmental Monitoring Services in Myanmar

Agency/Organisation	Service Coverage	Contact
R&E Myanmar	• Socio-economic Systems Monitoring; • Regulatory Systems Monitoring; and • Water Monitoring, etc.	+95 9 7301 3448
Myanmar Environmental Legal Service	• Monitor Policies and Practices Relating to Environmental Litigation; and • Provide Free Legal Services for Victims of Environmental Pollution and Damage in Order to Push for Justice, etc.	+95 94 2172 0170
E Guard Environmental Services	• Environmental Monitoring and Reporting for Compliance; • Environmental Inspection/Auditing and Compliance Monitoring; and • Noise Monitoring, etc.	+95 1 66 7953

D. Hazardous Wastes Disposal Services in Myanmar

Agency/ Organisation	Service Coverage	Contact
CAG Engineering	• Water Treatment System; • Wastewater Treatment System; • Building Energy Management System; and • SCADA Monitoring, etc.	+95 92 5707 0200
Organics Group Plc	• Designs, Builds, Installs and Commissions High Quality Pollution Control Systems for a Range of Differing Waste Streams; and • Waste to Energy System, etc.	+95 2 6334 0442
Golden Dowa Eco-system Myanmar	• E-Scrap Recycling; • Electronic Equipment Recycling; • Hazardous Waste Treatment; • Non-Hazardous Waste Treatment; and • Soil Remediation, etc.	+95 1230 9051
Recyglo	• Schedule Pick-up and Waste Collection; • Waste Characteristics and Analysis; • Transport to Recycling Plants; and • Waste Audit, etc.	+95 94 0424 5800
ANDRITZ MeWa - ANDRITZ Group	• Waste Recycling; and • Reuse the Recycling Materials as New Raw Materials, Like Pure Metals and Plastics, and to Substitute Fuels and Bioenergy etc.	+95 1 860 3360

E. Pollutants Treatment Services in Myanmar

Agency/Organisation	Service Coverage	Contact
SEAM	• Noise Control; • Air Quality Management; • Water Conservation and Resources Management; • Wastewater Treatment; and • Waste Management, etc.	+95 979 585 2122
RAMBOLL	• Water and Wastewater Treatment; and • Air Quality Management, etc.	+65 6469 9918 +1 312 288 3890

Source:

[1] *Ministry Websites, The Republic of the Union of Myanmar President Office*

[2] *Foreign Investment Guide – Myanmar (對外投資合作國別（地區）指南 – 緬甸), Ministry of Commerce China, 2018*

[3] *The Environmental Conservation Law, No.9/2012*

[4] *The Environmental Impact Assessment Procedure, 2015*

[5] *Preparation of EMP, ECD 2019*

[6] *Preparing an Environmental Management Plan (EMP) for MONREC Submission, SLP Environmental 2019*

[7] *National Environmental Quality (Emission) Guidelines, 2015*

[8] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[9] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[10] *Environmental Compliance in Myanmar, Luther 2018*

[11] *Emission Standard of Pollutants for Electrical Industry 2nd edition for Suggestion*

[12] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*

[13] *Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry GB 4287-2012*

[14] *Integrated Emission Standard of Air Pollutants GB 16297-1996*

[15] *Integrated Wastewater Discharge Standard GB 8978-1996*

[16] *Environmental Conservation Rules, 2014*

[17] *National Environmental Policy of Myanmar, 1994 (amended in 2019)*

[18] *Myanmar Investment Law, 2016*

[19] *Myanmar Special Economic Zone Law, 2014*

[20] *The Conservation of Water Resources and Rivers Law, 2006*

[21] *Prevention from Danger of Chemical and Associated Materials Law, 2013*

[22] *Air Quality Guidelines Global Update, World Health Organization 2005*

[23] *WHO's Air Quality Guidelines for Europe Second Edition WHO Regional Publications, European Series No. 91*

Appendix

Appendix 1

List of Industrial Estates in Myanmar

District/Province	Number of Industrial Estate (#)
Surrounding Yangon	**45**
Ayeryarwady Region	5
Bago Region	6
Kayah State	1
Kayin State	2
Mon State	4
Yangon Region	27
Surrounding Mandalay	**10**
Magway Region	2
Mandalay Region	6
Nay Pyi Taw Union Territory	2
Northern Myanmar	**10**
Kachin State	2
Sagaing Region	4
Western Myanmar	**2**
Rakhine State	2
Eastern Myanmar	**4**
Shan State	4
Southern Myanmar	**2**
Tanintharyi Region	2

Appendix 2

Myanmar's Selected Infrastructural Development Pipelines (Part 1/2)

Project	Value (USD m)	Specifications
Transport - Airport		
Hanthawaddy International Airport	1,500	Fourth and largest airport in Myanmar and is expected to become a major gateway for international airlines
Heho airport in Shan State	40	Construction of customs, immigration and quarantine facilities with the airports expected to achieve international standards
Kawthaung in Tanintharyi Division	36	
Mawlamyine airport in Mon State	20	
Transport – Port		
Seaport at Kyaukpyu, on the Bay of Bengal	1,300	Two deep water berths and Myanmar's largest port, linked to Mainland China, in the restive area of Rakhine state, part of the BRI
Transport – Rail		
Kunming-Kyaukphyu	9,000	Part of Mainland China's Belt and Road Initiative (BRI). Connecting capital of Yunnan with the Mainland China backed SEZ Kyaukphyu
Yangon Central Railway	2,500	Include new developments of office buildings, retail outlets and residential buildings in the area surrounding the station
Yangon-Mandalay Line	2,200	Upgrade the 622 km rail line linking Yangon to Mandalay, reduce travel time from almost 20 hours to 8 hours
Yangon Circular Railway	300	Upgrades to the line, including modern signaling equipment, new rolling stock and track upgrades
Trans-Asian Railway Network (TARN) Moreh in India and Tamu in Myanmar	192	The TARN is a 117,500 km network of railways encompassing 28 countries across Asia and Europe with this section linking Moreh and Tamu
Transport – Road		
Thailand Trilateral Highway	n/a	1360 km highway connecting Moreh and Tamu on the Indian border to Mae Sot District on the Thai border
Yangon Elevated Expressway	400	Link the south of Yangon, which includes Yangon Port and Thilawa Special Economic Zone, to the north side of the city, where the Yangon International Airport, Yangon Industrial Park and the Yangon-Mandalay Expressway are located
Yangon – Build and repair roads within city and townships on outskirts	307	Build and repair roads in Yangon and outskirt townships such as Hlegu, Htantabin, Tiekkyi, Hmawbi, Thonegwa, Thalyin and Twante
Muse-Mandalay highway	300	Improvements carried out along 400 km of the 455 km highway from Myanmar's northern Shan State to Mainland China

Appendix 2

Myanmar's Selected Infrastructural Development Pipelines (Part 2/2)

Project	Value (USD m)	Specifications
Urban Infrastructure		
Eco Green City	2,000	A 10-year project, covering 1,453 acres near the slated new Hanthawaddy International Airport with housing, a logistics hub, mixed-use zones and more
New Yangon City	1,500	Part of the China-Myanmar Economic Corridor, also a part of Mainland China's BRI. Complex of new towns, industrial parks and urban development projects
Smart District Project	185	1,100 acres for housing including low cost, private, and residential with commercial use
Korea Myanmar Industrial Complex	110	Small and medium-sized enterprises, heavy industry and a vocational school
Border Economic Cooperation Zones in Kachin and Shan States	n/a	Part of the Mainland China's BRI and includes trade centres and processing areas, small and medium-sized industrial facilities, a trade logistics centre and a quality packing centre
New Mandalay Resort City	n/a	Part of Mainland China's BRI and facilities, from information technology-related manufacturing to agricultural and logistical industrial zones, as well as residential and mixed-use development zones

Appendix 3

The Main Environmental Laws/Regulations in Myanmar

Ministry of Natural Resources and Environmental Conservation	Ministry of Planning and Finance	Ministry of Transport	Ministry of Industry
Environmental Conservation Law, 2012[3]	Myanmar Investment Law, 2016[18]	The Conservation of Water Resources and Rivers Law, 2006[20]	Prevention from Danger of Chemical and Associated Materials Law, 2013[21]
Environmental Conservation Rules, 2014[16]			
National Environmental Policy of Myanmar (1994)(amended in 2019)[17]	Myanmar Special Economic Zone Law, 2014[19]		
Environmental Impact Assessment Procedure, 2015[4]			

The Main Environmental Ambient/Effluent Standards in Myanmar

Ambient Standards	1	National Environmental Quality (Emission) Guidelines[7, a]
	2	Air Quality Guidelines Global Update[22]
	3	Who's Air Quality Guidelines for Europe[23]
Effluent Standards	1	General Guidelines of Air Emission[7, a]
	2	General Guidelines of Wastewater, Storm Water Runoff, Effluent and Sanitary Discharges[7, a]
	3	General Guidelines of Noise Level[7, a]
	5	Effluent Levels of Food and Beverages Manufacturing[7]
	6	Effluent Levels of Garments, Textile and Leather Products[7, a]
	7	Effluent Levels of Chemicals Manufacturing[7]
	8	Effluent Levels of Infrastructure and Service Development[7]
	9	Effluent Levels of Metal, Plastic and Rubber Products Manufacturing[7, a]
	10	Effluent Levels of Electronics[7, a]
	11	Effluent Levels of Biotechnology Manufacturing[7]

Note:
a. Corresponding effluent/emission standards are the standards adopted in Section 10.II.C.

Appendix 4

Types of Activities with EIA/IEE Requirements for the Key Industries in the National Environmental Quality (Emission) Guidelines on Environmental Regulations[4] (Part 1/5)

Industry	Types of Economic Activities	Criteria for IEE	Criteria for EIA
All	Projects in which investment is decided by the Parliament or the government cabinet or the President	-	All size
Food & Beverage	Meat Processing Plants (slaughter of cattle, pigs, sheep and other livestock)	≥ 15 t/d but < 50 t/d carcass production	≥ 50 t/d carcass production
	Poultry Processing Plants (slaughter of poultry and other commercially raised fowl)	≥ 15 t/d but < 50 t/d carcass production	≥ 50 t/d carcass production
	Fish Processing Plants (fish, crustaceans, gastropods, cephalopods, and bivalves; includes by-products such as fish oil and fish meals)	≥ 15 t/d but < 75 t/d	≥ 75 t/d
	Food and Beverage Processing Facilities (processing of beef, pork, mutton and poultry meats, vegetable, and fruit raw materials into value-added food and non-fermented beverage products for human consumption)	≥ 10 t/d but < 20 t/d	≥ 20 t/d
	Dairy Processing Plants (reception, storage, and industrial processing of raw milk and the handling and storage of processed milk and dairy products)	≥ 200 t/d raw milk on annual average basis	All activities where the Ministry requires that the Project shall undergo EIA
	Manufacture of Animal Feeds	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
	Vegetable Oil Production and Processing Facilities	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a

Appendix 4

Types of Activities with EIA/IEE Requirements for the Key Industries in the National Environmental Quality (Emission) Guidelines on Environmental Regulations[4] (Part 2/5)

Industry	Types of Economic Activities	Criteria for IEE	Criteria for EIA
Food & Beverage	Manufacture of Starches and Starch Products	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
	Manufacture of Grain Mill Products (grain milling, rice milling, production of rice flour, vegetable milling, manufacture of cereal breakfast foods, manufacture of flour)	≥ 100 t/d but < 300 t/d product and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d product or ≥ 600 t/d if production is operating a maximum of 90 d/a
	Monosodium Glutamate (seasoning powder) Factories	≥ 50 t/d but <100 t/d	≥ 100 t/d
	Sugar Manufacturing Plants	≥ 50 t/d but < 300 t/d and < 600 t/d if production is operating a maximum of 90 d/a	≥ 300 t/d refined sugar or ≥ 600 t/d if production is operating a maximum of 90 d/a
	Alcohol, Wine and Beer Production Factories (distilleries, wineries and breweries)	≥ 50,000 l/d but < 300,000 l/d product and < 600,000 l/d if production is operating a maximum of 90 d/a	≥ 300,000 l/d product or ≥ 600,000 l/d if production is operating a maximum of 90 d/a
	Non-Alcohol Factories (soda, soft drink, mineral water production)	≥ 20,000 l/d	All activities where the Ministry requires that the Project shall undergo EIA
	Ice Factories	≥ 500 t/d but < 2,000 t/d	≥ 2,000 t/d
	Drinking Water Factories (for bottled refined water)	≥ 100,000 l/d	All activities where the Ministry requires that the Project shall undergo EIA
	Tobacco Processing Plants	≥ 1 t/d but < 15 t/d product	≥ 15 t/d product

Appendix 4

Types of Activities with EIA/IEE Requirements for the Key Industries in the National Environmental Quality (Emission) Guidelines on Environmental Regulations[4] (Part 3/5)

Industry	Types of Economic Activities	Criteria for IEE	Criteria for EIA
Garment & Clothing	Textile Manufacturing Facilities (production of yarn, fabric, garments and finished goods based on natural fibres, synthetic fibres and/or regenerated fibres)	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
	Pre-treatment (washing, bleaching, mercerisation) or Dyeing of Textiles or Fibres	≥ 1 t/d but < 10 t/d	≥ 10 t/d
	Leather Products Manufacturing (includes synthetic leather, handbags, luggage, saddle, footwear)	≥ 1,000 t/a	All activities where the Ministry requires that the Project shall undergo EIA
	Tanning and Leather Finishing	< 12 t/d finished products	≥ 12 t/d finished products
Chemicals & Plastics	Large Volume Inorganic Compounds Manufacturing and Coal Tar Distillation (includes ammonia, acids [nitric, hydrochloric, sulphuric, hydrofluoric, phosphoric acid], chlor-alkali [e.g. chlorine, caustic soda, soda ash], carbon black, and coal tar distillation [naphthalene, phenanthrene, anthracene])	-	All sizes
	Petroleum-based Polymers Manufacturing Plants	-	All sizes
	Chemical Fertilizer Manufacturing Plants	-	All sizes

Appendix 4

Types of Activities with EIA/IEE Requirements for the Key Industries in the National Environmental Quality (Emission) Guidelines on Environmental Regulations[4] (Part 4/5)

Industry	Types of Economic Activity	Criteria for IEE	Criteria for EIA
Chemicals & Plastics	Pesticide Manufacturing, Formulation, and Packaging Plants	-	All sizes
	Oleochemicals Manufacturing Plants (production of fatty acids, glycerin, and biodiesel using fats and oils from vegetable or animal sources)	-	All sizes
	Pharmaceuticals and Biotechnology Manufacturing Plants	< 50 t/a	≥ 50 t/a
	Other Basic Organic Chemicals Manufacturing Plants	-	All sizes
	Other Basic Inorganic Chemicals Manufacturing Plants	-	All sizes
	Other Chemical Products Manufacturing Plants (e.g. paints, inks, varnishes, soap, detergents, perfumes, pyrotechnic products, photographic chemicals)	≥ 5 t/d but < 10 t/d	≥ 10 t/d
	Explosives Manufacturing Plants	-	All sizes
	Manufacturing of Extinguishers and Other Firefighting Products	All sizes	All activities where the Ministry requires that the Project shall undergo EIA
	Manufacturing of CO2 Gas and Filling and Liquefying Industrial Gas	≥ 1,000 t/a but < 3,000 t/a	≥ 3,000 t/a
	Rubber and Latex Processing Plants	≥ 2,000 t/a	All activities where the Ministry requires that the Project shall undergo EIA

Appendix 4

Types of Activities with EIA/IEE Requirements for the Key Industries in the National Environmental Quality (Emission) Guidelines on Environmental Regulations[4] (Part 5/5)

Industry	Types of Economic Activity	Criteria for IEE	Criteria for EIA
Electronics	Semiconductors and Other Electronics Manufacturing Plants (manufacturing of semiconductors, printed circuit boards, printed wiring assemblies, screens, passive components, and magnetic devices)	≥ 5,000 m² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
	Electronic and Electric Equipment Manufacturing Plants (computers, communication equipment, consumer electronics, laboratory equipment, electric motors, electric lightning etc.)	≥ 5,000 m² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
	Domestic Appliance Manufacturing Plants	≥ 5,000 m² production area, or ≥ 6 kg/h consumption of organic solvents	All activities where the Ministry requires that the Project shall undergo EIA
	Batteries and Accumulators Manufacturing Plants	< 3,000 t/a	≥ 3,000 t/a

Glossary – Section 1 to 9 Operational Requirements

ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AHTN	ASEAN Harmonised Tariff Nomenclature
ASEAN	Association of Southeast Asian Nations
BIMSTEC	Bay of Bengal Initiative for Multi-Sector Technical and Economic Cooperation
BIT	Bilateral Investment Treaty
BOT	Build-Operate-Transfer
BRI	Belt and Road Initiative
CBM	Central Bank Of Myanmar
CD	Customs Duty
CEPT	Common Effective Preferential Tariff
CGT	Capital Gains Tax
CIF	Cost, Insurance, Freight
CIT	Corporate Income Tax
CMP	Cut, Make and Package
CT	Commercial Tax
DICA	Directorate of Investment and Company Administration
DRI	Department of Research and Innovation
DTA	Double Taxation Agreement
DTPC	Department of Technology Promotion and Coordination
DTVE	Department of Technical and Vocational Education

ECPP	Environmental Conservation and Protection Plan
ESDL	Employment and Skills Development Law
EUR	Euro
FA	Factories Act
FDI	Foreign Direct Investment
FEXB	Foreign Exchange Management Board
FRC	Foreigner Registration Certificate
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GIPC	Global Innovation Policy Center
HKD	Hong Kong Dollar
HS	Harmonised System
IDC	Import Declaration Certification
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IP	Intellectual Property
IRD	Internal Revenue Department
JV	Joint Venture
LHA	Leave and Holiday Act
LLC	Limited Liability Company
LOL	Labour Organisation Law
LPI	Logistics Performance Index
MACCS	Myanmar Automated Cargo Clearance System
MCA	Myanmar Companies Act
MCL	Myanmar Companies Law

MFRS	Myanmar Financial Reporting Standards
MGMA	Myanmar Garment Manufacturers Association
MIC	Myanmar Investment Commission
MIL	Myanmar Investment Law
MIPO	Myanmar Intellectual Property Office
MIPP	Myanmar Investment Promotion Plan
MIR	Myanmar Investment Rules
MMK	Burmese (Myanmar) Kyat
MOLIP	Ministry of Labour, Immigration and Population
MyCO	Myanmar Companies Online
NLD	National League for Democracy
NRGI	Natural Resource Governance Institute
NSQD	National Standard and Quality Department
PIE	Public Interest Entity
PPP	Public-Private Partnership
PT	Property Tax
R&D	Research and Development
RCEP	Regional Comprehensive Partnership
RMB	Renminbi
S&T	Science and Technology
SD	Stamp Duty
SEC	Standard Employment Contract
SECM	Securities and Exchange Commission of Myanmar
SEZ	Special Economic Zone
SGD	Singapore Dollar

SGT	Specific Goods Tax
SIC	Standing Interpretations Committee
SLDL	The Settlement of Labour Disputes Law
SSF	Social Security Fund
TEU	Twenty-foot Equivalent Units
TVET	Technical Vocational Education and Training
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	United States Dollar
USDP	Union Solidarity and Development Party
VAT	Value Added Tax
WTO	World Trade Organization

Glossary – Section 10 Environmental

AOX	Absorbable Organic Halogen
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
ECC	Environmental Compliance Certificate
ECD	Environmental Conservation Department
EMP	Environmental Management Plan
EIA	Environmental Impact Assessment
IEE	Initial Environmental Examination
MONREC	Ministry of Natural Resources and Environmental Conservation
NMHC	Non-methane Hydrocarbon
TVOC	Total Volatile Organic Compounds

3.9 Guide to the Philippines

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

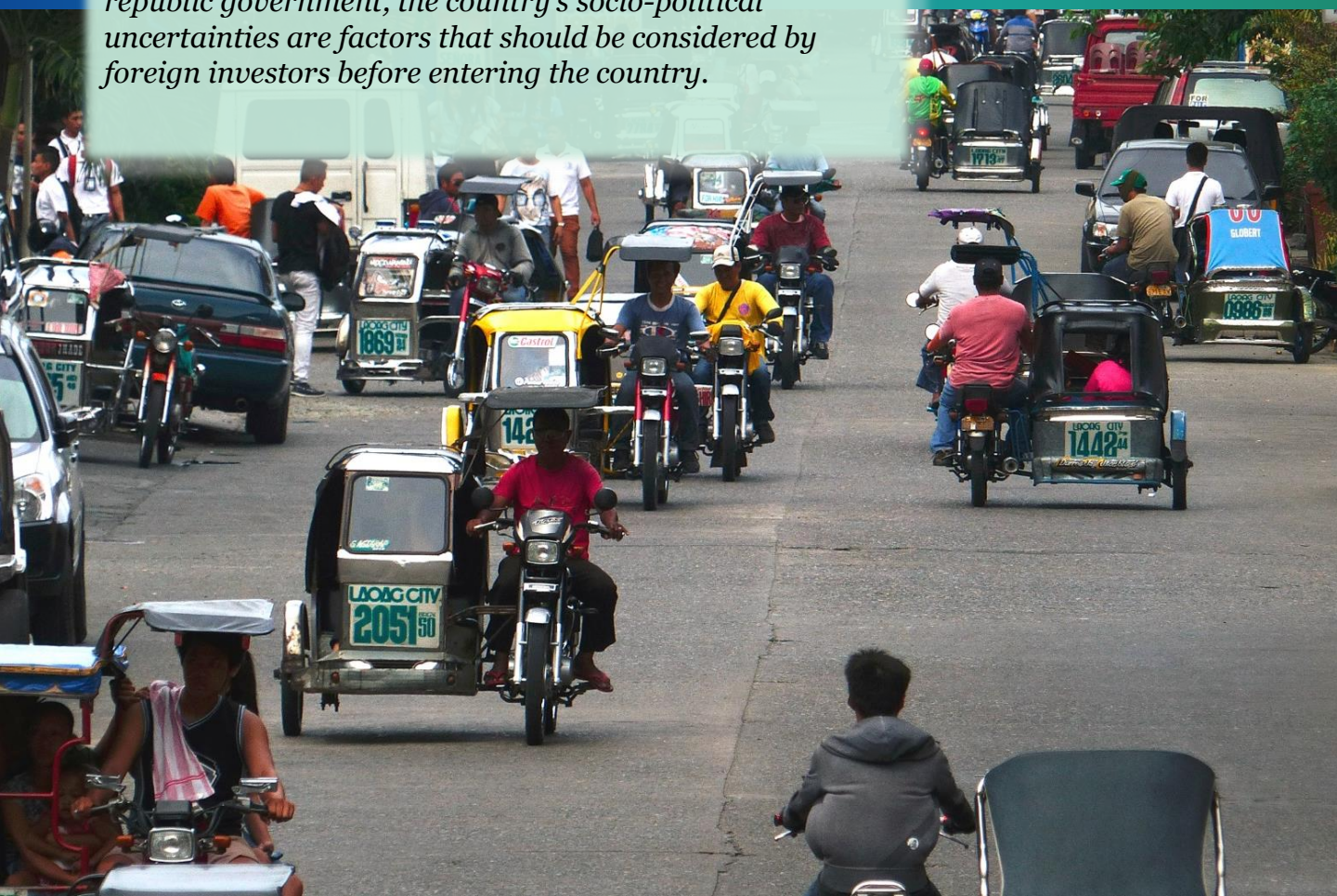
1. Overview of the Philippines

Executive Summary

The Philippines has witnessed a healthy gross domestic product (GDP) growth in the past several years as a result of the vigorous agenda under the Duterte administration, the remittance of overseas workers, and the young and English-proficient workforce. However, despite the growth, the Philippines remains a lower-middle income country.

The country has engaged in only two bilateral trade agreements: one with the European Free Trade Association and the other with Japan. Nevertheless, as part of the Association of Southeast Asian Nations (ASEAN), the Philippines benefits from another six multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia, and New Zealand.

While the Philippines has a democratic constitutional republic government, the country's socio-political uncertainties are factors that should be considered by foreign investors before entering the country.



1. Overview of the Philippines

I. Country Profile[1,2,3,4,5,6,7]

The Philippines' economy has been growing at a steady rate of 6.3% since 2010, and is forecasted to have 11.6% gross domestic product (GDP) growth in 2019. As a result of this continual growth, the country is expected to shift from a lower-middle income to an upper-middle income economy in the near future. The county's economic growth is driven by strong consumer demand (influenced by a growing middle class and a large young population), and healthy remittance inflows from the Overseas Filipino Workers (OFWs). President Duterte's numerous policies (e.g. "10-Point Socioeconomic Agenda", and the "Build, Build, Build" infrastructure plan) are expected to further increase the country's competitiveness, boost economic growth, and develop human capital.

GDP *(in USD)*
369.5 bn (2019f)
330.9 bn (2018)

GDP Per Capita *(in USD)*
3,417 (2019f)
3,104 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 9.6%
Industry: 30.6%
Services: 59.8%

External Trade *(% of GDP)*
Import: 44.4% (2018)
Export: 31.7% (2018)

Population
108.13 million (2019)
World ranking: 13/233

Median Age
23.7 (2018)
World ranking: 169/201 (from oldest to youngest)

Language
Filipino (official)
English (official)
Spanish

English Literacy
High proficiency (2018)
World ranking: 14/88

Government Structure
Constitutional Republic

Land Area
298,170 sq. km.

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[8,9]

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. It allows companies located in two or more countries to trade goods with each other at reduced or zero tariffs. This can be very attractive for Mainland China and Hong Kong companies that intend to expand their manufacturing footprint. The Philippines is a member of the Association of Southeast Asian Nations (ASEAN) since 1967, giving the country preferential access to Southeast Asian markets. In addition, the country also actively participates in international trade as it has been a full member of the World Trade Organization since 1995.

Currently, the Philippines has nine signed and effective trade agreements, including two bilateral and seven collective trade agreements (including the ASEAN Free Trade Area). In addition, the ASEAN – Hong Kong Free Trade Agreement (FTA) came into effect in June 2019 (see section below). Furthermore, there are two trade agreements currently under negotiation: one with the European Union, and another with the Regional Comprehensive Economic Partnership (RCEP); and another 10 proposed.

Signed and Effective Bilateral Trade Agreements

	Affected Industry	Agreement (effective date)
	• Industrial products • Agriculture	**Japan-Philippines Economic Partnership Agreement (2008)** • Elimination or reduction of tariffs on 95% of industrial and agricultural products; and • Bilateral economic assistance in 10 different sectors within the Official Development Assistance.
	• Industrial products	**Philippines-European Free Trade Association (EFTA) Free Trade Agreement (2018)** • EFTA comprises Iceland, Liechtenstein, Norway and Switzerland; • Elimination of customs duties on all industrial products from EFTA; and • Gradual reduction and elimination of duties on the majority of industrial products from the Philippines.

Signed and Effective Regional Trade Agreements as a Member of the ASEAN

As a member of the ASEAN, the Philippines benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

The Regional Comprehensive Economic Partnership (RCEP)

This partnership is being negotiated between the ASEAN members and their FTA partners (i.e. Mainland China, South Korea, Japan, India, Australia, and New Zealand). The RCEP is designed to be a mutually beneficial economic partnership that will foster cooperation and integration between the 16 countries. The agreement aims to lower tariffs and other barriers to enhance trade between the partners.

The Association of Southeast Asian Nations (ASEAN)[9]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

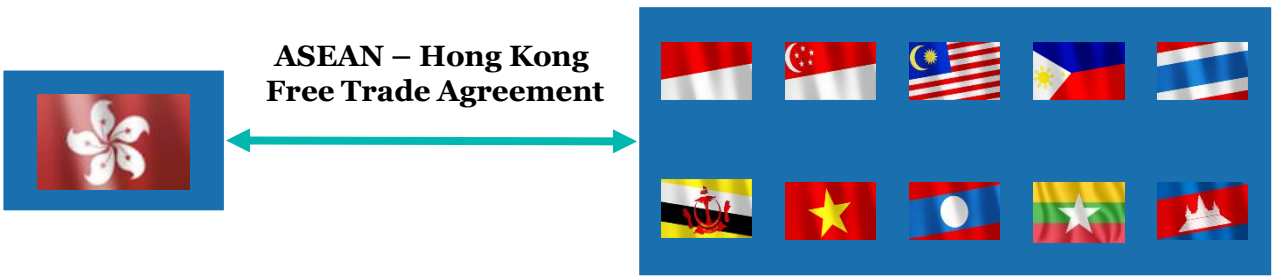
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11]

The Philippines is a constitutional republic with a multi-party system.

- The President acts as the head of state and the leader of the government. He holds executive power and appoints cabinet members to head the executive departments (e.g. Department of Finance, Department of Trade and Industry).
- Legislative power in the Philippines is held by the Congress, which consists of the House of Representatives (the lower house) and the Senate (the upper house). Every bill must gain the consent of both chambers before being signed by the President. However, only the Senate can approve or denounce treaties, and convict an impeached government official.
- Judicial power in the Philippines is held by the Supreme Court of the Philippines, and the lower courts. The Supreme Court is headed by the Chief Justice and 14 Associate Justices appointed by the President.

C. Political Uncertainties and Historical Coup Records[12,13,14,15,16]

The Philippines is considered a very politically unstable country. The country was ranked 173rd out of 195 countries in the World Bank's Political Stability Index. Since President Ferdinand Marcos was overthrown in 1986, the country has experienced over a dozen attempted coups. The most recent one, the Manila Peninsula siege, happened in 2007. On 29 November 2007, around 25 soldiers seized a room in the Manilla Peninsula Hotel and called for the overthrow of then President Arroyo. However, the coup failed, as hours into the hotel siege, the mutineers surrendered and were arrested.

In addition to the current political oppositions faced by President Duterte, his "drug war" is causing fear and instability in the country. Duterte's policy encourages the police and the public to kill suspected drug dealers and addicts. These killings, which have caused between 12,000 and 20,000 deaths since 2016, have been heavily condemned by local and international human rights organisations.

Source:

[1] KPMG Business Guide, 2018

[2] Philippines 10-Year Forecast, Fitch Solutions, 2019

[3] The World Factbook, Central Intelligence Agency

[4] Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), World Bank

[5] Philippines Population, Woldometers, 2019

[6] EF English Proficiency Index, EF Education First

[7] Geography Statistics Of Philippines, World Atlas

[8] Free Trade Agreements, Asia Regional Integration Centre

[9] ASEAN official website

[10] The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, May 2019

[11] Three Branches of Government, Philippine Information Agency

[12] Political uncertainty main risk to growth, Business Inquirer, 2017

[13] "As if a weakening economy was not enough, election uncertainty piles further pressure on Philippine peso", South China Morning Post, 2019

[14] Political Stability – Country Rankings, The Global Economy, 2017

[15] Recent coups and attempted coups in the Philippines, Reuters

[16] UN launches 'comprehensive' review of Philippine drug war, The Guardian, 2019

2. Legal Environment and Competition Law

Executive Summary

The Philippines attracts and welcomes foreign investments, and liberalised the corresponding regulations in 2018. As a result, the government expects innovation and technological advancement to positively impact the country's economy. However, there are still various sectors which are prohibited or restricted for foreign investments.

Mainland China and Hong Kong companies can choose to set up different types of business entities in the Philippines. However, unlike many other countries, Philippine law does not provide the option for business to establish a Limited Liability Company, with a domestic corporation being the closest equivalent in the Philippines. Foreign investors have the option of owning 100% of an enterprise in various sectors. Mainland China or Hong Kong companies can also choose to establish a branch office to conduct manufacturing or trading activities in the short-term.

2. Legal Environment and Competition Law

As stated in the Foreign Investments Act of 1991, it is the policy of the State to attract, promote, and welcome productive investments from foreign individuals, partnerships, corporations, and governments. Generally, investors' confidence is high, based on a strong macroeconomic position of the country, low debt and high level of foreign reserves. However, the Act also provides the Foreign Investment Negative List (FINL), with prohibited or restricted investment areas for foreigners: the FINL was promulgated in late 2018 and contains more liberalised regulations on foreign investments than previous versions (for more information about the FINL please refer to section 8 of this report). The government expects the country to benefit from more advanced technology and innovation from foreign investors.

The FINL only distinguishes between Philippine and foreign companies, and does not outline special laws for Mainland China or Hong Kong companies.

The Philippines' FINL Contains Two Lists of Prohibited or Restricted Business Sectors[1,2]

List A

Foreign Ownership is Limited by Mandate of the Constitution and Specific Laws

Examples:

- Retail trade enterprises with paid-up capital below USD 2.5 million (no foreign equity allowed);
- Small-scale mining (no foreign equity allowed);
- Advertising (up to 30% foreign equity allowed); and
- Ownership of private lands (up to 40% foreign equity allowed).

List B

Foreign Ownership is Limited for Reasons of Security, Defence, Risk to Health and Morals, and Protection of Small and Medium-sized Enterprises (SMEs).

Companies in these sectors are restricted to 40% foreign equity.

Examples:

- Domestic market enterprises with paid-in equity capital of less than the equivalent of USD 200,000; and
- Domestic market enterprises which involve advanced technology or employ at least 50 direct employees with paid-in equity capital of less than the equivalent of USD 100,000.

I. Types of Legal Business Entities Available for Foreign Investments[3,4,5,6,7,8,9]

There are several different main structures to relocate a factory or a business as an investor from Mainland China or Hong Kong to the Philippines. The Corporation Code, the Foreign Investments Act (Republic Act No. 7042, as amended), and other relevant laws govern the establishment of a foreign company in the Philippines. In early 2019, a revised Corporation Code ("New Code") was signed, which aims to improve the ease of doing business. Mainland China and Hong Kong companies have to obtain a license from the Securities Exchange Commission (SEC) to do business in the country. The SEC is the regulatory body with absolute jurisdiction for all companies, and also processes and approves the incorporation of a company. As opposed to many other countries, regulations in the Philippines do not provide the option for businesses to set up a Limited Liability Company or a Private Limited Company. A domestic corporation is considered the closest equivalent, which along with the branch office are the most popular business vehicles for foreign investors.

The three main forms of doing business or expanding manufacturing footprint to the Philippines are:

1. Domestic Corporations
2. Foreign Corporations
    - Branch Office
    - Representative Office
    - Regional or Area Headquarters (RHQ)
    - Regional Operating Headquarters (ROHQ)
    - Regional Warehouses
3. Partnerships

In addition to these three main business types, it is also possible to set up a sole proprietorship or a joint venture with a local partner. The sole proprietorship is a business type owned and operated by a single person with unlimited liability. The joint venture is a business entity with shared ownership and would mostly likely be incorporated as a domestic corporation and is therefore not elaborated further.

The New Code removed, subject to compliance with special laws, the minimum subscribed and paid-up capital requirement of USD 200,000 for stock corporations (domestic and foreign corporations), which is expected to attract more foreign investors.

Domestic Corporations

This is one of the most common business types for foreign investors. A domestic corporation is incorporated under the Philippine laws and represents a separate legal entity which is legally responsible for the payment of its obligations. A domestic corporation can conduct commercial activities and generate revenues and profits. Under the New Code, a domestic corporation does not require a minimum of five shareholders anymore: a One Person Corporation (OPC) can be set up by a single stockholder. Mainland China and Hong Kong businesses can hold up to 100% of the shares of a domestic corporation in the non-restricted sectors (for more details, please refer to section 8 of this report). However, if less than 40% of a corporation is foreign-owned, it will be considered as a Filipino corporation. It usually takes around eight weeks to set up a domestic corporation.

Foreign Corporation

Investors from Mainland China and Hong Kong can also engage in business in the Philippines through various types of foreign corporations. When considering relocating their manufacturing footprint to the Philippines, an investor has to define what kind of activities the company should carry out and choose the business type accordingly.

Branch Office

Branch offices are 100% owned by the Mainland China or Hong Kong head office and are not separate legal entities. Therefore, the parent company will be liable for the branch office's liability. A branch office is allowed to carry out business activities and is bound by all laws and regulations applicable to domestic corporations, with a few exceptions (e.g. the creation, formation, organisation, and dissolution of corporations). They also have to be registered with the SEC and are restricted for various sectors (for more details on restricted areas, please refer to section 8 of this report).

This business type is often chosen by manufacturing and trading companies with no long-term plans. Setting up a branch office usually takes around six weeks.

Representative Office

As opposed to the branch office, the representative office is not allowed to conduct production-related or commercial activities. It can only earn passive income, such as interest on deposits, which is subject to 20% tax. This business type is fully subsidised by its parent company and usually undertakes activities such as market research and the promotion and quality control of the parent's company. The establishment process takes around six weeks on average.

Regional or Area Headquarters (RHQ)

An RHQ may be a branch of a Mainland China or Hong Kong company. Its function is limited to non-income producing activities including supervision, communications or coordination of its subsidiaries, or branches in the Asia Pacific (APAC) region. It is only allowed to earn passive income and not subject to Philippine income tax.

Regional Operating Headquarters (ROHQ)

Similar to the RHQ, an ROHQ can be established by Mainland China and Hong Kong companies in order to serve its own affiliates, subsidiaries and branches in the Philippines or in the APAC region, and other foreign markets. However, as opposed to RHQs, ROHQs are allowed to derive income from certain qualifying services, such as:

- Business planning and coordination;
- Sourcing/procurement of raw materials and components;
- Logistics services; or
- Technical support and maintenance.

An ROHQ is prohibited from offering qualifying services to other than its own affiliates, subsidiaries or branches.

Regional Warehouses

Mainland China and Hong Kong manufacturers supplying spare parts, components, semi-finished products and raw materials to its distributors in the APAC region or worldwide may wish to establish regional warehouses in the Philippines. In order to do so, they must 1) establish an RHQ or an ROHQ in Special Economic Zones (for more details, please refer to section 9 of this report), and 2) obtain a license from the Philippine Economic Zone Authority. A warehouse is limited to activities such as serving as a supply depot for the storage, deposit and safekeeping, including packing, covering or labeling products to customer's specifications.

Partnership

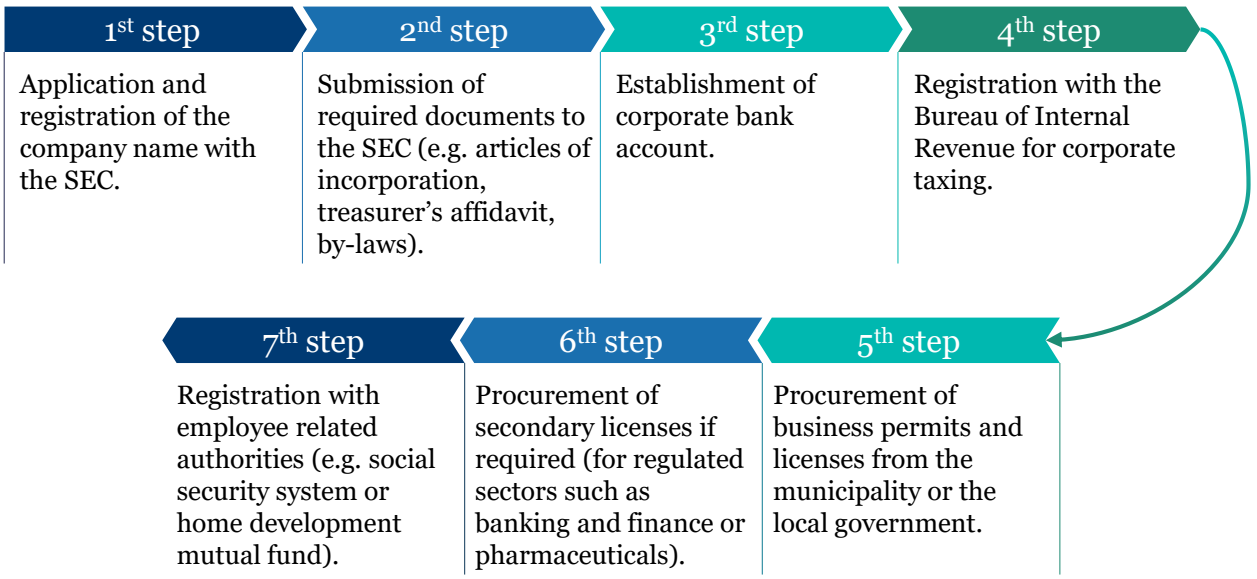
A partnership is an agreement between two or more parties to contribute properties or money to a common fund, with the intention of conducting business. Partnerships are governed under the Civil Code of the Philippines (Republic Act No. 386, as amended). They have juridical personalities and are separate legal entities. There are two forms of partnerships that differ in terms of their liability:

- In a general partnership, all partners have unlimited liability pro rata for the debts and obligations with all their properties;
- In a limited partnership, one or more partners have unlimited liability for the debts and obligations whereas the limited partners have liability only up to the amount of their capital contribution.

A partnership has to be registered with the SEC. The purpose of the registration is not to give the partnership a legal personality but to give a notice to interested parties.

Establishment Process

The New Code also mandated the SEC to develop and execute a new system enabling electronic submission of applications and other documents. The establishment process for a domestic corporation is summarised below. The process for other business entities is relatively similar, and therefore is not outlined additionally. For more information, please refer to the official SEC portal (www.sec.gov.ph/online-services/sec-company-registration-system/).



II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[10,11,12]

In 2015, the Philippine Competition Act (PCA) (Republic Act 10667) was passed after languishing in the Congress for 24 years. The PCA is the primary competition law framework protecting and promoting a competitive market. The Philippine Competition Commission (PCC) has the authority to conduct investigations and to hear and decide on cases of infringements of the PCA. The new PCA is expected to enable better consumer protection and to enhance economic growth through increased investment and job creation in the country.

The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong businesses that want to expand their manufacturing footprint to the Philippines.

The PCA prohibits three types of anti-competitive acts:

1. Abuse of dominant position
2. Anti-competitive agreements
3. Mergers and acquisitions control

In addition, the law outlines exceptions and sets penalty levels for infringements.

Abuse of Dominant Position

The PCA prohibits an entity from abusing its dominant position. A dominant position is defined in the PCA as a position of economic strength that an entity or entities hold which makes it capable of controlling the relevant market independently from any or a combination of the following: competitors, customers, suppliers, or consumers.

Actions of abusing a dominant market position include:

- Selling goods or services below cost, with the objective of driving competition out of the relevant market;
- Imposing barriers to entry or committing acts that prevent competitors from growing within the market; and
- Limiting production, markets, or technical development to the prejudice of consumers.

The entire list of prohibited actions can be consulted in the PCA SEC. 15. Abuse of Dominant Position (www.phcc.gov.ph/wp-content/uploads/2019/02/Philippine-Competition-Act-PCA-1.pdf).

Anti-competitive Agreements

The PCA also prohibits agreements between horizontal competitors or enterprises in a vertical production or distribution chain that substantially prevent, restrict, or lessen competition. The following agreements among others, between or among competitors are prohibited or restricted:

- Restricting competition as to price, or components thereof, or other terms of trade;
- Fixing price at an auction or in any form of bidding; and
- Setting, limiting, or controlling production, markets, technical development, or investment.

A business may be exempt from these prohibitions, if the conducted activities promote technical or economic progress or improve production or distribution of goods and services.

The entire list of prohibited actions can be consulted in the PCA SEC. 14. Anti-Competitive Agreements (www.phcc.gov.ph/wp-content/uploads/2019/02/Philippine-Competition-Act-PCA-1.pdf).

Engaging in an anti-competitive agreement may be subject to penalties of imprisonment from two to seven years, and a fine of PHP 50 million to PHP 250 million (approximately USD 1 to 5 million).

The PCA also deals with mergers and acquisitions that would substantially prevent, restrict, or lessen competition in the relevant market. The PCC published in 2017 its Rules on Merger Procedure which outlines more detailed regulations, measures and penalties in case of infringements. For instance, parties engaging in mergers or acquisitions, including joint ventures, have to notify the PCC within 30 days after signing, if 1) the gross annual revenues exceed PHP 5 billion (around USD 100 million), and 2) the transaction value exceeds PHP 2 billion (around USD 40 million). There are also clear measures for the acquisition of assets or shares. For more details, please refer to the official document by the PCC (www.phcc.gov.ph/wp-content/uploads/2017/11/PCC-MERGER-PROCEDURE-RULES.pdf).

B. Intellectual Property Protection Law on Trademarks[13]

A trademark is a visible sign capable of distinguishing the goods or services of an enterprise and shall include a stamped or marked container of goods. The Republic Act 8293, also known as the Intellectual Property Code of the Philippines, governs the trademark regulations in the country. The relevant trademark authority is the Intellectual Property Office of the Philippines. The Philippines' overarching intellectual property (IP) regulation, including those on trademarks, is ranked relatively low compared to other countries (ranked 37th out of 50). The laws and processes apply in general and do not specify particular rules for Mainland China or Hong Kong companies that consider to expand their manufacturing footprint to the Philippines. As such, the Philippines has one registration process for both local as well as foreign applicants:

1. Submission of the application to the Bureau of Trademarks (including data around the applicant and the trademark);
2. Search and examination through the Intellectual Property Office;
3. Publication in the IP Philippines Gazette which gives any individual the opportunity to oppose the registration of the trademark; and
4. Registration of the trademark.

The registration process takes between six to 12 months on average. A registration is valid for 10 years and can be renewed for subsequent 10-year periods.

C. Import/Export Regulations and Licenses[14]

Engaging in the import and export business in the Philippines requires certificates, registrations and licenses. The Philippines classifies three different lists with permitted, restricted or prohibited goods: 1) freely importable goods which require no permit, 2) regulated goods which require clearances or permits from corresponding government agencies (e.g. medicines, meat or petroleum products), and 3) prohibited goods which are not allowed to be imported or exported. For more details, please refer to the official portal at (www.dti.gov.ph/business/imports/import-facilitation).

Import

Mainland China and Hong Kong companies that want to import goods into the Philippines have to obtain an Import Clearance Certificate from the Bureau of Internal Revenue, which is valid for three years. In addition, it is required to register with the Bureau of Customs in order to set up an account with the Client Profile Registration System, which has to be renewed annually. As in most countries, an importer also has to file further documents, such as a bill of lading, a certificate of origin, a packing list or other special certificates that are needed for regulated goods.

Export

Exporters also need to register with the Client Profile Registration System through the Philippine Exporters Confederation and renew the account annually. Exporting certain goods requires additional registration processes or additional governmental permissions (e.g. exporting coffee, rice or sugar).

D. Jurisdiction System on Business Related Matters[15]

The Philippine law system is based on the Roman civil law and the Anglo-American common law. Depending on the case, either the civil law system or the statutes of the common law applies: 1) the civil law applies for disputes related to property, succession and family relations (non-exhaustive), whereas the common law operates in fields such as corporation or business related matters, taxation or labour relations (non-exhaustive).

As in most countries, the court structure in the Philippines is divided into various tiers:

- Metropolitan Trail Courts, Municipal Trial Courts, the Municipal Trial Courts in Cities, and Municipal Circuit Trial Courts (collectively, MTCs) are first level instances exercising jurisdiction over civil cases not exceeding PHP 300,000 or 400,000 (around USD 5,800 or 7,800), depending on the nature of the case and the location;
- Regional Trial Courts act as both, first level courts with jurisdiction over disputes outside the responsibility of MTCs as well as appeals from the decisions of the MTCs. For commercial disputes, special Regional Trial Courts are assigned;
- The Court of Appeals generally reviews disputes from the Regional Trial Courts; and
- The Supreme Court is the highest level of the Philippines' judiciary. It conducts appellate jurisdiction over cases from the Regional Trial Courts and the Court of Appeals.

In the Philippines, parties have the possibility to resort all types of commercial cases to arbitration. Arbitration bears various advantages over court litigations, such as higher speed, flexibility of the rules, free choice of arbitrators or confidentiality. For international disputes, the Hong Kong International Arbitration Centre is one of the preferred institutions outside of the Philippines.

Source:

[1] *Foreign Investments Act of 1991 [Republic Act No. 7042]*

[2] *Doing Business in the Philippines, Deloitte 2019*

[3] *Doing Business in the Philippines, Quisumbing Torres (Member firm of Baker & McKenzie) 2018*

[4] *Establishing a business in the Philippines, Thomson Reuters*

[5] *A peek into the Revised Corporation Code of the Philippines, BusinessWorld March 2019*

[6] *Setting Up a Domestic Corporation – Philippines, Kittelson & Carpo Consulting*

[7] *Revised Corporation Code is Now in Effect, Baker McKenzie March 2019*

[8] *Doing Business in the Philippines, EU – Philippines Business Network, July 2018*

[9] *Business entities in the Philippines, Healthy Consultants Group PLC*

[10] *Philippine Competition Law (R.A. 10667), Republic of the Philippines*

[11] *Key Prohibitions under the PCA Explained, Philippines Competition Commission*

[12] *PCC Rules on Merger Procedure, Philippines Competition Commission*

[13] *Philippines: Trade Marks 2019, ICLG*

[14] *Import and Export Procedures in the Philippines – Best Practices, ASEAN Briefing 2017*

[15] *Philippines: Litigation & Dispute Resolution 2019, ICLG*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation in the Philippines are personal and corporate income tax (CIT), and value added tax (VAT), among other specific business taxes.

Foreign Direct Investment (FDI) is generally welcomed in the Philippines. Most sectors are open for investment, but certain sectors have limitations on equity ownership, which are detailed in the Foreign Investment Negative List.

The Philippine Peso (PHP) is a free-floating currency, and the Philippines also welcomes the use of foreign currencies, with few restrictions. There are no foreign exchange controls, but exchanging foreign currencies requires certain documentation.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice[1,2,3,4]

The principal tax law governing the corporate tax provisions in the Philippines is the National Internal Revenue Code (NIRC), among other rules and regulations. In general, all companies in the Philippines, regardless of their tax residence, are subject to corporate income tax (CIT).

Domestic companies in the Philippines are generally taxed on worldwide income while foreign companies are taxed on the income derived from their activities in the Philippines only.

A. Corporate Income Tax (CIT)

Tax Calculation

The year of assessment (YA) can be the calendar year or fiscal year. Standard CIT is levied on net income. This includes the gross income (all gains or profits from a trade or business, except for certain items of passive income taxed at a different rate) minus allowable deductions.

Tax Residence

The place of incorporation and the location of business activities determine the tax residence and the source of taxable income of a company as follows:

Place of Incorporation	Business Activities in the Philippines?	Taxable Persons	Taxable Income
The Philippines	N/A	Residents	Worldwide income
Other countries	Yes	Residents	Philippines sourced income
	No	Non-residents	

Applicable Tax Rate

The standard tax rate for both resident and non-resident companies is 30%.

Types of CIT	Taxable Persons	Tax Base	Tax Rate
Standard CIT *(Note)*	Residents	Net income	30%
	Non-residents	Gross income	
Minimum Corporate Income Tax (MCIT) MCIT applies if: • The taxable year is at least the fourth year after the commencement of business operations; and • The amount of CIT (i.e. 30% of net income) is less than 2% of gross income	Residents	Gross Income	2%

Note: Educational institutions and non-profit organisations are subject to other tax rates. Please refer to Bureau of Internal Revenue.

Passive Income

- Dividends received by the non-resident companies are in general taxed at 30%, unless the recipient is a resident of a country having a tax treaty with the Philippines.
- Interests income derived from domestic currency bank deposits (or other monetary benefits from deposit instruments) paid to resident recipients are subject to withholding tax of 20% but those derived from foreign currency bank deposits are subject to withholding tax of 15%. Interest income received by non-resident companies are in general subject to withholding tax of 30%.

Taxable Income	Recipients	Withholding Tax Rate
Interests	Residents	• Domestic currency bank deposits: 20% • Foreign currency bank deposits: 15% • Other interest income: Subject to CIT/ MCIT (where applicable)
	Non-residents	• Interest income on foreign loan: 20% • Others: 30%
Dividends	Residents	0%
	Non-residents	30%
Other Passive Income (e.g. Royalties)	Residents	Subject to CIT/MCIT
	Non-residents	

Branch Income

Profits of a Philippine branch remitted back to its parent company are subject to a profit remittance tax of 15%, unless otherwise specified in applicable tax treaty.

Deductions

In general, all companies can opt for standard deductions at 40% of gross income instead of deducting itemised operating expenses. If companies choose itemised deductions, expenses are tax deductible if they are directly and exclusively incurred in the development, management, operation and/or conduct of the business. However, some expenses are specifically non-deductible, such as:

- Personal expenses;
- Goodwill;
- Start-up expenses;
- Tax penalties; and
- Income taxes imposed by the Philippines (i.e. CIT/MCIT) or any foreign country and value added tax (VAT).

Some of the deductible expenses are capped at certain thresholds, such as:

- Interest expenses are capped at 33% of interest income that is subject to taxation; and
- Deduction of entertainment expenses is capped at 0.5% of net sales for companies engaging in the sale of goods or properties. For companies engaging in service rendering (including lessors of properties), deduction of entertainment expenses is capped at 1%.

Consolidated Filing

There is no consolidated filing or group relief provisions for losses in the Philippines. Each company shall be taxed individually.

Taxable Losses

Operating losses occurred in a tax year can be set off against gross income for the next three consecutive years (if there is no substantial change in the control of the company). The loss shall not be deductible in the year when the company is exempt from income tax. Carryback of losses is not permitted.

Tax Return and Payment

Quarterly tax returns (must be denominated in PHP) must be filed and the quarterly tax due must also be paid within 60 days after each quarter.

Final tax returns must be filed within four months (i.e. on the 15th day of the fourth month) of the end of the YA. The balance of the tax due shall be settled after deducting the quarterly payments. If there is excess tax payment in the final tax return, it may be claimed as a refund or tax credit.

Double Tax Agreement (DTA) with Hong Kong

The Philippines has not yet entered into a DTA with Hong Kong.

B. Value Added Tax (VAT)

VAT applies to all imports and sales of goods, as well as rendering of services in the Philippines. A 3% tax will be applied to the gross income, instead of VAT if the income from sales of goods and rendering of services does not exceed PHP 3 million.

Applicable Tax Rate

The standard VAT rate is 12%, based on the gross receipts issued from the transactions.

The basis of VAT on the import of goods is the value used by the Bureau of Customs in determining tariff and customs duties excise taxes, and other charges.

Business Activities Subject to 0% VAT

The following business activities are subject to 0% VAT on output but are still eligible for input VAT credits:

- Export sales; and
- Services rendered to a party engaged in business conducted outside the Philippines or a non-resident person located outside the Philippines when the service is performed.

Exemptions from VAT

Certain goods and services are specifically exempt from VAT, including:

- Lease of a residential unit with a monthly rental of at most PHP 15,000;
- Sale of a residential unit valued at most PHP 1.5 million;
- Sale or lease of goods and services to senior citizens and persons with disabilities; and
- Transfers of property due to merger or consolidation.

Please refer to the Bureau of Internal Revenue for the full list of VAT exemptions.

C. Transfer Pricing Provisions

Section 50 of the NIRC governs the transfer pricing provisions in the Philippines. It adopts the arm's length principle of the Organisation for Economic Co-operation and Development's (OECD) Transfer Pricing Guidelines.

The Commissioner of Bureau of Internal Revenue (BIR) is authorised to distribute and allocate income and deductions between related parties in order to clearly reflect the amount of income earned by individual party and prevent tax evasion.

Taxpayers are required to prepare and maintain transfer pricing documentation to show that their transfer prices are consistent with the arm's length principle, and provide to the BIR when requested.

D. Statutory Auditing Requirements and Accounting Standards

Audit Requirements

All companies, including foreign branches, with paid-up capital of PHP 50,000 or above and/or quarterly gross sales of more than PHP 150,000 are required to prepare an annual statutory audit.

For those companies with an annual gross sales of more than PHP 3 million, their books of accounts must be audited annually by independent Certified Public Accountants (CPAs).

Financial Statements

The format and details provided in the financial statements should follow the Philippine Financial Reporting Standard (PFRS) or the Philippine Accounting Standards (PAS). In general, companies may determine its functional currency for its financial states according to the PFRS or PAS. However the BIR requires the tax return to be reported in PHP.

If a company is required to be audited by independent CPAs, the audited financial statements must be attached with the annual CIT return and stamp received by BIR. The stamped financial statements should then be filed with the Philippine Securities and Exchange Commission (SEC) within the due date (i.e. normally 120 calendar days from the end of the fiscal year or otherwise announced by the SEC).

Financial Reporting Framework

The Philippine Financial Reporting Standard Council is the sole authority for establishing accounting standards and other financial reporting requirements. All financial statements prepared have to comply with either the PFRS or the PAS.

II. Banking and Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)

Bank Account Setup Requirements[5]

Foreigners wishing to open a bank account in the Philippines will require many documents and identification. The requirements for both individuals and corporate accounts are quite extensive. While the setup requirements will differ from bank to bank, most banks will require a foreigner to have an Alien Certification of Registration from the Bureau of Immigration, which may take some time to obtain. The table below shows other generally required documents for a business wishing to open a bank account in the Philippines.

#	General Documents Required
1	Articles of Incorporation
2	Certificate of Registration with the Securities and Exchange Commission
3	Corporate By-laws
4	Board Resolution incorporating: • Authority to open a bank account; • List of authorised officers; • List of directors and shareholders; and • Two ID cards of authorised officers

Restrictions for Foreign Direct Investment (FDI)

The Philippines generally welcomes FDI, with investment incentive programmes such as the Investment Priorities Plan. Under the Foreign Investments Act of 1991, foreign businesses are even allowed up to 100% equity in most industries. However, there are a few industries that foreigners are restricted from investing in. These industries are specified in the Foreign Investment Negative List, currently in its 11th edition. The Negative List restricts the percentage of equity that a foreign company may own, ranging from completely prohibited to a maximum of 40% foreign equity ownership. For more information on restrictions for FDI, please refer to section 8 of this report.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[6]

Local Currency

Local currency (PHP) is currently a free-floating currency, managed by the Central Bank of the Philippines (Bangko Sentral Ng Pilipinas). It is freely exchangeable, with no restrictions on importing and exporting. Non-residents, including Overseas Filipinos, are also allowed to open peso accounts with banks in the Philippines. Pesos deposited into these bank accounts can be used for any purpose, including exchange into foreign currency.

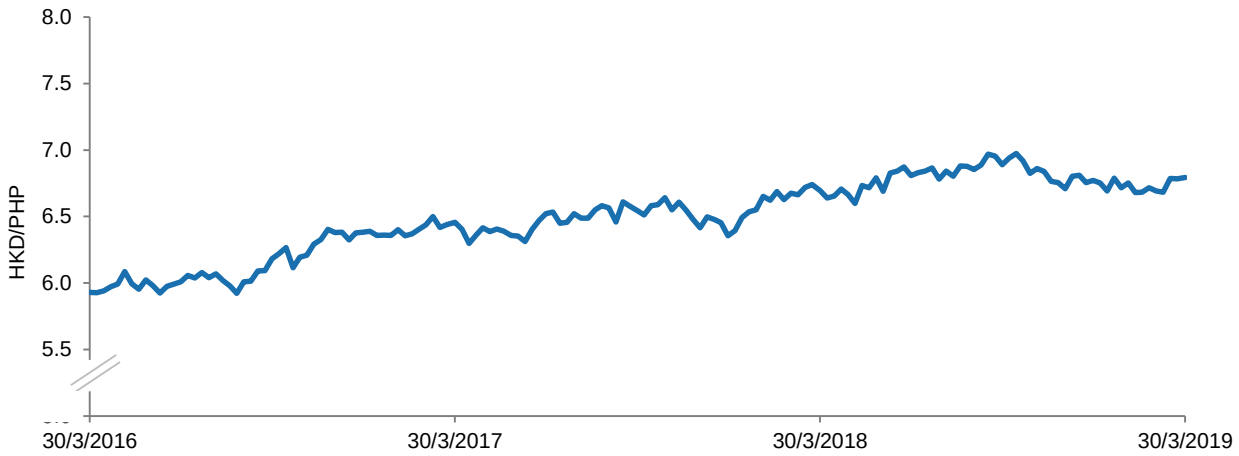
Foreign Currency

There are minimal restrictions on foreign currencies in the Philippines. Purchases of foreign currency is permitted in the Philippines, and can even be made using pesos. The only requirement is that the purchaser must submit a "duly accomplished Application to Purchase FX" (ATP) to a bank. The need for the ATP, and any supporting documents, may be waived if the amount of foreign currency to be purchased does not exceed USD 500,000 or equivalent for individuals, or USD 1 million or equivalent for corporates.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

The Philippine peso (PHP) is the official currency of the Philippines. The exchange rate is managed by the Central Bank of the Philippines under the New Central Bank Act of 1993, which liberalised the Philippine peso, and sets it on a free-floating exchange rate system. In the past, the currency was pegged against the US dollar, but a black market for the PHP devalued the currency. Currently, the black market does not exist, as the free-floating rate reflects the market demand and supply.

Three-year Exchange Rate Trend for HKD to PHP[7]



Date	HKD/PHP Rate
30/03/2016	5.9358
30/03/2017	6.4607
30/03/2018	6.6520
30/03/2019	6.6980

D. List of Banks from Foreign Investments[8]

According to the Central Bank of the Philippines, there are currently 46 universal and commercial banks in the Philippines. A universal bank can provide more services than commercial banks, including investment banking. There are six foreign-owned universal bank branches in the Philippines, and two foreign-owned commercial bank subsidiaries.

Banks from Foreign Investments in the Philippines

#	Bank Type	Names of Banks
1	Universal Bank Branch	Australia and New Zealand Banking Group Limited
2		Deutsche Bank AG
3		ING Bank N.V.
4		Mizuho Bank, Ltd. – Manila Branch
5		Standard Chartered Bank
6		The Hongkong & Shanghai Banking Corporation
7	Commercial Bank Subsidiaries	CTBC Bank (Philippines) Corporation
8		Maybank Philippines, Incorporated

There are additionally 18 foreign-owned commercial bank branches in the Philippines, and 13 representative offices of foreign banks. For a detailed list, please refer to Appendix 1.

Source:

[1] *Philippines Tax Profile, KPMG*

[2] *Worldwide Tax Summaries – Philippines, PricewaterhouseCoopers*

[3] *Philippines Highlights 2019, Deloitte Touche Tohmatsu*

[4] *Bureau of Internal Revenue official website*

[5] *Opening Bank Account in the Philippines, Kittelson Carpo Consulting*

[6] *Rules on Foreign Exchange Transactions, Bangko Sentral Ng Pilipinas, Jun 2019*

[7] *Bloomberg*

[8] *Directory of Banks and Non-Banks, Bangko Sentral Ng Pilipinas, Aug 2019*

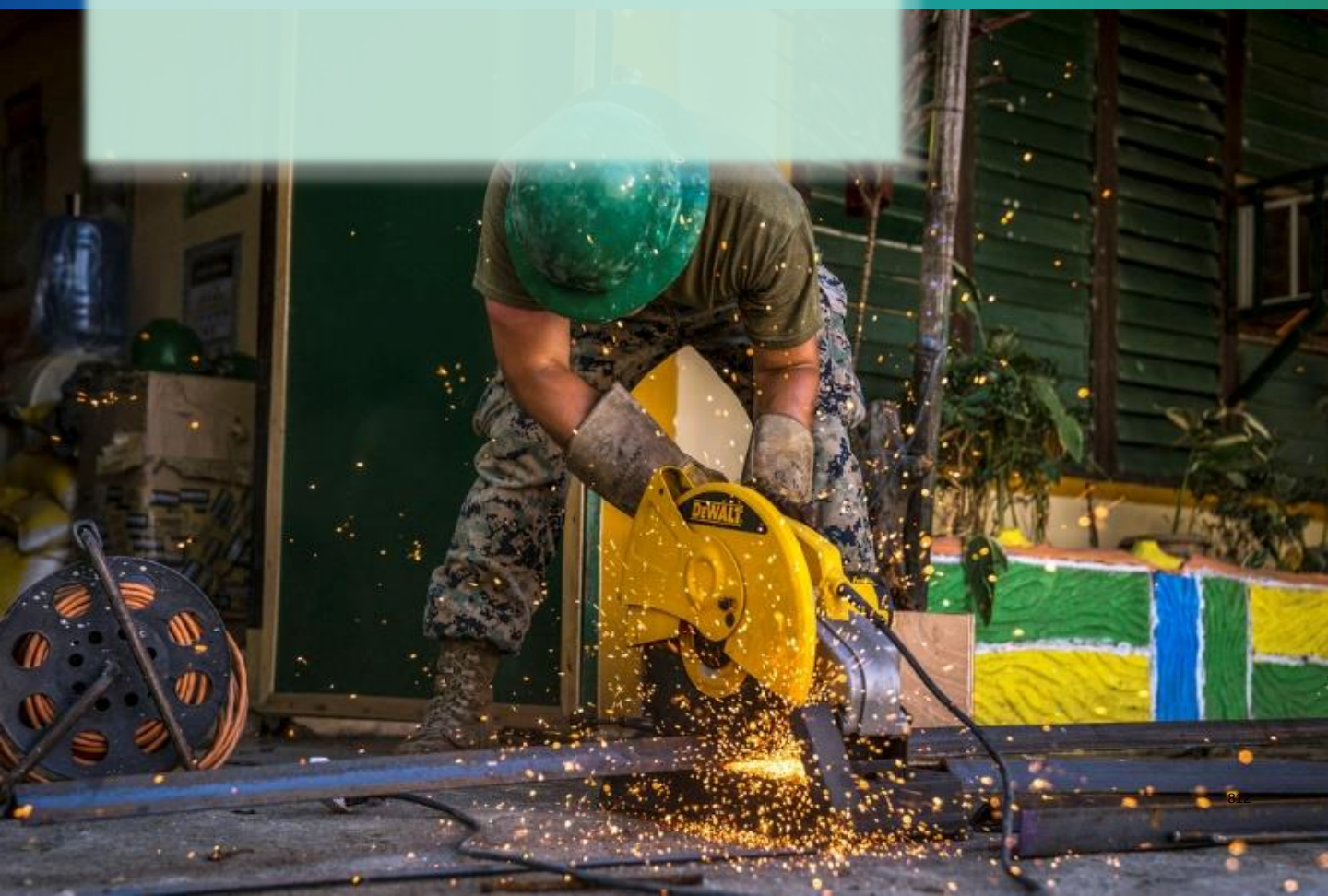
4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

The Philippines' Labour Code provides guidance on matters such as maximum working hours, minimum wages, and welfare to protect employees.

Foreign workers are forbidden or restricted from engaging in certain jobs which can be done by local workers.

Foreign workers are required to obtain a work permit and a visa for legal employment in the Philippines, which are approved by the relevant government departments on a discretionary basis.



4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment[1,2,3,4]

A. Contracts and Protection Towards Employees

The Labour Code of the Philippines, among other related laws, governs labour employment. Enacted in 1974, it forms the basis of the laws governing labour relations and employment of private employees.

These laws apply to five categories of employment arrangements: regular employment, probationary employment, project-based/term employment, seasonal employment, and casual employment.

Minimum Legal Working Age

The minimum employment age is 15 (except when the minor is working directly under his/her parents' or guardians' responsibility).

Children over 15 but under 18 years of age are only allowed to work during specific periods of the day for a certain number of hours stated by the Secretary of Labour and Employment. No one under 18 years is allowed to perform work which is "hazardous or deleterious in nature" as determined by the Secretary of Labour and Employment.

Labour Contract

The Labour Code of the Philippines governs the agreement between employer and employees. An employment contract, either oral or written, is concluded for all categories of employment arrangements recognised by the Philippine labour law. The contract must meet the minimum statutory standards prescribed by the Labour Code. Generally, the contract should be arranged in English; in the case of the employment of a Philippine national, a contract in Filipino must also be available to communicate the terms of the contract accurately.

Termination of Employment

The Labour Code of the Philippines only recognises two categories of causes for the termination of employment: just causes and authorised causes. Just causes include but are not limited to, serious misconduct from the employee's part, habitual neglect of their duty by the employee, fraud, insult or inhumane treatment by the employer, and crime by either party. Authorised causes for employers to dismiss their employees include but are not limited to, redundancy and installation of labour-saving devices.

With a just cause, employers can dismiss their employees without notice or separation pay. With an authorised cause, employers must give a written notice at least one month in advance, to the employee and the Ministry of Labour and Employment; and the dismissed employee shall receive a severance payment.

Depending on the authorised cause related to the dismissal, the employee is entitled to receive a severance payment equivalent to one-half or one month pay per year of service. Service for six months or more in a year is considered as one whole year.

B. Minimum Wage Level

As of November 2018, the minimum wage ranges from PHP 270 (around USD 5.30) to PHP 537 (around USD 10.50) per day. The wage varies depending on the location where the service is performed and the nature of work. Non-agricultural industries have a higher minimum daily wage than agriculture.

The minimum wage rate is occasionally updated by the government.

C. Maximum Working Hours and Days

The maximum number of working hours is eight hours per day, or 48 hours per week.

Once employees have worked for six consecutive working days, they must be given a 24-hour resting break.

Overtime

For work performed in excess of the maximum number of hours, employees must be compensated with overtime pay. Overtime pay can range from 125% to 371.8% of regular pay, depending on whether the day is a rest day, holiday, and whether the overtime is considered night shift. Undertime work on any day cannot be used to offset overtime work on any other day. Permission to go on leave another day is not an acceptable alternative to the overtime compensation payment.

D. Mandatory Welfare

Home Development Mutual Fund (HDMF) and the Social Security System (SSS)

All private employees, whether permanent, temporary, or provisional, are entitled to the HDMF benefits and should be registered under the SSS.

The HDMF, also known as the Pag-IBIG Fund, is a mutual provident savings programme supported by mandatory contributions from employees and employers of private earning groups and the government. The HDMF offers short term loans and housing programmes, and can also act as a savings programme. It was introduced to target the housing financing problem in the country.

The SSS provides income replacement when the employee is unable to work due to injuries, illnesses, disabilities, maternity, old age, and death.

The maximum monthly compensation used to calculate the contributions by employers and employees is PHP 5,000. Employers will always need to contribute 2%. Employees contribute 1% if the monthly compensation is PHP 1,500 or below, and 2% otherwise. In other words, both the employee and employer's monthly contributions are capped at PHP 100 (around USD 2).

The National Health Insurance Program (NHIP)

NHIP, formerly called Medicare, provides health insurance for all SSS members and their dependents. The Philippine Health Insurance Corporation (PhilHealth) is the mandated administrator of the programme. Financial assistance is provided for various personal health services and outpatient care, including but not limited to medicine, x-rays, and preventative services.

Monthly Basic Salary (in PHP)	Contribution (in PHP)	
	Employer	Employee
≤10,000	137.50	137.50
10,000 – 39,999	137.51 – 549.99	137.51 – 549.99
≥40,000	550.00	550.00

Other Benefits and Rights

In addition to these provisions, workers in the Philippines are entitled to various rights:

- Annual leave: employees who have worked continuously for one full year are entitled to at least five days of annual leave per year;
- Maternity leave benefits: full pay during maternity leave of at least two weeks prior to delivery, and four weeks after (four weeks also given after abortion). Maternity leave may be extended without pay should there be medically certified complications or illness due to pregnancy, delivery, abortion, or miscarriage.

Apart from the above mentioned legal provisions, employers are required by law to provide adequate drinking facilities, washrooms, and toilets for employees and must have first aid and medical facilities available at the premises (the extent of the facilities depends on the number of employees).

E. Labour Law Governing Authorities, Enforcements, and Restrictions

Governing Authorities

The Department of Labour and Employment (DOLE) is the official government body responsible for the oversight of labour administration and protection, social policy, and the promotion of employment.

Labour Law Enforcements

The Secretary of Labour and Employment and his authorised representatives, including labour regulation officers, are responsible for overseeing compliance with general working conditions, occupation safety and health, labour welfare, and labour relations. The Regional Director of the DOLE and his authorised hearing officers are responsible for settlement of labour disputes such as recovery of wages and monetary claims.

The Court of Industrial Relations and the National Labour Relations Commission provide an escalated way to resolve any disputes arising between employers and employees.

Employment Restrictions

Permitted Occupation Categories for Special Work Permit

Any foreign nationals wishing to work in the Philippines for more than six months must obtain an Alien Employment Permit (AEP) from the DOLE; for work lasting less than six months, a Special Work Permit from the Immigration Bureau is another viable option. The positive list of occupations that allow foreigners to obtain a Special Work Permit came into effect in 2019 due to reported frequent abuse of the Special Work Permits. The positive list includes athletes, lecturers, movie and TV crew, artists, chefs, and more. Foreigners seeking work in the Philippines in occupations other than those on the positive list must obtain an AEP. In addition, Article 40 of the Labour Code states that an AEP is only granted when it can be proven that no local worker is willing, available, and competent for the job that the foreigner is registering for.

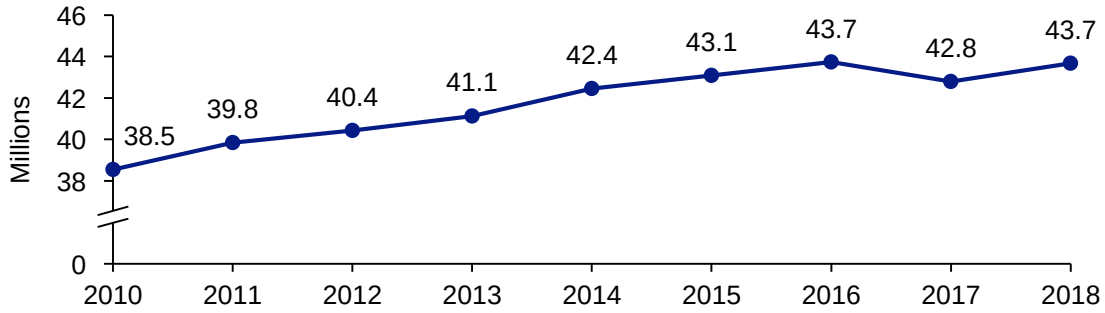
Prohibition against Discrimination

Female employees are protected from discrimination by the Labour Code on issues such as wages, promotion and training, and marriage. Any payment or compensation for a female employee must not be less than what a male employee receives for work of equal value. Female employees must have access to the same promotion and training opportunities as male employees; and an employer must not require female employees to not get married as a condition of employment.

II. Local Labour Supply Market Condition

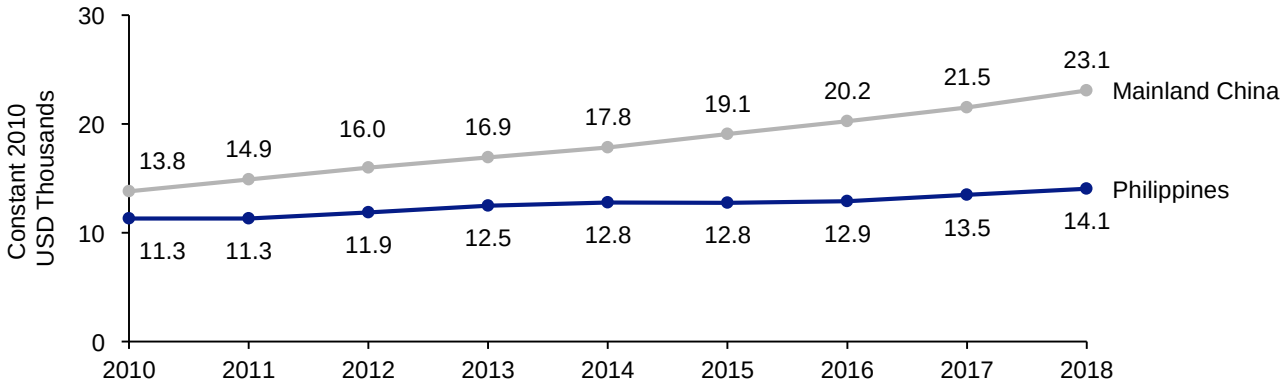
A. Supply Situation for Total Labour Force[5,6]

Philippines' Total Labour Force (2010 – 2018)



The estimated total labour force was around 43.7 million in 2018. The supply of labour for the past nine years has shown an overall upward trend, with a minor drop in 2017. As of 2017, approximately 25% of the labour force worked in the agriculture sector, 18% in manufacturing industry, and 56% in services.

Philippines' Labour Productivity (GDP per worker) *(Note)* (2010 – 2018)

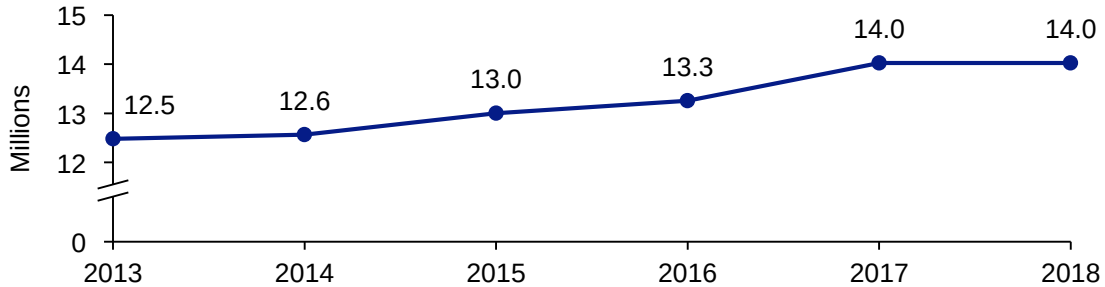


The Philippines' labour productivity was around 39% lower than Mainland China in 2018. In addition, Mainland China's productivity grew at a higher rate (around 6.7%) than that of the Philippines (around 2.8%) between 2010-2018. The Philippines' productivity ranked seventh amongst the 10 ASEAN countries.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply on Educated Employees[5]

Philippines' Estimated Labour Force with Higher Education (2013 – 2018)



The estimated labour force with higher education (defined as level of education beyond upper secondary school) was around 14.0 million in 2018, approximately 32% of the total labour force.

C. Government Support on Employee Training

Book Two of the Philippines Labour Code outlines the human resources development programme which aims to efficiently allocate human resources and meet the demand for trained manpower. The table below lists examples of incentives provided by the DOLE.

#	Incentives Granted
1	Deduction from taxable income of 50% of training expenses incurred for development programmes
2	Grants-in-aid provided by the government for manpower and youth development
3	Assistance provided by the DOLE to employers with developing training schemes
4	Instructor training, training in vocation, and entrepreneurship development provided by the DOLE

The organisation of training programmes and apprenticeships shall mainly be executed on a voluntary basis by employers; however, should there be any “particular requirements of economic development”, the President of the Philippines may require mandatory training in particular occupations or employment levels where shortage of trained manpower is considered to be critical.

D. Labour Unionisation and Related Government Regulations

All labour organisations must be registered with, and licensed by, the DOLE.

Protection of Rights of Unionisation

Article 259 of the Labour Code protects employees from an employer’s disciplinary actions and discrimination aimed at discouraging or encouraging membership in a certain labour organisation. It is also unlawful for employers to require a person to withdraw from his labour organisation or to not join one as a condition of employment. Moreover, employers are also restricted from interfering with the administration of labour organisations, including providing financial aid to it or its supporters.

Labour Dispute Settlement

Article 250 of the Labour Code details the procedure on collective bargaining. Written notice with a statement of proposal is needed to initiate a negotiation. A response must be made by the other party within 10 days and should differences arise, a conference should be arranged.

If the dispute cannot be settled, the National Conciliation and Mediation Board may provide directions to resolve the dispute. A voluntary arbitrator may be appointed to reconcile the dispute. If the dispute goes on for another 10 days, the National Labour Relations Commission is mandated to conduct hearings and resolve the dispute in 20 days.

E. Work Permits and Visas[7]

Work Permits

Foreign employees need a Special Work Permit to work for less than six months and an AEP to work for more than six months in the Philippines. An AEP will be valid for one year or the duration of the employment contract not exceeding five years. An AEP is only valid if the employee works in the company and in the position it was secured for. Should the foreign employee assume a new position within the same company or join another company, a new AEP must be obtained.

- Approval criteria: approval is considered by the DOLE on a case by case basis. The permit is granted provided that there exists a lack of domestic workers available, willing, and competent for the designation.
- Termination of employment: in case of termination of the employment or resignation of employees, the employer has a duty to report the cancellation of the respective work permits.
- The application should be filed to the DOLE Regional Office or Field Office.

For the detailed procedures, guidelines on application filing and required documents in work permit application, please visit DOLE homepage (www.dole12.org/portal/cp-alien-employment-permit-aep/).

Visas

Non-immigrant visas are issued by the Philippines' Bureau of Immigration.

- The most common work visa for foreign employment is the Pre-arranged Employment Visa, also known as the 9(G) visa. Applicants must obtain an AEP before applying for the 9(G) visa. The visa can only be applied through an employer's sponsorship. Should there be a change of employer, the 9(G) visa obtained is downgraded to a tourist visa, and foreign employees must apply for a new work visa. Initially valid for one to three years, this visa can be renewed for up to three years at a time.
- The Treaty Trader's Visa, also known as the 9(D) visa, is for foreigners from countries with a bilateral trade agreement with the Philippines; currently, those are the United Sates, Germany, and Japan. To obtain the 9(D) status, foreign nationals must prove to be engaging in substantial trade with the Philippines with at least 120,000 USD investment. They must be an executive or supervisor in the company and share the same nationality as their employer. This visa is valid for up to two years.

In order to work in the Philippines, foreign employees are required to go through the following procedures:

#	Key Steps for Foreigners Wishing to Work in the Philippines
1	Apply for the AEP (which takes 2 – 3 weeks) , and also the Provisional Work Permit (which takes about 2 weeks) should you wish to start working while your employment visa application is in process
2	Apply for the relevant employment visa (which takes 2 - 3 months)
3	Extend the duration of validity of the permit and visa if necessary

Travelling to the Philippines

Hong Kong residents are permitted to stay up to 14 days in the Philippines without a visa.

F. Religious and Cultural Concerns or Considerations[8,9]

Religion

Religious freedom exists in the Philippines. The Philippines does not have a state religion. However, Christianity is practiced by around 91% of the population. Approximately 5.5% of the population is Muslim. Ethno-religion and other religions make up the remainder.

Culture

Due to the history and location of the Philippines, the country's business culture is influenced by both western and eastern practices. Business relations are heavily affected by personal relationships. Therefore, it is essential for developing ties with Filipino business contacts. In addition, it is important to note that the majority of businesses in the Philippines are family-owned.

Source:

[1] *The Labour Code of the Philippines, the Department of Labour and Employment, 2016*

[2] *The Handbook on Workers' Statutory Monetary Benefits, the Department of Labour and Employment, 2019*

[3] *Employer's Guide to Government-Mandated Employee Benefits in the Philippines, Moneymax, 2018*

[4] *Foreigners can get work permits only in 15 job categories, Inquirer, 2019*

[5] *Labour Force Survey, Philippine Statistics Authority*

[6] *World Factbook, Central Intelligence Agency, 2019*

[7] *The Guide to Employment Permits for Foreign Workers in the Philippines, ASEAN Briefing, 2017*

[8] *Religious Freedom Report, ACN International*

[9] *The Philippines: Business Practices, Santander Trade, 2019*

5. Research and Development Environment

Executive Summary

The Philippines identified science and technology (S&T) as a lever to achieve the country's objectives of socioeconomic growth, macroeconomic stability and social equity. The government is currently implementing the National Science and Technology Plan (NSTP) to transform the country into a producer of highly competitive and value-added products over 18 years. Additional policies are being implemented to develop research and development (R&D) activities in specific industries such as manufacturing or semiconductor and electronics.

However, the country's S&T ecosystem is still developing. The government manages a few research centres and offers various funding opportunities. The private sector is involved in building S&T infrastructure, but universities' impact in R&D is limited. In addition, the country needs to double its S&T workforce and strengthen intellectual property protection to attract more foreign investors.

5. Research and Development Environment

I. The Science and Technology (S&T) in the Philippines

A. Policies and Trends in S&T

The National Science and Technology Plan (NSTP) 2002-2020[1]

The Department of Science and Technology (DOST) drafted the NSPT to define and guide the Philippines' S&T ecosystem development over nearly 20 years. The plan aims to foster S&T in the country to achieve the objectives set in the national Philippine Development Plan (PDP) which are: socio-economic growth, macroeconomic stability, social equity and good governance.

The main goals of the NSPT are presented along the following timeline:

2002 - 2004	2004 - 2010	2010 -2020
S&T should: • Contribute to enhancing national productivity and competitiveness; and • Help solve urgent national problems.	The Philippines needs to: • Utilise world class research and development (R&D) knowledge applied to specific industries; and • Develop a national S&T culture.	The Philippines must: • Develop highly competitive and/or valued added products and services leveraging S&T and R&D.

In order to meet these targets, the government is implementing multiple actions along nine focus areas: 1) create industry specific clusters, 2) tackle national issues such as poverty, resources management or housing and employment, 3) train an S&T proficient workforce, 4) support small and medium-sized enterprises (SMEs), 5) promote technology transfers, 6) build/upgrade S&T infrastructure, 7) enhance domestic and international cooperation between public sector, private sector and universities, 8) improve S&T governance, and 9) foster a science, technology and innovation (STI) culture.

In the NSTP, the Philippine government also identified 12 priority R&D areas, the main ones among which are:

Manufacturing and Process Engineering

Information and Communications Technology (ICT)

Materials Science and Engineering

Microelectronics

Other Policies[2]

To support the national implementation of the NSTP and transform the Philippines into a highly competitive economy, the government drafted additional policies designed to strengthen the overall plan.

- The Science for Change Program (SC4P) aims to accelerate the country's STI ecosystem by increasing investment in S&T workforce trainings and R&D activities expansion.
- The Harmonized National Research and Development Agenda (HNRDA) identifies five priority R&D areas of which development should alleviate poverty and promote inclusive growth. One of the priority areas is creating competitive industries by attracting foreign direct investment (FDI) and building R&D facilities tailored for the manufacturing or the semiconductor and electronics industry.

Outlook[3,4]

The Philippines' innovation capabilities are still limited. In the 2018 Global Competitiveness Index, the country ranked 67th out of 140 countries, below other ASEAN countries such as Malaysia (30th) and Thailand (51st). Compared to its 2015 ranking (48th), the country fell by almost 19 rankings. The Philippines' lowest scores were recorded on R&D expenditure criteria (99th), trademark applications (98th) and international co-inventions (87th). Indeed, according to the latest data available (from 2013), R&D expenditures represented only 0.14% of its GDP. However, the country had high scores in the diversity of workforce (15th) and multi-stakeholder collaboration (27th).

B. S&T Related Organisations

Department of Science and Technology (DOST)[5]

The DOST is the Philippines' main government body in charge of S&T-related matters. The department's vision is to ensure that national S&T efforts lead to economic growth, increased productivity and benefit the population (e.g. better quality of life). In order to realise this vision, the DOST is charged with two major missions: 1) leading and coordinating all S&T activities in the country and 2) formulating policies and programmes to foster the national S&T ecosystem development.

The DOST is composed by multiple councils and agencies which carry out different missions:

- Three sectoral planning councils (e.g. the Philippines Council for Industry, Energy and Emerging Technology Research and Development) which formulate S&T policies and programmes, and fund and monitor national R&D projects;
- Seven R&D institutes (details in the next section) which carry out basic and applied research;
- Six S&T services institutes (e.g. the Technology Application and Promotion Institute) which provide S&T related services;
- Two collegial bodies (e.g. the National Research Council of the Philippines) which are in charge of establishing links with international agencies ; and
- Sixteen regional offices and 80 provincial S&T centres which plan and implement S&T programmes at a regional level. They also coordinate and provide services to all S&T stakeholders.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies

The Philippines has a few R&D centres, which are mostly managed by specific national departments. Below is an overview of the R&D institutes under the DOST.

DOST's R&D Institutes (Part 1/2)

Institute	R&D
Advanced Science and Technology Institute	The ASTI carries out research focusing on: • ICT; • Microelectronics; and • Technology transfer.

DOST's R&D Institutes (Part 2/2)

Institute	R&D
Industrial Technology Development Institute	The ITDI focuses on R&D in: • Chemicals and Energy; • Biotechnology and Nanotechnology; • Material Science; and • Food processing and packaging technologies.
Metals Industry R&D Centre	The MIRDC assists metals and engineering companies in R&D activities designed to improve products, processes and materials.
Philippines Textile Research Institute	The PTRI's main missions are: • Conduct applied R&D for the textile industry; • Transfer completed research to end-user; and • Provide trainings programmes and support the private sector.
Food and Nutrition Research Institute	The FMRI carries out research focusing on: • Food quality and safety; • Nutrition technologies; and • Therapeutic nutrition.
Forest Products R&D Institute	The FPRDI's major objectives are: • Conduct R&D on wood and non-woods products; • Foster technology transfers; and • Provide technical services (e.g consultancy) and trainings.
Philippines Nuclear Research Institute	The PNRI's mission is to carry out nuclear related R&D, provide specialised nuclear services and efficiently implement nuclear safety standards in the country.

B. University-based R&D Institutes[6,7]

Apart from the government, universities are also important players in the R&D field. According to the 2019 QS Asia University Rankings, the Philippines only has four universities ranked in the top 300, indicating low research and teaching quality. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The top institution in the Philippines comes in 72nd place, with no other institutions ranked in the top 100. The ranking implies that R&D carried out in the universities has a low impact in the S&T international scene.

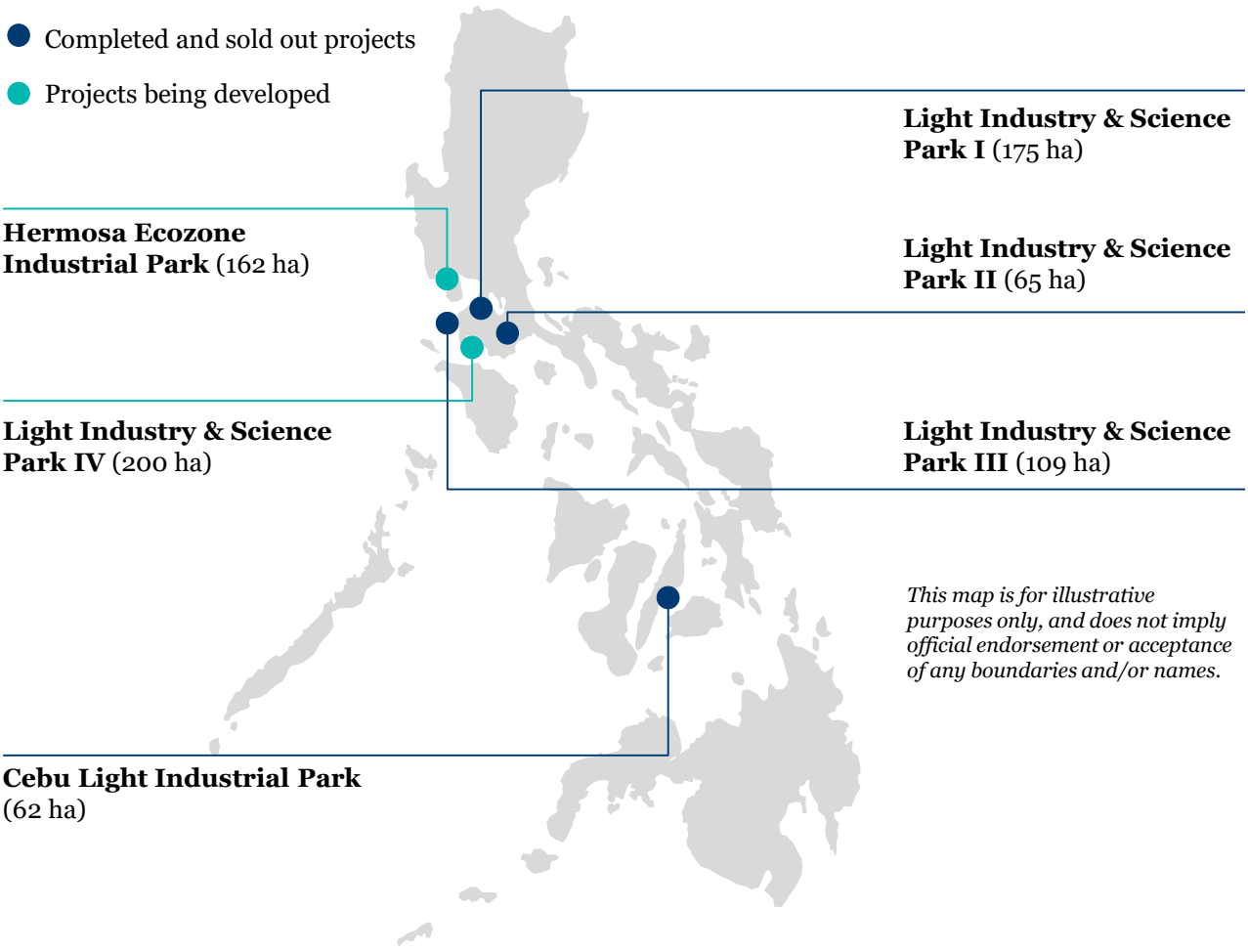
University of the Philippines (72nd)

The research areas prioritised in the university are: 1) ICT engineering and nanotechnology, 2) Computational modelling and complex systems, 3) Agriculture, nutrition, biotechnology, 4) Environment, climate and energy, and 5) Health, disease and wellness.

C. Private Business Firms (Research Centres)[8]

In the Philippines the private sector is heavily involved in R&D, specifically due to one private enterprise: the Science Park of the Philippines Inc. (SPPI). The company is the leading industrial estates developer of the country with its four Light Industry and Science Parks and two Industrial Parks (covering almost 800 hectares (ha)). The SPPI's parks are home to domestic and foreign investors which carry out production and R&D activities in the estates. Some examples of multinational companies (MNCs) located in the parks are: NEC, NXP Semiconductors, Mitsui Hi-tech, Procter & Gamble, and Unilever. One of the main reasons to locate a company in these parks is the availability of tax and non-tax incentives delivered by the Board of Investments (BOI). For more information, please refer to section 9 of this report.

Location of SPPI's Light Industry and Science Parks (LISPs)



D. Infrastructure Availability for Foreign Investments

As highlighted in the section above, foreign investors are welcome in the Philippines and can easily set up in the SPPI's LISPs. Infrastructure is especially available for foreign companies in the Harmosa Ecozone and the LISP IV, which are still under development and looking for investors. Overall, the area around Manila hosts the greatest number of infrastructure available for foreign investments.

III. Priority Areas in the Philippines (major exports)[9,10]

The Philippines' economy is supported by a proficient electronics industry. In 2018, the country's top five exports were:

Top 5 Exports	% of Total Exports (in 2018)
Electrical Machinery and Equipment	48.7%
Machinery and Appliances	14.3%
Optical and Medical Equipment	3.3%
Edible Fruits and Nuts	3.1%
Precious Stones and Metals	2.2%

The country has extensive hi-tech capabilities. In 2018, 58% of total manufactured exports were labelled hi-tech products (e.g. products with high R&D intensity, such as in computers, aerospace, pharmaceuticals), compared to only around 30% in Vietnam or Malaysia. The Philippines has managed to upgrade its exports and use R&D to create value-added products.

IV. Funding for S&T, R&D[5]

With the Science for Change Program, the government is seeking to develop strong national R&D capacities, to increase industrial competitiveness. To reach this objective, four different funding programmes have been established to grant funding for specific purposes.

Collaborative Research and Development to Leverage Philippines Economy (CRADLE) Programme

Description	Priority Areas	Sub-programme	Funding
Provides financial grants to projects aiming to establish long-lasting relationships between academic institutions, R&D institutions and the private sector to foster the country's R&D capabilities.	Priority will be given to projects focusing on: • Basic research; • Industry; • Energy; and • Emerging technologies.	CRADLE 1 for projects creating mutually beneficial links between academics and the industry.	• Maximum funding of PHP 5 million (around USD 100,000). • Maximum support of 3 years.
		CRADLE 2 for projects involving SMEs and academics in joint R&D activities with commercial applications.	• Maximum funding of PHP 5 million (around USD 100,000). • Maximum support of 2 years.

Business Innovation through S&T (BIST) for Industry Programme

Description	Priority Areas	Requirements	Funding
Provides financial assistance to Filipino's companies in order to support them in the acquisition of strategic technologies. These technologies shall be incorporated in their R&D activities.	Priority will be given to projects focusing on: • Manufacturing under Industry 4.0 (automation and robotics); • Semiconductors and electronics; • ICT; and • Infrastructure and Logistics.	• Company must be incorporated in the Philippines. • Company must be at least 60% Filipino-owned.	• The BIST refunds 70% of eligible expenses incurred by companies for the licensing of technologies and the purchase of equipment. • The refund is distilled over a period of 3 to 5 years.

Niche Centers in the Regions for R&D (NICER) Programme

Description	Priority Areas	Requirements	Funding
Provides grants to Higher Education Institutions (HEI) planning to build regional R&D centres. The centres should answer specific industry needs, help train an S&T workforce and support IP management and protection improvements in the country.	Priority will be given to projects focusing on: • Basic research; • Industry, energy and emerging technologies; • Agriculture, aquatic and natural resources sectors; • Disaster risk reduction and climate change adaptation; and • Health.	• Any HEI can apply for the programme if the project proves to have a positive impact on regional industries. • The proposed project should be in line with national policies (e.g. the HNRDA). • The proposed project should not exceed 3 years and must expose a clear roadmap of R&D activities and outputs.	• The NICER provides funding assistance for a maximum of 3 years.

R&D Leadership (RDLead) Programme

This programme is designed for HEI or Research and Development Institutions (RDI) involved in the NICER programme. The RDLead provides them funding to hire experts (with PhD and at least 15 years of experience) who will be in charge of guiding and strengthening the institutions' R&D activities.

V. Human Resources for S&T[11,12]

The Philippines' S&T labour force is scarce. According to the latest data available (from 2013), the country's ratio of researchers in R&D was 188 per 1 million people, which adds up to around 19,000 full-time researchers nationally. In the 2019 Global Innovation Index, the country ranked 78th out of 126 countries on the criterion "Researchers, FTE/mn pop." below Malaysia (35th), Thailand (53rd) and Vietnam (58th). This bottleneck has been identified by the Philippine government which currently targets to reach a ratio of 380 researchers/one million people. Therefore, the country needs to double its researcher population and close the 19,000 people gap.

Nevertheless, the Philippines can leverage its strong base of S&T educated people. Indeed, around 29% of the total number of tertiary graduates graduate in science and engineering *(Note)*.

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Support in Testing and Verification

In the Philippines, support in testing and verification can be obtained from the various institutions operating under the DOST. Indeed, all six S&T services institutes and seven R&D institutes provide technical services such as consultancy, patenting or licencing. More precisely, manufacturing investors looking for support in testing and verification can contact the Industrial Technology Development Institute and the Metals Industry R&D Centre. These centres can provide tailored services to private manufacturers in fields such engineering design (e.g. prototyping), testing and analysis, calibration, standards and measurements.

VII. Intellectual Property Policy[13]

Intellectual property (IP) rights are an important factor to consider when entering a country. Some nations have troubles implementing a strong framework to protect IP rights which can lead to serious damages to the companies. Each year the Global Innovation Policy Center (GIPC) publishes a worldwide ranking which analyses eight IP protection related categories: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, as well as membership and ratification of international treaties. According to the 2019 IP Index published by the GIPC, the Philippines' IP Protection is relatively low. Globally, the country is ranked 37th out of 50 analysed countries and regionally its performance is below other Asian countries. Overall, the Philippines scored 36% compared with 52% for the Asian average (as a reference, the top five world economies averaged 92% on the index).

The report underlines areas where the Philippines' IP protection is improving:

- The legislation provides basic IP rights;
- Improved IP protection capabilities with administrative IP courts;
- Proposed IP code amendments to toughen criminal sanction; and
- Proposed fast-track procedures for trademark registration.

However, some areas of improvement can be underlined:

- Major hurdles to technology transfers and licencing;
- Poor life sciences related IP rights; and
- Lack of digital protection and high online piracy rates.

Source:

[1] *National Science and Technology Plan 2002-2020, DOST*

[2] *Harmonized National R&D Agenda 2013-2020, DOST*

[3] *The Global Competitiveness Report 2018, World Economic Forum*

[4] *Research and Development expenditure (as % of GDP), The World Bank*

[5] *DOST Homepage*

[6] *QS Asia University Rankings 2019, QS World University Rankings*

[7] *University of the Philippines homepage*

[8] *Science Park of The Philippines homepage*

[9] *Trade Map, International Trade Centre*

[10] *High-technology exports as a share of manufactured exports, World Bank*

[11] *Researchers in R&D per million people, World Bank*

[12] *Global Innovation Index 2019, INSEAD*

[13] *2019 IP Index, Global Innovation Policy Center, 2019*

6. Supply Chain Environment

Executive Summary

The Philippines' economy is heavily focused on services and manufacturing. In particular, the Philippines is a major player in the global tourism, electronics, and automotive industries. While the agriculture sector plays a smaller role in the country's economy, the Philippines continues to be a large global producer of bananas, other tropical fruits, and their related products.

The Philippines boasts a talented, English-speaking workforce. However, foreign ownership restrictions, and poor infrastructure leading to high transportation costs have restricted foreign investments. In response to this problem, the current Philippine government has created the PHP 8.4 trillion Build, Build, Build programme, aiming to modernise and upgrade the country's infrastructure over the next few years.

6. Supply Chain Environment

I. Industry Profiles in the Philippines

Breakdown of 2018's Top 10 Exports[1,2,3]

The Philippines' major sectors by gross domestic product (GDP) in 2017 are services (59.8%), industry (30.6%) and agriculture (9.6%).

In the Philippines, the service sector mainly includes tourism, trade, private services, transportation, and communications. The major industries are electrical machinery, food and beverage, and chemical products. The primary products dominating the agricultural industry are rice, coconuts, corn, sugarcane, bananas, pineapples, and mangoes.

In 2018, the Philippines' total global shipments amounted to USD 67.5 billion of which over 80% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Electrical machinery and equipment	USD 32.9 billion	48.7%
2. Machinery and appliances	USD 9.6 billion	14.3%
3. Optical and medical equipment	USD 2.2 billion	3.3%
4. Edible fruits and nuts	USD 2.1 billion	3.1%
5. Precious stones and metals	USD 1.5 billion	2.2%
6. Copper, copper articles	USD 1.4 billion	2.1%
7. Ores, slag, and ash	USD 1.2 billion	1.8%
8. Ships and boats	USD 1.2 billion	1.8%
9. Animal or vegetable fats and oils	USD 1.2 billion	1.7%
10. Mineral fuels including oil	USD 1.1 billion	1.7%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp

The electronics industry in the Philippines dominates its yearly exports. The Philippines is a major global player in the integrated circuits market, being the fifth largest exporter in 2017 (USD 32.2 billion, or 4.6% of global exports), as well as in the semiconductor market, being the sixth largest exporter (USD 3.3 billion, or 3.8% of global exports).

Even though agriculture only contributed around 10% of the country's GDP in 2018, it remains one of the main industries in the Philippines. That year, the Philippines was the world's third largest exporter of bananas, and second largest exporter of coconut oil.

II. The Key Supported Industries in the Philippines[4]

The Philippines is one of Asia's fastest-growing economies, with average annual GDP growth of over 6.3% since 2010. However, due to foreign ownership restrictions and poor infrastructure, the country receives less Foreign Direct Investment (FDI) than its Southeast Asian peers. Please refer to section 7 for more details.

When considering specific industries, manufacturing receives by far the most FDI in the Philippines (it attracts around 50% of the country's equity investments). Within the manufacturing industry, the electronics and automotive industries are both major contributors.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations[5, 6]

Electronics

The Philippines is a major player in the global integrated circuits and semiconductor industries. Some of the largest integrated circuits companies of the world have locations in the Philippines, including Texas Instruments, STMicroelectronics, NXP, ON Semiconductor, Analog Devices, and Maxim. Most of the electronics in the Philippines are of high quality, and produced for exports. Hong Kong is by far the largest target for the Philippines' electronics industry, accounting for over 20% of the country's exports in 2018.

Compared to regional peers, the Philippines has a two major advantages when it comes to attracting electronics companies: its workforce has strong English skills, is flexible and trainable, while still being low cost; and the country offers very robust financial and non-financial support to companies. Indeed, the Semiconductor and Electronics in the Philippines Foundation, Inc. (SEIPI) provides many supporting functions in the economy such as training, networking, research development, and general information support. In addition, the Philippine Economic Zone Authority (PEZA) provides many incentives for electronics companies wishing to invest in the Philippines. For more information regarding the incentives, please refer to section 9.

Automotive

The Philippines is a major global player in the automotive industry. However, the multinational companies producing cars in the Philippines such as Toyota, Mitsubishi, Mazda, Nissan, and Isuzu, mostly target the domestic market rather than producing cars for export. The major auto components manufactured for export in the Philippines are wire harnesses, wheel assemblies and drive trains, and transmissions.

The Philippines has a workforce advantage in the manufacturing of auto components, as the production process is labour intensive. The domestic workforce is relatively low cost, but is still well-trained in engineering, and generally loyal to the companies (i.e attrition rates are low).

However, a major challenge in the Philippines is that there are very few domestic vehicle part producers. According to the Department of Trade and Industry (DTI), in 2014, only 330 out of over 20,000 automobile parts used were manufactured domestically. Wire harness manufacturers need to import parts from other Southeast Asian countries or the United States (US) and the European Union (EU). Transmission producers need to import metal and parts from India and Mainland China.

Nevertheless, the Philippine government has created many programmes aimed to further develop the automotive parts industry by providing incentives under the Investment Priorities Plan (IPP), and reducing duty rates for imported parts through the Motor Vehicle Development Program.

III. Key Raw Materials Sourcing Platforms/Channels[7]

The Philippine government has created the Procurement Service of the Department of Budget and Management (PS-DBM) to purchase goods from the private sector for use by the government, and resell unnecessary goods. The Philippine Government Electronic Procurement System (PhilGEPS) is the primary portal for information on government procurement, and is managed by the PS-DBM. (ps-philgeps.gov.ph/home/index.php)

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered

Being an archipelago, the Philippines has a natural hurdle when it comes to transportation within the country: the sea. This problem is further complicated by the weak logistics infrastructure in many of the islands, leading to high transportation costs and long delivery times.

However, the Philippine government has been taking steps to improve the overall infrastructure in the country, primarily through the Build, Build, Build programme which aims to develop modern logistics infrastructure that can help drive the country's economical growth in the future.

According to a 2019 report by the World Bank, the Philippines is ranked 124th in the world in terms of ease of doing business, and is ranked seventh out of the ASEAN countries (Hong Kong is ranked fourth worldwide in the same report). While the Philippines ranks poorly in Starting a Business (166th), Getting Credit (184th), and Enforcing Contracts (151st), it ranks better in Getting Electricity (29th) and Resolving Insolvency (63rd).

B. Efficiency of Customs and Clearance Process[8]

The Philippines applies two systems of tariff classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between the Philippines and the other ASEAN countries, whilst the United Nations' Standard International Trade Classification (SITC) applies for trade with non-ASEAN countries. For more information regarding tariff classification, please refer to the Philippine Tariff Finder launched by the Tariff Commission (www.finder.tariffcommission.gov.ph/)

All the goods imported are liable for customs duties, 12% value added tax (VAT), and any applicable excise tax. Imports and exports are mostly governed under the Customs Modernization and Tariff Act (CMTA), enacted in 2016. Imports are classified into four categories:

- Freely Importable Commodities, which are goods that may be freely imported without permits or licenses;
- Regulated Commodities, which are goods subject to regulation, and can be imported only with declaration, clearances, licenses, and other required documentation;
- Restricted Importation, which are goods prohibited from importation, unless with specific authorisation; and
- Prohibited Importation, which are goods completely prohibited from importation.

For more information regarding specific goods in each category, please refer to the CMTA (www.senate.gov.ph/lisdata/2230519018!.pdf)

Custom Clearance Process[9]

Goods Declaration

Step 1:

Goods imported or exported are subject to customs declaration. Goods declaration must be lodged within 15 days of the discharge of the last package from the arriving vessel or aircraft.

Relevant list of documents are required for submission to the Bureau of Customs at the place where the goods are imported/exported.

Selectivity System

Step 2:

The Customs Cargo Clearance System will categorise goods into one of four control channels:

- Green: no documentary check or examination of goods
- Yellow: documentary check only
- Red: documentary check and examination of goods
- Blue: to be considered for post-clearance audit

Examination of Goods

Step 3:

Goods in the yellow or red channel will need to go through documentary checks and examination if appropriate. Priority in examination will be given to live animals, perishables, and other urgent goods. Goods may be examined physically or using x-ray. Customs may also take samples of goods.

Inspection and Release of Cargo

Step 4:

Goods will be assessed and valued for duties, taxes, and other charges.

Goods shall only be released after payment of duties, taxes, and other charges, or upon specific circumstances.

The following table shows the supplementary documents needed for customs declaration:

#	Import and Export Goods
1	Invoice
2	Bill of lading or air waybill
3	Packing list
4	Duly notarised Supplemental Declaration on Valuation (SDV)
5	Certificate of Origin
6	Import/export permit or clearance, if required
7	Certificate of Product Registration from the Philippines' Food and Drug Administration for animals, plants, foods, medicine, or chemicals
8	Any other specific documents required by specific regulations

For specific regulations regarding the customs clearance process, please refer to the Entry Lodgement and Cargo Clearance Process document by the Bureau of Customs (www.customs.gov.ph/wp-content/uploads/2016/10/Entry-Lodgement-and-Cargo-Clearance-Process.pdf)

V. Logistic Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[10,11,12,13,14]

Due to the many islands and mountainous areas, the Philippines, historically, has had weak logistics and transportation infrastructure. This was exacerbated by the government's continual underinvestment over many decades. However, under President Duterte, the Philippine government has created the Build, Build, Build programme, which aims to improve infrastructure, develop industries, and increase the productive capacity of the economy. Under this plan, the government will spend around PHP 8.4 trillion on infrastructure from 2017-2022 (around USD 160 billion).

Airports

The Philippines has a total of 85 airports, of which 11 are international airports, 33 are principle domestic airports, and 41 are community level airports. The busiest airports in the Philippines are the Ninoy Aquino International Airport (MNL) in Manila, Mactan-Cebu International Airport (CEB) in Cebu, and the Francisco Bangoy International Airport (DVO) in Davao City.

All three of the busiest airports in the Philippines, as well as many other major airports in the country, are currently planning expansions or renovations through public private partnerships (PPP) projects to ease traffic, modernise the facilities, and upgrade the handling capacity.

Seaports

As an island nation, the Philippines are heavily dependent on ports for trade. The main ports in the country include Manila, Subic Bay, Batangas, Davao, and Cebu. Most public ports are managed under the government-owned Philippine Ports Authority, except Cebu.

For transportation between islands, the Philippines has developed the Philippine Nautical Highway System. Under this system, land vehicles can use the "roll-on/roll-off" ferries to cross between islands. The nautical highway is 919 km in length, and has greatly improved connectivity between the islands since it opened in 2003.

Location of Major Airports and Seaports

Port of Manila

The largest and main shipping gateway into the Philippines. It is comprised of three facilities: Manila North Harbour, Manila South Harbour, and the largest and busiest facility, Manila International Container Terminal (MICT). The port handled over 4.5 million TEU (twenty-foot equivalent units) in 2017, and is undergoing expansions to improve capacity.

Ninoy Aquino International Airport (NAIA)

The Philippines' main and busiest international airport. It is located 7 km from Manila, and handled over 45 million passengers in 2018. It has four passenger terminals, and nine cargo warehouses. The airport is currently undergoing renovations on Terminal 2, which are expected to finish in 2020. It is also considering offers from the private sector to expand the airport.

Highways

The road network in the Philippines is 217,000 km long, with over 80% being paved roads. The highway network spans over 32,000 km, with major highways such as the Pan-Philippine Highway connecting the four islands of Luzon, Samar, Leyte, and Mindanao, and the ro-ro system connecting the road systems of the many islands of the Philippines. The expressway network spans 420 km in length as of 2015, and is planned to be extended to 995 km around 2030. The six expressways are currently all on the largest island of Luzon, and are centred around the capital of Manila.

Railways

The railway system in the Philippines is 79 km long, but is currently used only as passenger transport serving Manila and the province of Laguna, also on Luzon. The system is comprised of the two lines of the Manila Light Rail Transit System, the Manila Metro Rail Transit System, and the Metro South Commuter Line.

There are plans to revive the cargo rail service between the MICT and the inland container terminal at Laguna, as well as a connection between Subic and Clark funded with assistance from Mainland China.

B. Key Logistics Hubs[15]

Currently, most of the logistics infrastructure in the Philippines are concentrated around Manila on the island of Luzon (which has also historically received more infrastructure funding than the other islands). On a national level, the country's infrastructure still lags behind many of its Southeast Asian peers, but the Philippine government aims to upgrade the country's infrastructure through the Build, Build, Build programme. The government plans to spend around PHP 8.4 trillion (around USD 160 billion) on infrastructure projects from 2017-2022. This will increase infrastructure spending from 5.4% of GDP in 2017 to 7.3% in 2022, the highest infrastructure budget allocation in Philippine history.

Major projects include the Mactan-Cebu International Airport upgrade project, Metro Manila subway, the Subic-Clark Railway, the Luzon Spine Expressway Network, the Mindanao Growth Corridors project, and the Mindanao Road Development network. All these projects aim to reduce the high cost of transportation and provide modern logistics infrastructure.

For more information about the Build, Build, Build programme, please refer to the official website (www.build.gov.ph)

C. Logistics Information Tractability and Transparency[16]

The Philippines has a relatively poor logistics performance as compared to the other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), the Philippines was ranked 60th out of 160 countries for the overall LPI, an increase from the 2016 result (ranked 71st out of 160). The Philippines ranked sixth amongst the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing; and (6) Timeliness. The Philippines ranked relatively better in international shipments (37th), but scored poorly in Customs (85th) and Timeliness (100th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Philippines, Central Intelligence Agency*

[3] *Philippines, The Observatory of Economic Complexity*

[4] *Net FDI, Bureau of Trade and Industrial Policy Research, Dec 2018*

[5] *The Philippines in the Electronics & Electrical Global Value Chain, Department of Trade & Industry, 2017*

[6] *The Philippine Motor Vehicle Industry, Philippines Board of Investments, July 2017*

[7] *Procurement Service official website*

[8] *Philippines – Import Requirements and Documentation, Export.gov, Nov 2018*

[9] *Entry Lodgement and Cargo Clearance Process, Bureau of Customs*

[10] *Manila (Philippines), Lloyd's List, Aug 2018*

[11] *Manila International Airport Authority official website*

[12] *DOTr to OK tycoons' proposal to rehab, expand Naia, Inquirer.net, May 2019*

[13] *DOTr to revive Manila-Laguna cargo rail project, Manila Standard, Oct 2018*

[14] *Subic-Clark railway construction begins 2019, BusinessWorld, Jun 2018*

[15] *Build, Build, Build official website*

[16] *Logistics Performance Index, The World Bank, 2018*

7. Infrastructure

Executive Summary

Infrastructure deficiency is considered one of the key constraints to the Philippines' economic growth. In recent years, the Philippine government has been increasing investments in infrastructure projects to enhance the country's competitiveness.

Industrial estates offer manufacturing facilities and infrastructure to foreign investors. There are currently 74 operating Philippine Economic Zone Authority (PEZA)-managed industrial estates in the country and various incentives have been put in place to attract foreign investments. Most of these industrial estates are located on the main island of Luzon.

The Build, Build, Build programme includes over 60 large-scale priority infrastructure projects. Private funding, public private partnerships (PPP) and Official Development Assistance (ODA) from other countries are utilised to fund the infrastructure projects in the country.

7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates[1,2,3]

Industrial estates, also known as Manufacturing Special Economic Zones (SEZs), are regulated under the Special Economic Zone Act of 1995, like other types of SEZs. The most prominent SEZ administrative agency is the Philippine Economic Zone Authority (PEZA), which manages over 90% of the SEZs in the country. Among the SEZs managed by the PEZA, there are 74 operating industrial estates which cover a total gross area of around 39,770 hectares, while another 28 industrial estates are being developed.

In the Philippines, industrial estates can be developed and operated by private enterprises and/or investment promotions agencies. However most of the industrial estates are developed by private developers. There is also a long history of joint development of industrial estates between local and foreign companies. A Philippine developer giant, Ayala Land Inc., teamed up with the Japanese company Mitsubishi, to develop the first industrial park in the country. Ayala Land is also planning to build the country's first Sino-Philippine industrial park in Pampanga.

Industrial estates are equipped with relatively established infrastructure and logistics facilities, as well as tax incentives and assistance in employment and import/export. Thus, many foreign investors consider industrial estates as their main destinations for setting up a manufacturing base in the Philippines.

Support and Incentives

All industrial estates are equipped with relatively established infrastructure and logistics facilities, as well as tax incentives and assistance in employment and import/export.

Utilities

Industrial park operators and developers are required to provide basic infrastructure and utilities, such as lights and power systems, water supply and distribution systems, sewerage and drainage systems, pollution control devices, communications facilities, and community facilities for the tenants. Some of the industrial estates will also offer pre-built standard factory buildings.

Transportation

All industrial estates are connected by paved road networks. Most of them are clustered near major cities like Manila and Quezon City, and therefore benefit from privileged access to established transportation links and hubs such as railways, ports, and airports.

Government Incentives

Industrial estates benefit from the support of the government in terms of both tax and non-tax incentives. Key tax and non-tax incentives granted to companies in industrial estates are provided as follows:

- Tax incentives: tax holidays, reduced corporate income tax, zero value added tax, as well as tax allowances in import of production input etc.; and
- Non-tax incentives: tenants in the industrial estates enjoy simplified import and export procedures. They are provided with assistance in arranging employment visas for their foreign workers.

For further details of incentives regarding industrial estates, please refer to section 9 of this report.

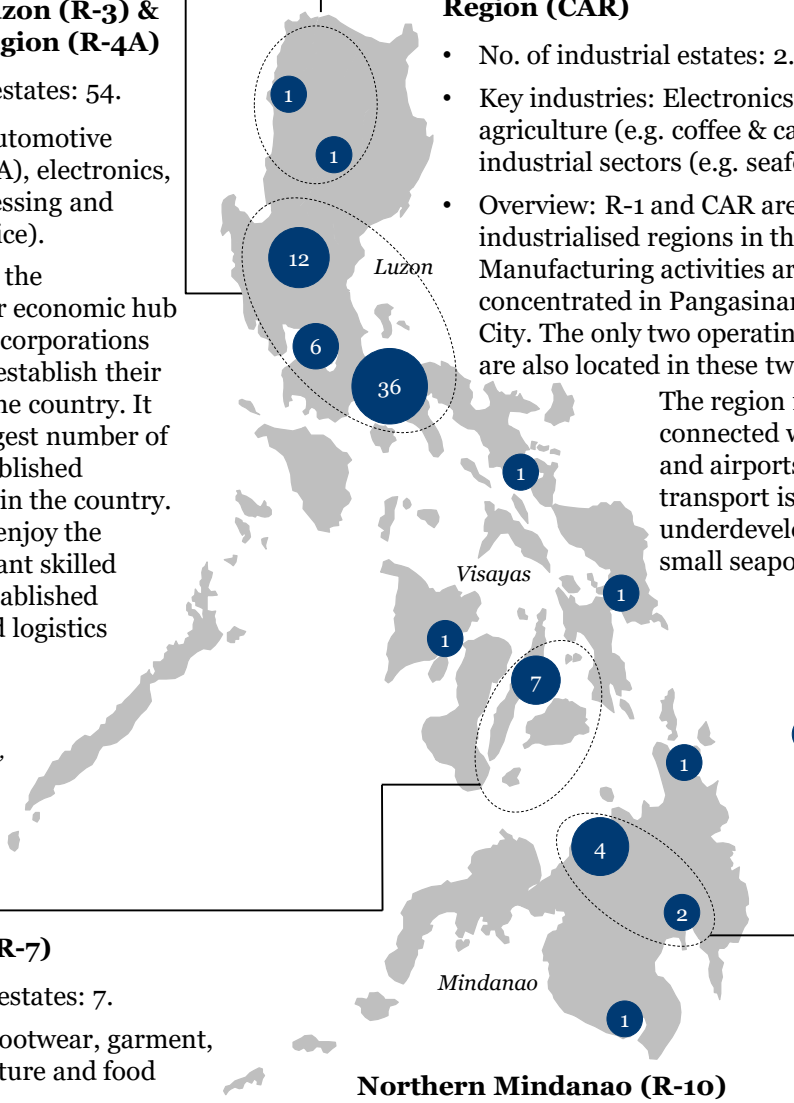
Industrial Estates' Locations and Regional Implications[4]

The Philippines is divided into 15 administrative regions. Each region has its own focused industries. The map below introduces the administrative regions where the key industrial estates are located in.

For a detailed list of industrial estates in the Philippines, please refer to the Economic Zone Map (www.peza.gov.ph/index.php/economic-zones).

National Capital Region (NCR), Central Luzon (R-3) & CALABARZON Region (R-4A)

- No. of industrial estates: 54.
- Key industries: Automotive (especially in R-4A), electronics, textile, food processing and agriculture (e.g. rice).
- Overview: NCR is the Philippines' major economic hub where the largest corporations and major banks establish their headquarters in the country. It also holds the largest number of and the most established industrial estates in the country. Businesses there enjoy the benefits of abundant skilled workforce and established infrastructure and logistics network.



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Ilocos (R-1) & Cordillera Administrative Region (CAR)

- No. of industrial estates: 2.
- Key industries: Electronics, mining, agriculture (e.g. coffee & cacao) and agro-industrial sectors (e.g. seafood processing).
- Overview: R-1 and CAR are among the less industrialised regions in the Philippines. Manufacturing activities are mainly concentrated in Pangasinan and the Baguio City. The only two operating industrial estates are also located in these two cities. The region is generally well-connected with road networks and airports. However sea transport is relatively underdeveloped with only one small seaport in Dagupan.

Central Visayas (R-7)

- No. of industrial estates: 7.
- Key industries: Footwear, garment, electronics, furniture and food processing.
- Overview: R-7 is one of the most developed and most densely populated regions in the Philippines. Among other provinces, Cebu is the economic and logistics centre of the region and home to all the industrial estates. Sea transport is especially established in Cebu which is the base of about 80% of the domestic shipping lines.

Northern Mindanao (R-10)

- No. of industrial estates: 6.
- Key industries: Various light to medium industries, including food processing and furniture, etc. and agriculture.
- Overview: The region's international seaport is considered one of the most efficient ones in the country. Moreover, businesses there can also benefit from reliable and relatively cheap power and water supply. R-10 is also home to the country's largest industrial park, Phividec Industrial Estate (3,000 hectares).

Foreign Direct Investment (FDI)[5]

Despite having abundant natural resource reserves and one of the largest population in the ASEAN, the Philippines has been lagging behind its peers in the ASEAN in attracting FDI, due to high power costs, poor infrastructure, and foreign ownership restrictions. In 2018, the Philippines received around USD 9.8 billion FDI across the country, a 4.5% decrease compared with 2017 (a historical high at around USD 10.3 billion). Around USD 2.3 billion of 2018 FDI is equity investment, representing a big drop of 33% compared to the previous year, mainly due to the lack of mega investments (e.g. USD 1.9 billion acquisition of power assets by the San Miguel Corporation) in 2017.

In terms of the most invested sectors, the manufacturing sector attracts the most equity FDI in terms of value, with a total of around USD 1.1 billion (around 48% of total equity investment), followed by the financial and insurance sector, and the real estate sector, both with around USD 0.3 billion (around 14.6%). Singapore and Hong Kong are key contributors of equity FDI in 2018, accounting for USD 0.9 billion and USD 0.3 billion respectively.

Cost of Usage[6,7]

Businesses and investors are typically charged with three main types of fees:

1. Cost of land and building (lease or sale, depending on the industrial estates); and
2. Utilities fee, including water, gas, electricity and telecommunications.

The land and building in industrial estates can be sold or leased, which vary from one site to another. However, foreign investors can only purchase the buildings (e.g. factories) in the industrial estates but cannot own the land. The land prices depend on factors such as location, provision of utilities, transportation links, the size and the type of land slot bought/leased (e.g. established industrial complex vs plain land), etc. NCR and R-7 have the highest cost of usage as they benefit from the proximity to the major industrial and business centres (e.g. Manila and Cebu), well-developed transportation, as well as established infrastructure within the industrial estates and in the provinces.

The PEZA provides an indicative price list of available land slots in certain industrial estates, please refer to "List of Available Industrial Lots in PEZA Economic Zones" at www.peza.gov.ph/index.php/pezadownloads/25-downloads/ecozone-development. For the details and updated prices of specific sites, please refer to the specific official website of each individual industrial park or consult with the operators of the industrial park directly.

Outlook[8,9]

Although some of the industrial estates are developed by the government, the development of industrial estates in the Philippines are mainly driven by the private sector. It is expected that the development of major infrastructure projects, and improved trade relationships with Asian and European countries will foster the investments in manufacturing and logistics projects in the Philippines over the next three years. For example, the construction of the North Luzon Expressway and South Luzon Expressway Connector Road will provide improved access to major ports and airports in Manila, as well as the two major industrial hubs in the country: the Clark-Subic corridor and CALABA. These projects are expected to attract industrial estate investments in Northern and Central Luzon.

According to the PEZA, there are 34 industrial SEZs under development. Among the SEZs, 28 of them are industrial estates (i.e. manufacturing SEZs) which secured around PHP 41 billion in total. The key industrial estates in development include the Fil-Estate Industrial Park in Southern Luzon and the Hijo SEZ in Davao. The remaining six are dedicated to agro-industrial sectors with a total investment of PHP 1.2 billion.

B. Land or Building for the Major Industrial Estates[4,7]

Availability for Foreign Ownership

Land ownership is restricted to only Filipino citizens and companies with least 60% of Filipino shareholding or board representation in the Philippines. Mainland China and Hong Kong investors interested in acquiring land in industrial estates can consider entering into long-term leases to build their own factory. Alternatively, they can purchase an existing industrial complex. However, for both options, the Mainland China and Hong Kong investors cannot own the land on which the factory is built.

For the terms and conditions of specific sites, please refer to the specific official website of each individual industrial park.

Application Procedures for Setting up Business Operations in Industrial Estates

The following application procedures apply to the PEZA-managed industrial estates only. For industrial estates managed by other investment promotion agencies, please consult with the individual investment promotion agencies.

II. Potential Infrastructure Shortfall[10,11]

In the World Economic Forum's 2018 Competitiveness Report, the Philippines was ranked 92nd out of 140 countries in quality of infrastructure, well below other Southeast Asian peers like Singapore (first) and Malaysia (32nd). The major problems of the country's infrastructure are:

- Poor road connectivity (129th);
- Poor quality of roads (88th);
- Low railroad density (87th), with only 1.6 km of railroad/km²;
- Low electrification rate (100th), with only 89.6% of population having access to electricity;
- Unsafe drinking water (101th); and
- Low penetration of fixed broadband internet (96th), with only 3.2% of population covered.

Infrastructure deficiency has been a key constraint to the Philippines' economic growth over the years, especially the logistics and transport infrastructure. One of the reasons is that the newly elected president always delay the predecessor's pet infrastructure projects by various means. In order to accelerate the development of infrastructure in the country, President Duterte assured that the previous administration's projects will continue to move ahead. Moreover, the engine of the country's infrastructure development will shift from a reliance on public private partnership (PPP) to a hybrid development model of building infrastructure with public funding and Official Development Assistance (ODA) and operating the infrastructure under PPP. Such change aims to avoid delays and achieve lower project costs.

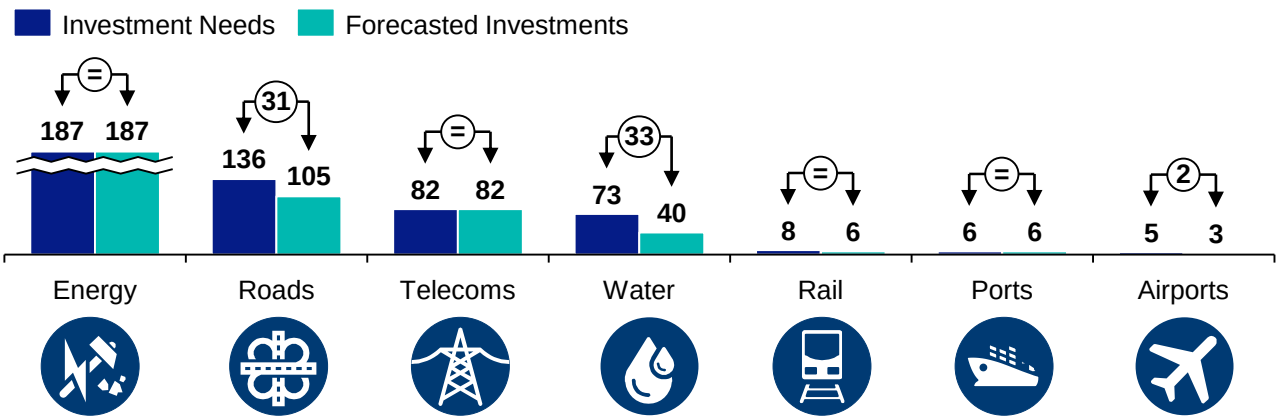
III. Latest and Upcoming Major Local Infrastructure Projects and Spending[12,13,15]

In order to address the infrastructure woes, the Philippine government will increase its infrastructure spending from around 5.4% of gross domestic product (GDP) in 2019 to as high as 7.3% by 2022. This is an unprecedented infrastructure investment in the history of the Philippines.

The major infrastructure programme endorsed by President Duterte is the PHP 8.4 trillion (around USD 160 billion) Build, Build, Build programme, which aims to usher in a golden age of infrastructure and bring in new railways, roads, bridges and airports. As of July 2019, 61 infrastructure projects are listed under the Build, Build, Build pipeline, including 24 road, highway and bridge projects, 11 rail or subway projects, and 17 airport projects, etc.

According to Global Infrastructure Outlook delivered by G20 in 2017, from 2016 to 2040, around USD 498 billion will be needed to upgrade and develop new infrastructure (see chart below for breakdown by sector). Over the period it is forecasted that the Philippines public and private sectors will invest USD 429 billion, therefore covering almost 86% of the country's needs.

Philippine's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



Transportation

Air

There are 17 airport projects under the Build, Build, Build programme. Since the major airport in Manila, Ninov Aquino International Airport (NAIA), has already reached its maximum capacity, the government aims to divert some of the air traffic from NAIA to the upgraded regional airports. Some of the key enhancement projects include equipping airports with night-rating capabilities (e.g. Cotabato Airport, Dipolog Airport and Cauayan Airport), upgrading airport operations and maintenance facilities (e.g. Davao Airport and Bacolod-Silay Airport) and airport expansion (Clark International Airport).

Ports[16,17]

The Philippine Ports Authority (PPA) has been conducting over 104 port development projects in Luzon, Visayas and Mindanao islands since 2018 and has been supervising operations improvements on six existing ports. There is only one seaport project in the Build, Build, Build programme, the Cavite Barge Gateway Terminal. The terminal, which started operating in 2018, offers annual capacity of 115,000 TEUs (twenty-foot equivalent units). The terminal is expected to reduce truck traffic in Manila by around 140,000 truck trips annually.

Rail[18]

Rail is one of the most lacking infrastructure in the Philippines. With six out of 11 rail and subway projects in the Build, Build, Build programme expected to be completed by 2022, the government is aiming to expand the national railway network from 79 km to 1,900 km. Most of the rail projects are funded through ODA (e.g. Japan ODA: Philippine National Railways (PNR) Clark Phase 1&2, PNR Los Baños and Metro Manila Subway extension; Mainland China ODA: PNR South Long Haul) and PPP (e.g. MRT Line 7).

Roads[19]

There are currently 24 road projects in the Build, Build, Build programme. The government has completed the construction and rehabilitation of over 6,000 km of roads and constructed a total of 2,680 bridges across the country (as of year end of 2018). Around half of the road and bridge projects are in Luzon. Outside Luzon, the government has planned key road projects, including the Urdaneta City Bypass Road in Pangasinan, Plaridel Bypass Road in Bulacan and Laguna Lake Highway, etc. By 2022, the government expects to complete the flagship Philippine High Standard Highway Network Program, which spans over 1,000 km across the Luzon, Cebu and Davao regions.

Utilities

Power[20]

The power sector in the Philippines is mostly privately owned and funded. Thus there is no power project in the government Build, Build, Build programme. According to the Department of Energy, the four committed and significant power projects in the country are the 150-megawatt (MW) Phase 2 of the Limay coal-fired power project, the 300-MW Masinloc coal-fired power project, the 500-MW San Buenaventura coal-fired facility and the 1,336-MW Dinginin coal-fired power project. All of them are privately funded and due for commercial commissioning by 2021. The other power projects are various renewable energy projects with marginal capacities (up to around 100-MW) or projects with regulatory or technical delays. According to industry players, if there are no new power projects, the existing and committed power facilities may not satisfy the country's electricity needs beyond 2022.

Water[21,22,23]

Clean water scarcity has been a severe problem in the Philippines for years. Although there are thousands of water utilities across the country providing piped water connection, most of them are small and unregulated. Even in big cities like Manila, water shortage happens frequently. For example, around 52,000 households across Manila did not have water supply in early 2019. Thus a number of water supply and dam projects are undergoing in the country to improve the situation. Most of them are funded by ODA (e.g. Japan: JPY 300 million project in Southern Mindanao; Mainland China: New Centennial Water Source-Kaliwa Dam project) and PPP (e.g. Bulacan Bulk Water Supply Project and Baggao Water Supply Project etc.).

On the other hand, frequent typhoons causes flooding in the Philippines every year. Drainage and tide embankment projects are lined up across the country in order to prevent and/or reduce the damage of flooding.

Telecommunications[14]

While cellular phone adoption (110.4%) is relatively high in the Philippines, mobile broadband (68.6%) and fixed broadband (3.2%) adoption are not as common in the country. Only 55.5% of population has access to the internet. Since the telecommunications sector is mainly operated by private companies, the government has introduced the third telecommunications provider in 2018, MISLATEL (previously the Philippine Long-Distance Telephone Company and Globe Telecom dominated the market), in the hope of increasing market competition, service coverage and internet speed.

For the complete list of the projects in the Build, Build, Build programme, please refer to the official website (www.build.gov.ph/)

Funding Infrastructure through Public Private Partnerships (PPP)[24,25]

President Duterte's administration pledges to account 5% of GDP (i.e. around USD 9 billion in 2018) to annual infrastructure spending. Although PPP has been playing a key role in infrastructure funding in the Philippines, the government plans to shift primary infrastructure funding from PPP to public funding and ODA to ensure timely delivery and lower project costs. However, with lower borrowing costs due to the upgraded credit rating of the Philippines and a relatively friendly and mature regulatory environment (i.e. second in the Economist Intelligence Unit's ranking of Asian countries most conducive to PPP), PPP remains a significant contributor to the country's infrastructure funding. As of April 2019, a total of 58 PPP projects worth around USD 50 billion have been under implementation or in the pipeline.

IV. Availability of Natural Resources[26,27,28,29,30,31,32]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• According to the United Nations' estimates, around 28% (around 8.3 million hectares) of the Philippines' land is covered by forest. • Mindanao, especially the CARAGA region, is the leading timber producer of the country (with over 0.6 million hectares of forest land). • Since deforestation was banned in 2010, the domestic production of timber is based on plantation. The annual production is around 1.3 million m^3. However the domestic production cannot satisfy the domestic demand of wood (around 2 million m^3 per year). Thus, the country needs to import logs and lumber from other countries to address the unmet needs.
Agriculture	• The agricultural sector in the Philippines accounts for roughly 10% of the GDP and involves around 25% of the total labour force in 2017. • The Central Luzon, Cagayan Valley and Negros are the key agricultural bases of the Philippines. • Common agricultural products and important agricultural exports include: rice, bananas, coconut, sugarcane, and pineapples.
Fishing/ Aquaculture	• The Philippines is one of the world's largest seafood producers and exporters. • There are over 2,400 species of marine creatures found in the country's water system, at least 65 of which have commercial value, including tilapias, crabs, tunas and pearls etc.
Livestock	• The largest outputs of livestock in the Philippines are recorded for cattle, hog and dairy. • The gross value of livestock production contributed around 17% (i.e. PHP 75.4 billion) of the country's total agricultural production in Q1 of 2019.
Water Resources	• Despite the abundant monsoon rainfall in the country, due to the vast population, the Philippines' per capita availability stands at 1,553 m^3 per year, which is well below the international "water stress" threshold and approaching the "water scarcity" threshold. • The supply of fresh water mainly concentrates in the Northern Mindanao, Davao Region and Soccsksargen.
Minerals	• There are around 21.5 billion metric tonnes of metal and 19.3 billion metric tonnes of nonmetal mineral deposits in the Philippines. • Among the metal deposits, the country is especially rich in nickel, iron and copper.
Coal, Oil and Fossil Fuels	• The Philippines has 16 sedimentary basins of oil and gas, most of which are found in Luzon, particularly in Palawan. According to the Philippine Energy Plan, the country's target production level is 78.59 million barrels by 2040. • The domestic coal production in the Philippines cannot fully satisfy the domestic coal demands, even with a surge of indigenous coal production in recent years. As of 2018, around 75.4% of domestic coal consumption was imported.
Renewable Energy	• By 2040, the Philippines targets to double the renewable energy-based installed capacity to power generation from its 2008 level of 5,300 MW. • There are currently a number of committed renewable energy projects, including a geothermal project for 31 MW capacity, solar projects for 115 MW and a hydropower project for 23 MW capacity.

Source:

[1] *Philippine Economic Zone Authority (PEZA) Official Website*

[2] *ALI plans to develop country's first Sino-PHL industrial park, BusinessWorld*

[3] *Industrial Policy in the Philippines: The role of Special Economic Zones, Philippine Economic Zone Authority (PEZA)*

[4] *Republic of the Philippines Department of Trade and Industry Official Website*

[5] *DOF: Drop in 2018 FDI inflows temporary, INQUIRER.net*

[6] *Ownership and Leasing Options, First Philippine Industrial Park*

[7] *Land Ownership and Property Acquisition in the Philippines for Foreigners and Former Filipino Citizens, Kittelson & Carpo Consulting*

[8] *Logistics Lifts Industry, Colliers Quarterly*

[9] *The strong performance of the Philippines' industrial sector invites higher levels of investment, Oxford Business Group*

[10] *The Global Competitiveness Report 2018, World Economic Forum*

[11] *Philippines' infrastructure challenge: A huge gap or a black hole, BusinessWorld*

[12] *Global Infrastructure Outlook 2017, G20*

[13] *Economic Briefing in London showcases PH economic growth, infrastructure opportunities, the Bangko Sentral ng Pilipinas (BSP)*

[14] *Philippines – Information and Communications Technology, Export.gov*

[15] *Build, Build, Build, Philippine Infrastructure Transparency Portal*

[16] *Philippines Plans to Accelerate Port Development Projects, DredgingToday.com*

[17] *Cavite Gateway Terminal, International Container Terminal Services, Inc.*

[18] *Philippines to expand railway network as key economic policy, ABS CBN News*

[19] *Over 6,000 kilometers of roads built, improved since 2016 – Villar, Manila Bulletin*

[20] *No new power projects committed amid increase in demand, Manila Bulletin*

[21] *Sustainable Capacity Building for Small Water Utilities, World Bank Group*

[22] *Japan provides ¥500 million for water and farm projects in Philippines' conflict-hit Mindanao, the Japan Times*

[23] *SMC to submit proposal for new water source project, CNN Philippines*

[24] *PH ranks 2nd in Asia list of most conducive environment for PPP, INQUIRER.net*

[25] *Shift from ODA to PPP for project funding backed, Philstar.com*

[26] *The World Factbook, CIA*

[27] *The Philippines' Wood Industry, Agriculture Monthly*

[28] *List of Natural Resources in the Philippines, USA Today*

[29] *Globefish Highlights (January 2019 ISSUE), Food and Agriculture Organization of the United Nations*

[30] *A Policy Brief on the Philippine Water Sector (September 2018), the Arangkada Philippines Project*

[31] *Performance of Philippine Agriculture, January-March 2019, Philippine Statistics Authority*

[32] *Country Nuclear Power Profiles (2018 Edition) – Philippines, International Atomic Energy Agency*

8. Types of Industries Encouraged by the Local Government

Executive Summary

Through the Investment Priorities Plan (IPP), the Philippine government defines every three years a list of activities considered essential for the country's development. Local or foreign companies engaging in these areas will be granted investment incentives.

The Foreign Investments Act (FIA) enacted in 1991 liberalised the Philippines' economy by allowing 100% foreign ownership in multiple sectors. However, the Foreign Investment Negative List (FINL) defines activities in which foreign ownership is prohibited or restricted.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1,2]

The Omnibus Investment Code of 1987 provides a general list of incentives that can be granted to domestic and foreign investors when they engage in specific industries. These activities are considered by the Philippine government as high priority for national development.

The 2017 Investment Priorities Plan (IPP)

Under the Omnibus Investments Code of 1987, the preferred areas of investments (which are subject to government incentives) are drafted every three years by the Board of Investment (BOI) in the IPP. The 2017 IPP, effective from 2017 until the end of 2019, tackles the theme of "Scaling Up and Dispersing Opportunities", or expanding investment opportunities to suburban regions (i.e outside of the main island of Luzon). The 10 following activities are prioritised in the 2017 IPP:


Manufacturing


Infrastructure and Logistics


Strategic Services (*Note 1*)


Innovation Drivers


Inclusive Business Models *(Note 2)*


Mass Housing


Healthcare Services


Agriculture, Fishery, and Forestry


Energy


Environment or Climate Change-related Projects

In addition, the Omnibus Investment Code separates the above-mentioned industries into pioneer or non-pioneer. The status of pioneer enterprise is awarded to companies that:

- Manufacture commodities that are not being produced in the Philippines on a commercial scale;
- Use designs, methods or production systems that are new in the Philippines;
- Engage in agricultural, forestry or mining activities that are declared by the BOI as essential to the attainment of specific national goals; or
- Produce non-conventional fuels, or manufacture equipment utilising such fuels.

For more details regarding the IPP, please refer to the relevant legal document (www.boi.gov.ph/wp-content/uploads/2018/03/2017-IPP-GP-SG-CTC.pdf).

Note 1: The strategic services include integrated circuit design; creative industries; maintenance, repair and overhaul of aircraft; charging stations for electric vehicles; industrial waste treatment; telecommunications; state-of-the-art engineering, and procurement and construction.

Note 2: Business activities of medium and larger enterprises in the agribusiness and tourism sectors that provide business opportunities to micro and small enterprises (MSEs) as part of their value chain.

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[3]

Foreign Investments Act of 1991 (FIA) and 11th Foreign Investment Negative List (FINL)

The Foreign Investments Act of 1991 (FIA) is the main policy governing foreign investments in the country. This Act has liberalised the entry of foreign capital in the economy as it allowed foreigners to invest 100% equity in nearly all business sectors. However, certain restrictions are prescribed in Foreign Investment Negative List (FINL).

The effective 11th FINL (published in 2018) defines two lists of multiple activities for which foreign investments are limited in the Philippines:

- List A: areas where foreign ownership is prohibited or limited to a maximum of 40% by the constitution and specific laws; and
- List B: areas where foreign ownership is limited for reasons of security, defence, risk to health and morals, and protection of small and medium-sized enterprises (SMEs).

A partial list of the 11th FINL is presented below.

List A: Foreign Ownership is Limited by Mandate of the Constitution and Specific Laws

Maximum Allowed Foreign Equity	List of Prohibited or Restricted Industries
No foreign equity allowed	• Small-scale mining • Retail trade enterprises with paid-up capital below USD 2.5 million • Mass media • Utilisation of marine resources
Up to 25%	• Private recruitment • Contracts for the construction of defence related structures
Up to 30%	• Advertising
Up to 40%	• Ownership of private lands • Contracts for the construction and repair of public works • Exploration, development, and utilisation of natural resources • Contracts for the supply of goods to government-owned corporations • Operation of public utilities except power generation and the supply of electricity to the contestable market • Operations of deep sea commercial fishing vessels

List B: Foreign Ownership is Limited for Reasons of Security, Defence, Risk to Health and Morals, and Protection of Small and Medium-sized Enterprises

Maximum Allowed Foreign Equity	List of Prohibited or Restricted Industries
Up to 40%	• Domestic market enterprises with paid-in equity capital below USD 200,000 • Domestic market enterprises that involve advanced technology, or employ more than 50 employees with paid-in equity capital below USD 100,000 • Manufacture, repair, storage, and/or distribution of products and/or ingredients requiring Philippine National Police or Department of National Defence clearance • Manufacture and distribution of dangerous drugs

For the complete list, please refer to Executive Order No. 65 or visit the link below (www.officialgazette.gov.ph/downloads/2018/10oct/20181029-EO-65-RRD.pdf)

Source:

[1] The 2017 Investment Priorities Plan, The Board of Investment, 2017

[2] Doing business in the Philippines, Deloitte, April 2019

[3] The 11th Regular Foreign Investment Negative List, Official Gazette of the Republic of the Philippines, 2018

9. Key Government Incentives

Executive Summary

In the Philippines, foreign investors that qualify to register with the Board of Investment (BOI) may be eligible for fiscal and non-fiscal incentives. Generally, to qualify, foreign investors must invest in the pioneer activities which are listed in the Investment Priority Plan (IPP).

Additionally, foreign investors can also locate their manufacturing activities in tailored zones: the Manufacturing Economic Zones (EZs). These EZs are managed by the Philippine Economic Zone Authority (PEZA) which can grant various incentives to eligible investors.

Apart from the BOI and the PEZA, other Philippine authorities have the power to grant foreign investors fiscal and non-fiscal incentives.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments[1,2]

The Board of Investments (BOI) and the 2017 Investment Priorities Plan (IPP)

The BOI is responsible for promoting investments in the Philippines and assisting investors in their business journey in the country. Therefore, the BOI is the organisation that grants fiscal and non-fiscal incentives to local and foreign companies. However, these companies need to register their activities with the BOI to be eligible for incentives.

Qualification Criteria for BOI Incentives

To qualify for incentives, Filipino and foreign companies must fulfill different criteria. For foreign-owned businesses, or businesses with a foreign participation exceeding 40%, the criteria are the following:

- The investment is made in an activity listed in the IPP as pioneer; or
- The company is export-oriented and exports at least 70% of its output (this criteria must be fulfilled if investment is made in an activity listed in the IPP as non pioneer).

Examples of Fiscal Incentives for BOI-registered Enterprises

Category	Incentives
Income Tax Holiday	Companies are granted income tax holiday for: • 6 years for new projects granted pioneer status • 4 years for new non-pioneer projects • 6 years for projects located in less developed areas • 3 years for expansion and modernisation projects.
Tax and Duty Exemption	Companies are entitled to exemption from customs duties and national internal revenue taxes on imported equipment, spare parts and accessories.
Capital Equipment Duty Rates Reduction	For a period of 5 years, companies may import machinery, equipment, spare parts and accessories at a 0% duty rate
Tax Credits	Tax credits available for raw materials, supplies and semi-manufactured exports products.

Examples of Non-fiscal Incentives for BOI-registered Enterprises

A registered company can enjoy non-fiscal incentives such as:

- The permission to employ foreign nationals;
- Simplified customs procedures for importation of equipment, spare parts, raw materials, and supplies and exports of processed products;
- Permission to import consigned equipment for a 10-year period; and
- The privilege to operate a bonded manufacturing or trading warehouse.

For the full list of investment incentives offered by the BOI, please refer to the BOI's website (www.boiown.gov.ph/db-main-final/db-investor-incentives/), or consult a legal advisor.

II. Scope of Special Economic Zone Schemes and Geographical Location[3,4]

The Philippine Economic Zone Authority (PEZA)

The PEZA is a government agency in charge of promoting investments and granting incentives to businesses operating in PEZA Economic Zones. In addition, the PEZA registers, assists and facilitates companies' operations in these export oriented zones.

Only businesses engaged in specific activities will be able to register with the PEZA and therefore be granted incentives. A list of eligible activities in provided below.

Eligible Activities for PEZA Registration and Incentives

Export Manufacturing

Agro-industrial Export Manufacturing

Agro-industrial Biofuel Manufacturing

Logistics and Warehousing Services

Information Technology Service Export

Economic Zone Development and Operation

Facilities Providers

Utilities

Tourism

Medical Tourism

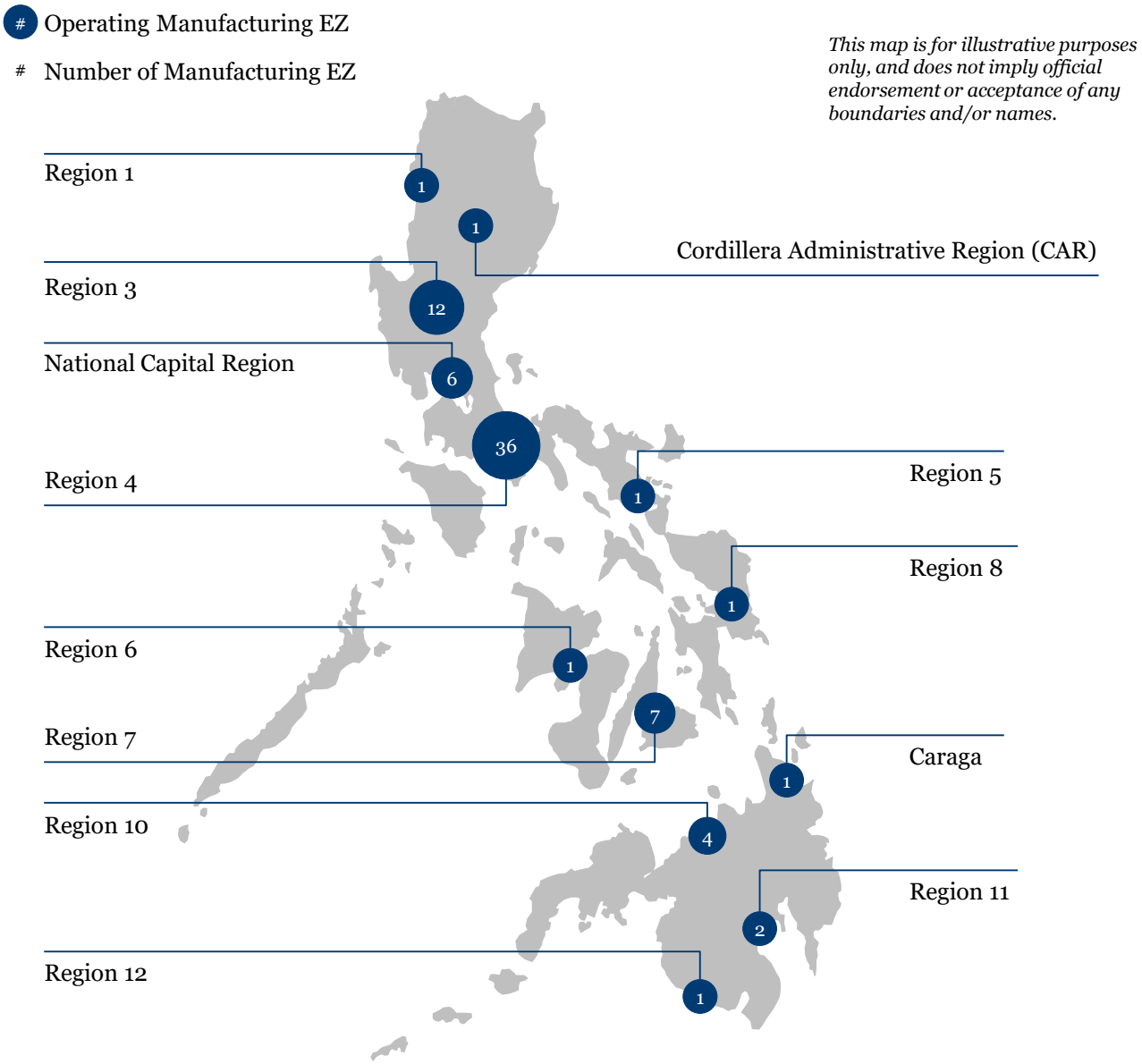
For additional details regarding the registration process with PEZA or eligible activities, please visit PEZA homepage (www.peza.gov.ph/index.php/eligible-activities-incentives/eligible-activities)

Economic Zones (EZs)

As per the official PEZA website, there are currently 379 operating EZs and 139 under development in the Philippines. In the country, there are five different types of EZs, each targeting a specific sector. Among the 379 operating EZs, 69% are Information Technology Parks (total of 262), 20% are Manufacturing EZs (74), 6% are Agro-Industrial EZs (22), 5% are Tourism EZs (19) and the rest are Medical Tourism Parks (2).

When considering operating manufacturing EZs only, more than 70% are located in and around Manila (i.e. Region 3, Region 4 and the National Capital Region).

Location of Operating Manufacturing EZs



Please refer to Appendix 2 for a complete list of locations for all the EZs.

Incentives for PEZA Registered Economic Zone Enterprises

The PEZA grants fiscal and non-fiscal incentives to businesses registered with the Authority. However, these incentives vary according to the type of EZ in which the company is located. The incentives that a business operating in a Manufacturing EZ can receive are detailed below.

Fiscal Incentives in Manufacturing Economic Zones

Category	Incentives
Income Tax Holiday (ITH)	100% corporate income tax exemption for: • 6 years for pioneer project • 4 years for non-pioneer project
Special Tax	After the ITH: 5% special tax on gross income and exemption from all national and local taxes.
Tax and Import Duty Exemption	Tax exemption and duty free importation of capital equipment, raw materials, spare parts, and machineries.
Reduced VAT	Possible 0% value added tax for local purchases.
Tax and fee exemption	• Exemption from wharfage dues and export tax, imports or fees • Payment exemption on various local imports, fees, licenses or taxes • Exemption from expanded withholding tax

Non-fiscal Incentives Manufacturing Economic Zones

Companies will be granted the following incentives:

- Simplified import and export procedures;
- Permission to hire foreign nationals in supervisory, technical or advisory positions;
- Special non-immigrant visa with multiple entry privileges granted to investors, employees in supervisory, technical or advisory position and their relatives.

For additional details and the full list of incentives provided, please refer to the PEZA homepage (www.peza.gov.ph/index.php/eligible-activities-incentives/non-fiscal-incentives).

III. Other Government Support Funding Schemes, Including Both Local and Foreign Investments[5,6]

Except for the BOI and PEZA, other government bodies and agencies can grant incentives to investors. A few examples are listed below. However, for more details please visit the BOI homepage (www.boiown.gov.ph/db-main-final/db-investor-incentives/).

Other Special Economic Zones Established

The following Authorities offer companies fiscal and non-fiscal incentives similar to those available for PEZA-registered enterprises:

- Zamboanga City Special Economic Zone Authority (ZCSEZA) manages a Special Economic Zone and a Freeport where import of machinery and other goods are exempt from local and national tariffs;
- Cagayan Economic Zone Authority (CEZA) manages the Cagayan SEZ and Freeport which are industrial and commercial zones opened to foreign investors;
- Aurora Economic Special Economic Zone Authority (ASEZA) also known as the Aurora Pacific Economic Zone, is designed to be a gateway to the Pacific;
- PHIVIDEC Industrial Authority (PIA), is a government body that manages a 3,000 hectare industrial estate in Misamis Oriental.

Science Park of the Philippines (SPPI)

Any company located within the Light Industry and Science Parks facilities developed by the SPPI, can qualify to register with the BOI and therefore may be entitled to the fiscal and non-fiscal incentives mentioned previously. Please refer to section 5 of this report for more details.

Source:

[1] *Republic of the Philippines Board of Investments*

[2] *More value for you business-Investment incentives in the Philippines, PwC, 2015*

[3] *The Special Economic Zone Act of 1995, The Congress of the Philippines, 1995*

[4] *The Philippine Economic Zone Authority*

[5] *Investment Incentive in the Philippines, PwC, 2015*

[6] *Science Park of the Philippines, Inc.*

10. Environmental Requirements

Executive Summary

In Philippines, the Department of Environment and Natural Resource (DENR) is the main body responsible for management and administration of environmental policy and standards as well as the enforcement of law. Philippine Environmental Policy and Philippine Environment Code are the primary environmental laws in Philippines. Any foreign businesses wishing to invest or do business in Philippines must abide by the Law.

Factories in Philippines may encounter environmental hurdles or problems, such as historical pollution, and license requirements.

There are environmental organisations and agencies in Philippines that can provide relevant environmental supporting services to those companies requiring assistance.

10. Environmental Requirements

I. Environmental Laws and Regulations in Philippines[1]

The Department of Environment and Natural Resource (DENR) is the primary regulatory body responsible for the conservation, management, development, and proper use of the country's environment and natural resources, as well as the licensing and regulation of all natural resources as may be provided for by law.

The Philippine's Environmental Policy is enunciated in Presidential Decree No.1151 (1977) which aims to formulate an intensive, integrated program of environmental protection that will bring about a concerted effort towards the protection of the entire spectrum of the environment. The Decree also established the environmental impact assessment system.

A. The Main Environmental Protection Administrations in Philippines

Department of Environment and Natural Resource (DENR)[2]

The responsibilities and main duties of the DENR are as follows:

- Assure the availability and sustainability of the country's natural resources through judicious use and systematic restoration or replacement, whenever possible;
- Increase the productivity of natural resources in order to meet the demands for forest, mineral, and land resources if a growing population;
- Enhance the contribution of natural resources for achieving national economic and social development;
- Promote equitable access to natural resources by the different sectors of the population; and
- Conserve specific terrestrial and marine areas representative of the Philippine natural and cultural heritage for present and future generations.

Environmental Management Bureau (EMB)[3]

Environmental Management Bureau (EMB) is one of the frontline functional departments of DENR, with the mission to protect, restore and enhance environmental quality towards good public health, environmental integrity and economic viability. The EMB takes responsibility for management of environmental problems and implementation of Environmental Impact Assessment System.

B. The Main Environmental Legislation in Philippines

Presidential Decree No. 1151 Philippine Environmental Policy[1]

Presidential Decree No. 1151 (1977) is the fundamental environmental policy of Philippine to clarify that every individual shall be responsible in contributing to the preservation and enhancement of the Philippine environment. As provided for in section 4 of the decree, all agencies of the national government, including government-owned or controlled corporations, as well as private corporations, firms and entities, shall prepare a detailed statement on significant environmental effects.

Presidential Decree No. 1152 Philippine Environment Code[4]

Presidential Decree No. 1152 (1977), or the Philippine Environment Code, provides a comprehensive program of environmental protection and management. The Code established specific environment management policies and prescribes environmental standards on: air quality; water quality management; land-use management; natural resources management and conservation; conservation and utilization of surface and ground waters; and waste management.

Presidential Decree No. 1586 on Establishing an Environmental Impact Statement System (Revised in 2014)[5,6]

The Philippine Environmental Impact Statement System (PEISS) was established under Presidential Decree No.1586 and is currently being implemented through its implementing rules and regulations.

The Decree introduced the concepts of Environmentally Critical Projects (ECP) and projects within Environmentally Critical Areas (ECA), and required no person, partnership or corporation shall undertake or operate any such declared ECP or project within an ECA without first securing an Environmental Compliance Certificate (ECC).

ECC is an environmental compliance document issued by the EMB certifying that the proponent has complied with all the requirements of the PEISS. The Certificate of Non-Coverage (CNC) is the other environmental compliance document issued by the EMB certifying that a project is not covered by the PEISS and is not required to secure an ECC.

Environmentally Critical Projects (ECP)[7]

ECPs refer to the projects with significant potential to cause negative environmental impacts, which are grouped into four main categories, namely: (i) heavy industries, (ii) resource extractive industries, (iii) infrastructure projects, and (iv) golf courses.

Environmentally Critical Areas (ECA)[7]

An area is considered an ECA if it exhibits any of the following characteristics:

- Areas declared by law as national parks, watershed reserves, wildlife preserves, and sanctuaries;
- Areas set aside as aesthetic, potential tourist spots;
- Areas which constitute the habitat for any endangered or threatened species of indigenous Philippine wildlife;
- Areas of unique historic, archeological, geological, or scientific interests;
- Areas which are traditionally occupied by cultural communities or tribes;
- Areas frequently visited and or hard-hit by natural calamities (geologic hazards, floods, typhoons, volcanic activity, etc.);
- Areas with critical slopes;
- Areas classified as prime agricultural lands;
- Recharged areas of aquifers;
- Water bodies;
- Mangrove areas; and
- Coral reefs.

Other Regulations Against Pollutions

Philippines has issued environmental laws on details of pollution control and waste management, etc.

Philippine Clean Air Act (1999)[8]

Known as the Philippine Clean Air Act of 1999, Republic Act No. 8749 (1999) sets forth the air pollution clearance and permits design, pollutants standard from stationary sources and vehicles. The Rules provide for various kinds of fines and penalties for the three categories of violations of the provisions of the Clean Air Act, the imprisonment could vary between six months to one day.

Ecological Solid Waste Management Act (2000)[9]

Republic Act No. 9003, or Ecological Solid Waste Management Act of 2000, stresses that "if specifically designated, the operator is considered to have primary responsibility for compliance; however, this does not relieve the owner of the duty to take all reasonable steps to assure compliance with these standards and any assigned conditions. When the title to a disposal is transferred to another person, the new owner shall be notified by the previous owner of the existence of these standards and of the conditions assigned to assure compliance."

Philippine Clean Water Act (2004)[10]

Republic Act No. 9275, known as Philippine Clean Water Act of 2004, applies to water quality management in all water bodies. According to article 5 of the act, anyone who commits prohibited acts such as discharging untreated wastewater into any water body will be fined for every day of violation.

Failure to undertake clean-up operations willfully shall be punished by fine and imprisonment of not less than two years and not more than four years. Failure or refusal to clean up which results in serious injury or loss of life or lead to irreversible water contamination shall be punished with fine and imprisonment of not less than 6 years and 1 day and not more than 12 years. In cases of gross violation, fine will be imposed for each day of violation. Criminal charges may also be filed.

A detailed list of environmental laws and regulations in Philippines can be found in Appendix 3.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China Have Issued with Philippines

China and the Association of Southeast Asian Nations (ASEAN) have made a series of statements and plans to further enhance the environmental cooperation, such as Joint Statement of China and ASEAN Leaders on Sustainable Development, China-ASEAN Environmental Protection Cooperation Strategy 2016-2020 and so on.

Details of the statements are listed in the following table:

Main Environmental-Related Joint Announcements and Statements[11,12]

Statements	Impact	Detail
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in awareness of environmental.	Clause 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clause 45, 47, 53, 54

D. The Main Environmental Permits in Philippines

Philippines has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Water Discharge Permit[13]

To maintain the quality of water bodies, all factories are required to secure a Discharge Permit from DENR, The Discharge Permit shall not be issued if the wastewater effluent does not pass the standards set by law, and failure to pass the standards can lead to the closure of the establishment.

Philippine Environmental Impact Statement System (PEISS)[6]

According to the PEISS, the projects can be classified into four categories based on their location and types, which have different compliance requirements. The details are listed in the following table:

Category	Description	Compliance Type	Application Documents
A	ECPs	ECC	• Environmental Impact Statement (EIS)
B	Non-ECPs located in ECAs	ECC	• Initial Environmental Examination Report (IEER) ; or • Initial Environmental Examination Checklist (IEEC)
C	Projects intended to directly enhance environmental quality or address existing environmental problems not falling under Category A or B.	CNC	• Project Description Report (PDR)
D	Projects unlikely to cause adverse environmental impacts	CNC	-

II. Environmental Situations in the Philippines

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period	Operation Period
Historical Pollution Issues	**License Requirements**	**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	• EIS/IEE/CNC • Water Discharge Permit	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project.

The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary.
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction.
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope.
- Results: The EDD provider will identify significant potential environmental risks in a report.

EDD Case

SLP Environmental Consultants was appointed to conduct Phase I Environmental Site Assessment for an operational sport equipment manufacturing facility located in Bataan Special Economic Zone, Philippines. The client was considering the acquisition of the site, and EDD was conducted as part of the overall transaction due diligence process. The primary objective of the study was to determine if soil and groundwater contamination was potentially present at the subject property as a consequence of historic and current activities on and or within the environs of the subject property.

For a list of organisations/agencies providing EDD services in Philippines, please refer to Section 10.III.A.

Pre-construction Period: Environmental Impact Statement (EIS)[14]

According to the DENR Administrative Order No. 2003-30 (DAO 2003-30), the proponent of ECPs (Category A) are required to submit an EIS to obtain ECC, which is a comprehensive study of the significant impacts of a project on the environment.

Resolutions

EIS

According to the DAO 2003-30, only accredited individuals, offices, or organisations are allowed to prepare EIS documents.

EIS Process:

- Supporting agency selection: Hiring an accredited consulting company to prepare an EIS (or do this by the proponents' accredited technical staff).
- Submission: Submitting the EIS to the Central Office of EMB, which then forwards it to the Environmental Impact Assessment Review Committee (EIARC) for evaluation.
- Approval: The EMB Director reviews final recommendation of EIARC, and approves or denies the ECC. Typically the whole processing time will be 120 working days.

Pre-construction Period: Initial Environmental Examination (IEE)[14,15]

According to the DENR Administrative Order No. 2003-30 (DAO 2003-30), the proponent of projects located in ECAs (Category B) are required to submit an IEER or IEEC to obtain ECC, which is a document similar to an EIS, but with reduced details and depth of assessment and discussion.

Resolutions

IEE

According to the DAO 2003-30, only accredited individuals, offices, or organisations are allowed to prepare IEE documents.

IEE Process:

- Screening: An IEEC is applicable for prescribed projects with certain types and limits to obtain ECC, otherwise an IEER is required.
- Supporting agency selection: Hiring an accredited consulting company to prepare an IEE document (or do this by the proponents' accredited technical staff).
- Submission: Submitting the IEEC or IEER to the Regional Office of EMB (or online).
- Approval: The DENR Regional Executive Director (RED) determines whether the project IEE may further require an EIS, if not, the RED will approve or deny the ECC. Typically the whole processing time will be 30 working days for IEEC, and 60 working days for IEER (For online application, the processing time will be within 7 days after receipt if complete).

Types of projects with IEEC requirements for the key industries can be found in Appendix 4.

Pre-construction Period: Certificate of Non-Coverage (CNC)[16]

According to the DENR Administrative Order No. 2003-30 (DAO 2003-30), the projects under Category C and Category D may secure a CNC.

Resolutions

CNC

The project proponents could submit an application form to the EMB (or online) to obtain a CNC.

CNC Process

- Submission: Proponents of Category C projects should submit the application form and a PDR to the EBM Regional Office, while the proponents of Category D shall not be required with a PDR and can submit the application form online (The CNC online application website: http://cnconline.emb.gov.ph/projectchecker/).
- Approval: The EMB Regional Office typically takes 15 working days to process and approve the application, while it will take shorter days to get the approve online.

EIS/IEE Case

According to the requirements of PEISS, a 300-MW Circulating Fluidized Bed coal-fired power project located in Barangay Binugao, Davao City was required with an EIS to obtain ECC. The Apercu company was appointed to prepare the EIS for this thermal power plant project. Baseline studies conducted include geologic surveys, extensive flora and fauna surveys, freshwater and marine ecology surveys, etc. Data on soil, water, air and noise were also gathered, as well as socio-economic and health data from Davao City. The ECC for the project was obtained in September 2011.

For a list of organisations/agencies providing EIS/IEE supporting services in Philippines, please refer to Section 10.III.B.

Pre-construction Period: Water Discharge Permit[13,17]

The businesses that discharge wastewater into sewage or wastewater treatment facilities must apply for a Water Discharge Permit and renew it annually.

Resolutions

Water Discharge Permit

- For areas around the Laguna Lake Region, the Discharge Permit should be secured from Laguna Lake Development Authority (LLDA).
- For areas outside Laguna Lake region, the Discharge Permit should be secured from DENR.
- The process typically takes 20 working days.

Operation Period: Environmental Pollution Problems

During the operation period, company may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leading to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The EMB is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For a list of organisations/agencies providing environmental monitoring, waste disposal/recycle services and other related services in Philippines, please refer to Section 10.III.C & D.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Philippines

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewelry	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standard between Philippines and China

Please refer below legend for the symbols list out in the comparison tables within this section.

In Philippines, most of the wastewater from the main industrial zones are discharged into class C water body, such as First Philippine Industrial Park, Light Industry & Science Park, Carmelray Industrial Park and so on. As a result, for the Philippines standards, the values in the table refer to the limit of effluent discharged into class C water body. The class C water body is the water sources for fishery, recreation (boating, fishing, ect.), and agriculture.

For the China standards (except for electronic industry and textile industry), values in brackets refer to the limit of effluent discharged into water supply resources and fishery water areas, and the values outside the brackets refer to the limit of effluent discharged into industrial water area, landscape water area, and agricultural water area. For the electronic and textile industry in China, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of China is stricter than Philippines.

"↑" indicates the requirement of Philippines is stricter than China.

"=" indicates the requirement of China is the same as Philippines.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non-industrial areas in Philippines at the moment, i,e. residential areas. If there are plans to build or operate factories in such area, a business should confirm with local environmental department whether specific regional requirements exist.

Besides, for the purposes of streamlining compliance and enforcement of General Effluent Standards, the standards regulated significant parameters for the specific industries, please refer to the Philippine Standard Industrial Classification (PSIC), and find the significant parameters for the industries according to the PSIC codes.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Philippines and China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	pH		6.0-9.5	6.0-9.0	↓
		Total suspended solids		100	50	↓
		COD		100	80	↓
		BOD		50[c]	-	N/A
		Mercury		0.004	-	N/A
		Ammonia as NH_3-N	Special electronic materials	0.5	10/20[d]	↑/↑
			Electrical units		5	↑
			Printed circuit boards		20	↑
			Semiconductor devices		10	↑
			Display device and photoelectron components		5	↑

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Ammonia as NH_3-N	Electron terminals products	0.5	5	↑
		Total nitrogen	Special electronic materials	-	20/30[d]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[d]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Sulfate		550	-	N/A
		Copper	Special electronic materials	-	0.5	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		0.5	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		-	N/A
		Copper as dissolved copper		0.04	-	N/A
		Zinc	Special electronic materials	4.0	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Zinc	Display device and photoelectron component	4.0	1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.01	0.05	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↑
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Chromium as hexavalent chromium	Special electronic materials	0.02	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↑
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	0.04	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	-	0.2	N/A
			Electrical units		0.2	N/A
			Printed circuit boards		0.2	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A
		Cyanide as free cyanide		0.2	-	N/A
		Silver	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A
			Printed circuit boards		0.3	N/A
			Semiconductor devices		0.3	N/A
			Display device and photoelectron components		0.3	N/A
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Manganese		2	-	N/A
		Fluoride	Special electronic materials	2	10	↑
			Electrical units		10	↑
			Printed circuit boards		10	↑
			Semiconductor devices		10	↑
			Display device and photoelectron components		10	↑
			Electron terminals products		-	N/A
		Petroleum		-	3.0	N/A
		Oil and grease		5.0	-	N/A
		Selenium		0.04	-	N/A
		Boron		3	-	N/A
		Iron		7.5	-	N/A
		Barium		6	-	N/A
		Trichloroethylene		9	-	N/A
		Phenol & phenolic substances[e]		0.5	-	N/A
		Chloride		450	-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas		Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas		Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*
b. *China Standards: Emission Standard of Pollutants for Electrical Industry[20], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*
c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*
d. *The value applies to manufacturers who run aluminum electrolytic capacitors electrode foil .*
e. *Phenols include 2-chlorophenol, 2, 4-dischlorophenol, and 2,4,6-trichlorophenol.*

Garment & Clothing (Part 1/2)

Water pollutants and air pollutants are the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Philippines and China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Philippines[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, temperature and colour)	pH	6.0-9.5	6.0-9.0	↓
		COD	100	80	↓
		BOD	50[c]	20	↓
		Colour[d]	150	50	N/A
		Temperature[e]	3	-	N/A
		Ammonia as NH_3-N	0.5	10	↑
		Total nitrogen	-	15	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine dioxide	-	0.5	N/A
		AOX	-	12	N/A
		Sulfide	-	0.5	N/A
		Sulfate	550	-	N/A
		Aniline	-	Not be detected	N/A
		Chromium as hexavalent chromium	0.02	Not be detected	↓
		Trichloroethylene	9	-	N/A
		Copper as dissolved copper	0.04	-	N/A
		Phenol & phenolic substances[f]	0.5	-	N/A
		Oil and grease	5.0	-	N/A
		Cyanide as free cyanide	0.2	-	N/A
		Surfactants (MBAS)	15	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas	Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas	Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Garment & Clothing (Part 2/2)

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*
b. *China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[22], Integrated Emission Standard of Air Pollutants[23], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*
c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*
d. *In China, the method of measuring colour is dilution method, while in Philippines is visual comparison method. The measuring method and the unit applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*
e. *General Effluent Standards values for temperature refer to the temperature difference of the background value and discharge point. Specific sampling locations shall be established based on the EMB Ambient Water and Effluent Quality Monitoring Manual. Sampling locations for temperature monitoring, established and approved by EMB, prior to this Order shall remain valid. The unit for temperature is ˚C.*
f. *Phenols include 2-chlorophenol, 2, 4-dischlorophenol, and 2,4,6-trichlorophenol.*

Watches & Jewellery

Water pollutants from washing process and air pollutants from polishing process are the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Philippines and China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Philippines[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH)	pH	6.0-9.5	6.0-9.0 (6.0-9.0)	↓ (↓)
		Total suspended solids	100	150 (70)	↑ (↓)
		COD	100	150 (100)	↑ (=)
		BOD	50[c]	30 (20)	↓ (↓)
		Ammonia as NH_3-N	0.5	25 (15)	↑(↑)
		Cyanide as free cyanide	0.2	-	N/A
		Cyanide	–	0.5 (0.5)	N/A
		Chromium as hexavalent chromium	0.02	0.5 (0.5)	↑(↑)
		Petroleum	-	10 (5)	N/A
		Oil and grease	5.0	15 (10)	↑ (↑)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas	Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas	Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*

b. *China Standards: Integrated Wastewater Discharge Standard[24], Integrated Emission Standard of Air Pollutants[23], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*

c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*

Toys & Games

Water pollutants from washing process, the air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Philippines and China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Philippines[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH)	pH	6.0-9.5	6.0-9.0 (6.0-9.0)	↓ (↓)
		Total suspended solids	100	150 (70)	↑ (↓)
		COD	100	150 (100)	↑ (=)
		BOD	50[c]	30 (20)	↓ (↓)
		Ammonia as NH_3-N	0.5	25 (15)	↑(↑)
		Sulfide	-	1.0 (1.0)	N/A
		Sulfate	550	-	N/A
		Phenol & phenolic substances[d]	0.5	-	N/A
		Volatile phenols	-	0.5 (0.5)	N/A
		Petroleum	-	10 (5)	N/A
		Oil and grease	5.0	15 (10)	↑ (↑)
		Cyanide as free cyanide	0.2	-	N/A
		Cyanide	–	0.5 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas	Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas	Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*

b. *China Standards: Integrated Wastewater Discharge Standard[24], Integrated Emission Standard of Air Pollutants[23], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*

c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*

d. *Phenols include 2-chlorophenol, 2, 4-dischlorophenol, and 2,4,6-trichlorophenol.*

Hi-tech (Part 1/5)

Water and air pollutants from chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Philippines and China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	pH		6.0-9.5	6.0-9.0	↓
		Total suspended solids		100	50	↓
		COD		100	80	↓
		BOD		50[c]	-	N/A
		Mercury		0.004	-	N/A
		Ammonia as NH_3-N	Special electronic materials	0.5	10/20[d]	↑/↑
			Electrical units		5	↑
			Printed circuit boards		20	↑
			Semiconductor devices		10	↑
			Display device and photoelectron components		5	↑
			Electron terminals products		5	↑
		Total nitrogen	Special electronic materials	-	20/30[d]	N/A
			Electrical units		15	N/A
			Printed circuit boards		30	N/A
			Semiconductor devices		15	N/A
			Display device and photoelectron components		15	N/A
			Electron terminals products		15	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[d]	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		0.5	N/A
		Sulfide	Special electronic materials	-	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	N/A
			Semiconductor devices		1.0	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Sulfate		550	-	N/A
		Copper	Special electronic materials	-	0.5	N/A
			Electrical units		0.5	N/A
			Printed circuit boards		0.5	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		0.5	N/A
			Electron terminals products		-	N/A
		Copper as dissolved copper		0.04	-	N/A
		Zinc	Special electronic materials	4.0	1.5	↓
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓
			Display device and photoelectron component		1.5	↓
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.01	0.05	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↑
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Chromium as hexavalent chromium	Special electronic materials	0.02	0.2	↑
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	↑
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	0.04	0.3	↑
			Electrical units		0.3	↑
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1	0.2	↑
			Electrical units		0.1	=
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑
			Display device and photoelectron components		0.2	↑
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0	0.5	↓
			Electrical units		0.5	↓
			Printed circuit boards		0.5	↓
			Semiconductor devices		0.5	↓
			Display device and photoelectron components		0.5	↓
			Electron terminals products		-	N/A

Hi-tech (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Philippines[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Cyanide	Special electronic materials	-	0.2	N/A
			Electrical units		0.2	N/A
			Printed circuit boards		0.2	N/A
			Semiconductor devices		0.2	N/A
			Display device and photoelectron components		0.2	N/A
			Electron terminals products		-	N/A
		Cyanide as free cyanide		0.2	-	N/A
		Silver	Special electronic materials	-	0.3	N/A
			Electrical units		0.3	N/A
			Printed circuit boards		0.3	N/A
			Semiconductor devices		0.3	N/A
			Display device and photoelectron components		0.3	N/A
			Electron terminals products		-	N/A
		Manganese		2	-	N/A
		Fluoride	Special electronic materials	2	10	↑
			Electrical units		10	↑
			Printed circuit boards		10	↑
			Semiconductor devices		10	↑
			Display device and photoelectron components		10	↑
			Electron terminals products		-	N/A
		Petroleum		-	3.0	N/A
		Oil and grease		5.0	-	N/A
		Selenium		0.04	-	N/A
		Boron		3	-	N/A
		Iron		7.5	-	N/A
		Barium		6	-	N/A
		Trichloroethylene		9	-	N/A
		Phenol & phenolic substances[e]		0.5	-	N/A
		Chloride		450	-	N/A

Hi-tech (Part 5/5)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Philippines[a]	Mainland China[b]	
Hi-tech	Air Pollutants mg/m^3	TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas	Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas	Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*
b. *China Standards: Emission Standard of Pollutants for Electrical Industry[20], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*
c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*
d. *The value applies to manufacturers who run aluminum electrolytic capacitors electrode foil .*
e. *Phenols include 2-chlorophenol, 2, 4-dischlorophenol, and 2,4,6-trichlorophenol.*

Food & Beverage, Chemicals & Plastics[19]

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc. In Philippines, the relevant standards for pollutants are General Effluent Standards.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Philippines, the chemicals & plastics industry should be in compliance with the General Effluent Standards. However, for air pollutants, there are specific limits regulated in pollution from stationary sources such as NO_X for industries related manufacture of nitric acid and SO_X for industries related manufacture of sulfuric acid and so on.

General Industries (Part 1/2)

General industries refer to those industries which do not produce massive or characteristic pollutants (such as the logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general effluent standards available in both countries.

The following table compares the general effluent/emission standards of Philippines and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Philippines[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	6.0-9.5	6.0-9.0 (6.0-9.0)	↓ (↓)
		Total suspended solids	100	150 (70)	↑ (↓)
		COD	100	150 (100)	↑ (=)
		BOD	50[c]	30 (20)	↓ (↓)
		Ammonia as NH_3-N	0.5	25 (15)	↑(↑)
		Sulfide	-	1.0 (1.0)	N/A
		Sulfate	550	-	N/A
		Formaldehyde	-	2.0 (1.0)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for light industrial areas	Daytime 70 Night 60	-	N/A
		Noise limits for heavy industrial areas	Daytime 75 Night 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

General Industries (Part 2/2)

Note:

a. *Philippines Standards: General Effluent Standards[18], Pollution From Stationary Sources[8], and Environmental Quality Standards for Noise in General Areas[19].*
b. *China Standards: Integrated Wastewater Discharge Standard[24], Integrated Emission Standard of Air Pollutants[23], and Emission Standard for Industrial Enterprises Noise at Boundary[21].*
c. *The limit value of BOD in wastewater discharged in the table applies to establishments with influent BOD less than 3,000 mg/L. For establishments with influent BOD on the range of 3,000-6500 mg/L (6500 not included), the limit value of BOD in wastewater discharged is 100 mg/L. For establishments with influent BOD on the range of 6,500-10,000 mg/L (10,000 not included), the limit value of BOD in wastewater discharged is 200 mg/L. For establishments with influent BOD on the range of 10,000-30,000 mg/L, the limit value of BOD in wastewater discharged is 600 mg/L. For establishments with influent BOD greater than 30,000 mg/L, the limit value of BOD in wastewater discharged is 900 mg/L.*

III. The Main Local Supporting Organisations / Agencies in Philippines

Philippines has developed a complicated environmental management system along a relatively long history. Owners as well as operators of the factory shall carefully identify pollutants classification and application procedures accordingly.

To ensure environmental compliance and to maintain a good relationship with the public, the investor should pay attention to the environment survey, license application and must meeting the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environmental related support services.

A. EDD Services in Philippines

Agency/ Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Environmental and Social Risk Management; • Environmental and Health and Safety (EHS) Regulatory Compliance Assessments; and • Independent assurance, etc.	+63 (2) 845 2728
SLP Environmental	• Environmental Due Diligence; • Technical Assistance & Advisory Services; and • Environmental & Social Impact Assessment, etc.	+ 66 (0) 2168 7016 (ASEAN headquarters)
Apercu Consultants, Inc.	• Environmental Due Diligence; • Environmental Impact Assessment (EIA); and • Environmental Performance Report and Management Plan (EPRMP), etc.	+63 (2) 929 2778
Pacific Spectrum Environmental Research and Consultancy, Inc.	• Environmental Due Diligence; • Environmental Compliance Reporting; • Environmental Monitoring and Sampling; and • Environmental Impact Assessment, etc.	+63 (2) 637 8669

B. EIA Supporting Service in Philippines

Agency/ Organisation	Service Coverage	Contact
Pacific Spectrum Environmental Research and Consultancy, Inc.	• Environmental Due Diligence; • Environmental Compliance Reporting; • Environmental Monitoring and Sampling; and • Environmental Impact Assessment Modules & Environmental Audit, etc.	+63 (2) 637 8669
Apercu Consultants, Inc.	• Environmental Due Diligence; • Environmental Impact Assessment (EIA); • Environmental Performance Report and Management Plan (EPRMP); and • Monitoring Surveys, etc.	+63 (2) 929 2778
Prism Express	• Environmental and Social Impact Assessment; • Environmental Management Advisory Services; • Solid Waste Management; and • Environmental/Compliance Audit, etc	+63 (2) 865 1223

For full list of EIA consulting company, please refer to: eia.emb.gov.ph/?page_id=481

C. Environmental Monitoring Service in Philippines

Agency/ Organisation	Service Coverage	Contact
Berkman Systems, Inc.	• Operation, Maintenance and Monitoring – Air, Water, and Noise; • Environmental Impact Assessment (EIA) Studies; • Wastewater and Sewerage Treatment Facilities; and • Environmental Management Services, etc.	+63 (2) 863 6129
Triple i Consulting, Inc.	• Self Monitoring and Compliance Reporting; • Environmental Impact Assessment; • Environmental Compliance Certificate; and • Pollution Control Cases; etc.	+63 (2) 551 9012-13
AMETEK MOCON	• On-Line Gas Chromatographs; • Hydrocarbon Analyzers; • OEM Sensors & Detectors; • Specialty & Industrial Gas Analyzers; • Toxic Gas Monitoring; and • Environmental Monitoring, etc.	+63 (2) 912 9227

D. Waste Disposal and Recycling Services in Philippines

Agency/ Organisation	Service Coverage	Contact
Tana Oy	• Landfill Operations; • Recycling of Waste Tyres; • Recycling of Municipal Solid Waste; and • Recycling of Construction and Demolition Waste, etc.	+63 (32) 520 2214
ANDRITZ HYDRO, Inc.	• WEEE And Refrigerators Recycling; • Metals Recycling and Special Processing; • Recycling of Wood Waste; and • Recycling of Organic Waste, etc.	+63 (2) 501 5093
Wacuman Incorporated	• Waste Disposal Facility; • Waste Hauling Services; • Material Recovery Facility; and • Environmental Consultancy, etc.	+63 (2) 990 2613
Cebu Megalube	• Hazardous Waste Treatment Service; • Hazardous Waste Transport Service; and • Marine Oily Waste Disposal, etc.	+63 (32) 268 3043
Genesis Water Technologies, Inc.	• Wastewater Solutions; • Process Water Solutions; • Drinking Water Solutions; and • Water Treatment Media Solutions, etc.	+63 (2) 771 1159

For a full list of Treatment, Storage, and Disposal facilities, please refer to: emb.gov.ph/wp-content/uploads/2019/05/List-of-TSD-Facilities-for-posting-April-30-2019.pdf

For a list of transporters, please refer to: emb.gov.ph/wp-content/uploads/2019/05/List-of-HW-Transporters-for-posting-April-30-2019.pdf

Source:

[1] Presidential Decree No. 1151 Philippine Environmental Policy , 1977

[2] DENR Mandate, Vision and Mission, DENR 2019

[3] EMB Vision and Mission, Environmental Management Bureau, EMB 2019

[4] Presidential Decree No. 1152 Philippine Environment Code, 1977

[5] Presidential Decree No. 1586 on Establishing an Environmental Impact Statement System, 1978

[6] DENR Administrative Order No. 2003-30 on Implementing Rules and Regulations (IRR) for the Philippine Environmental Impact Statement (EIS) System, DENR 2003

[7] Proclamation No. 2146 Proclaiming Certain Areas And Types Of Projects As Environmentally Critical And Within The Scope Of The Environmental Impact Statement System Established Under Presidential Decree No. 1586, 1981

[8] Republic Act No. 8749 Philippine Clean Air Act , 1999

[9] Republic Act No. 9003 Ecological Solid Waste Management, 2001

[10] Republic Act No. 9275 Philippine Clean Water Act, 2004

[11] Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010

[12] China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017

[13] Discharge Permit for Wastewater Effluent , Triple i Consulting 2012

[14] Requirements For Environmental Impact Assessment System, aboutphilippines.org 2019

[15] EMB Memorandum Circular No.2019-003 on Updated Guidelines in the Processing and Issuance of ECC for Category B Projects

[16] EMB Memorandum Circular No.2015-003 on Implementing of Online Processing of Certificate of Non-Coverage (CNC) Applications for Category D Projects under PEISS

[17] Environmental Permit, Triple i Consulting 2019

[18] Water Quality Guidelines and General Effluent Standards, 2016

[19] Environmental Quality Standards for Noise in General Areas, 1988

[20]Emission Standard of Pollutants for Electrical Industry,2nd Edition for Suggestion

[21] Emission Standard for Industrial Enterprises Noise at Boundary, 2008

[22] Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry ,GB 4287-2012

[23] Integrated Emission Standard of Air Pollutants, GB 16297-1996

[24] Integrated Wastewater Discharge Standard, GB 8978-1996

[25] Republic Act No. 6969 Toxic Substances and Hazardous and Nuclear Wastes Control, 1990

[26] Republic Act No. 9483 Oil Pollution Compensation Act, 2007

Appendix

Appendix 1

List of Foreign-owned Bank Branches and Representative Offices in the Philippines (Part 1/2)

#	Bank Type	Bank
1	Commercial Bank Branch	Bangkok Bank Public Co. Ltd.
2		Bank of America, N.A.
3		Bank of China Limited – Manila Branch
4		Citibank, N.A.
5		JP Morgan Chase Bank, N.A.
6		KEB Hana Bank – Manila Branch
7		Mega International Commercial Bank Co., Ltd.
8		MUFG Bank, Ltd.
9		Chang Hwa Commercial Bank, Ltd. – Manila Branch
10		CIMB Bank Philippines Inc.
11		Industrial and Commercial Bank of China Limited – Manila Branch
12		First Commercial Bank, Ltd., Manila Branch
13		Cathay United Bank Co., LTD. – Manila Branch
14		Shinhan Bank – Manila Branch
15		Sumitomo Mitsui Banking Corporation – Manila Branch
16		Industrial Bank of Korea Manila Branch
17		United Overseas Bank Limited, Manila Branch
18		Hua Nan Commercial Bank, Ltd. – Manila Branch
1	Representative Office	Wells Fargo Bank National Association
2		Korea Development Bank Representative Office

Appendix 1

List of Foreign-owned Bank Branches and Representative Offices in the Philippines (Part 2/2)

#	Bank Type	Bank
3	Representative Office	Credit Suisse AG Representative Office, Philippines
4		Bank of Taiwan Representative Office
5		Bank of Singapore Limited Philippine Representative Office
6		DBS Bank, Ltd.
7		Japan Bank For International Cooperation
8		Rothschild (Singapore) Limited Philippine Representative Office
9		The Bank of New York Mellon
10		Korea Eximbank Manila Representative Office
11		UBS AG Philippine Representative Office
12		The Ogaki Kyoritsu Bank, Ltd. Representative Office
13		State Bank of India

Appendix 2

Breakdown of Operating Economic Zones by Region

Region	Major City	Manufacturing	IT	Agro-Industrial	Tourism	Medical Tourism
National Capital Region (NCR)	Manilla	6	155	0	5	1
Cordillera Administrative Region (CAR)	Baguio City	1	3	0	1	0
Region 1	Pangasina, illlocos Norte	1	3	0	1	0
Region 2	Isabela	0	0	1	0	0
Region 3	Bataan, Bulacan, Pampanga	12	9	0	0	0
Region 4	Batangas, Cavite, Palawan	36	14	3	4	1
Region 5	Camarines Norte	1	5	0	2	0
Region 6	San Carlos City	1	18	1	2	0
Region 7	Cebu	7	39	2	3	0
Region 8	Leyte	1	2	2	0	0
Region 9	Zamboanga Del Norte	0	0	1	0	0
Region 10	Misamis Oriental, Lanao Del Norte	4	2	3	1	0
Region 11	Davao City, Davao Del Norte	2	11	3	0	0
Region 12	General Santos City	1	1	6	0	0
Caraga	Surigao Del Norte	1	0	0	0	0

Appendix 3

The Main Environmental Laws/Regulations in Philippines

Department of Environment and Natural Resource	1	Presidential Decree No. 1152 Philippine Environment Code (1977)[4]
	2	Republic Act No. 8749 Philippine Clean Air Act (1999)[8]
	3	Republic Act No. 9275 Philippine Clean Water Act (2004)[10]
	4	Republic Act No. 6969 Toxic Substances and Hazardous and Nuclear Wastes Control (1990)[25]
	5	Republic Act No. 9483 Oil Pollution Compensation Act (2007)[26]
	6	Republic Act No. 9003 Ecological Solid Waste Management (2001)[9]

The Main Environmental Ambient Standards in Philippines

Ambient Standards	1	Water Quality Guidelines for Primary Parameters[18]
	2	Water Quality Guidelines for Secondary Parameters-Inorganics[18]
	3	Water Quality Guidelines for Secondary Parameters-Metals[18]
	4	Water Quality Guidelines for Secondary Parameters-Organics[18]
	5	National Ambient Air Quality Guideline Values[8]
	6	National Ambient Air Quality Standards for Source Specific Air Pollutants from Industrial Sources/Operations[8]

Appendix 3

The Main Environmental Effluent Standards in Philippines

Effluent Standards	1	General Effluent Standards[18]
	2	Effluent Standards for BOD Applicable to Establishments with Influent BOD of ≥ 3,000 mg/L[18]
	3	Pollution From Stationary Sources[8]
	4	Environmental Quality Standards for Noise in General Areas[20]

Appendix 4

List of Projects which are Applicable for IEEC

Industries	Type of Projects	Limits
Chemicals & Plastics	Organic Fertilizer Manufacturing (Composting) Facilities	With an annual production capacity exceeding 10,000 bags (50kg/bag)
	Plastic Recycling	None
Logistics & Transportation	Cold chain	Stationary/fixed facility used for storing agricultural products and shall be a component of Sustainable Logistics Dev't Program of Development Bank of the Philippines (DBP)
	Ro-ro terminal	Under the Sustainable Logistics Dev't Program (SLDP) of DBP with Access Roads (= or less than 10 kilometers) and Terminal Facilities (= and above 1,000 sq. m. to 10,000 sq. m. of floor area)

Glossary – Section 1 to 9 Operational Requirements

AEP	Alien Employment Permit
AFTA	ASEAN Free Trade Agreement
AHTN	ASEAN Harmonised Tariff Nomenclature
ASEAN	Association of Southeast Asian Nation
BIR	Bureau of Internal Revenue
BOI	Board Of Investment
BSTI	Business Innovation Through S&T programme
CIT	Corporate Income Tax
CMTA	Customs Modernization and Tariff Act
CRADLE	Collaborative Research and Development to Leverage Philippines Economy
DOLE	Department of Labour and Employment
DOST	Department of Science and Technology
DTI	Department of Trade and Industry
EFTA	European Free Trade Association
EZ	Economic Zones
FDI	Foreign Direct Investment
FIA	Foreign Investments Act of 1991
FINL	Foreign Investment Negative List
FTA	Free Trade Agreement
GDP	Gross Domestic Product
HDMF	Home Development Mutual Fund

HEI	High Education Institution
HNRDA	Harmonized National Research and Development Agenda
ICT	Information and Communications Technology
IP	Intellectual Property
IPP	Investment Priorities Plan
ITH	Income Tax Holiday
LISP	Light Industry and Science Park
MCIT	Minimum Corporate Income Tax
MICT	Manila International Container Terminal
MTCs	Collectively: Metropolitan Trail Courts, Municipal Trial Courts, the Municipal Trial Courts in Cities, and Municipal Circuit Trial Courts
MW	Megawatt
NHIP	National Health Insurance Program
NICER	Niche Centers in the Regions for R&D programme
NSTP	National Science Technology Plan 2002-2020
ODA	Official Development Assistance
OPC	One person corporation
PAS	Philippine Accounting Standards
PCA	Philippine Competition Act
PCC	Philippine Competition Commission
PEZA	The Philippine Economic Zone Authority
PFRS	Philippine Financial Reporting Standard
PPP	Public Private Partnerships
PS-DBM	Procurement Service of the Department of Budget and Management
R&D	Research and Development

RCEP	Regional Comprehensive Partnership
RDLead	R&D Leadership programme
RHQ	Regional or Area Headquarters
ROHQ	Regional Operating Headquarters
S&T	Science and Technology
SEC	Securities Exchange Commission
SEZ	Special Economic Zone
SPPI	Science Park of the Philippines Inc.
SSS	Social Security System
STI	Science, Technology and Innovation
VAT	Value Added Tax

Glossary – Section 10 Environmental Requirements

AOX	Absorbable Organic Halogen
ASEAN	Association of Southeast Asian Nations
BOD	Biochemical Oxygen Demand
CNC	Certificate of Non-Coverage
COD	Chemical Oxygen Demand
DAO 2003-30	DENR Administrative Order No. 2003-30
DBP	Development Bank of the Philippines
DENR	Department of Environment and Natural Resources
ECA	Environmentally Critical Areas
ECC	Environmental Compliance Certificate
ECP	Environmentally Critical Projects
EDD	Environmental Due Diligence
EIARC	Environmental Impact Assessment Review Committee
EMB	Environmental Management Bureau
IEE	Initial Environmental Examination
IEEC	Initial Environmental Examination Checklist
IEER	Initial Environmental Examination Report
NMHC	Non-methane Volatile Organic Compounds
PDR	Project Description Report
PEISS	Philippine Environmental Impact Statement System
PSIC	Philippine Standard Industrial Classification

3.10 Guide to Singapore

Opportunities and Limitations in Manufacturing

Contents

Published in January 2020

1. Overview of Singapore

Executive Summary

As a result of successful economic reforms, Singapore has experienced rapid economic growth in the past two decades. The city-state is now a highly developed country and also the fourth largest financial centre in the world.

Singapore has 25 signed and effective bilateral free trade agreements (FTAs) with countries in Asia, Europe, Middle East, as well as North and South America. These agreements eliminate tariffs and incentivise investments in a number of industries. As part of the Association of Southeast Asian Nations (ASEAN), Singapore benefits from six other multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand, in addition to the ASEAN Free Trade Area.

Singapore is an attractive destination for foreign investors due to its open market, strong legislation system and free financial market. However, the high dependence on the service sector exposes the nation to global economic risks and trade disputes.

1. Overview of Singapore

I. Country Profile[1,2,3,4,5,6,7]

Singapore is an island state in Southeast Asia which has been experiencing significant economic growth since its independence in 1965. The nation is indeed one of the "Four Asian Tigers" (with Hong Kong, South Korea and Taiwan) which together are some of the most developed economies of the region. As one of the major financial centres in the world, the country has witnessed strong growth over the past two decades. Economic performance however is slowing down, as the nation is expected to have a gross domestic product (GDP) growth of only 1.3% between 2018 and 2019. Nevertheless, the government is looking to push for the digital transformation of Singapore, thus placing innovation as one of the country's major economic drivers.

GDP *(in USD)*
365.0 billion (2019f)
360.4 billion (2018)

GDP Per Capita *(in USD)*
52,890 (2019f)
62,590 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 0%
Industry: 24.8%
Services: 75.2%

External Trade *(% of GDP)*
Import: 149.8% (2018)
Export: 176.4% (2018)

Population
5.80 million (2019)
World ranking: 114/191

Median Age
34.9 (2018)
World ranking: 84/228 (from oldest to youngest)

Official Languages
English
Mandarin
Malay
Tamil

English Literacy
Very high proficiency (2019)
World ranking: 5/100

Government Structure
Unitary multiparty republic

Land Area
709 sq km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[8,9]

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. It allows companies located in two or more countries to trade goods with each other at reduced or zero tariffs. Singapore is a founding member of the Association of Southeast Asian Nations (ASEAN) and is a full member of the World Trade Organization (WTO) since 1995. The country has therefore a preferential access to the most developed Southeast Asian economies and is strongly implicated in international exchanges.

Singapore has 25 signed and effective free trade agreements (FTAs), including the ASEAN Free Trade Area. The country has also launched negotiations with five economic partners (including Canada, Egypt, Mexico, Pakistan and Ukraine).

In addition to the FTA with the European Union (EU) that recently entered into effect, Singapore signed in 2019 an agreement with the Eurasian Economic Union (EEU). This FTA reduces tariffs on 90% of the products that Singapore exports to the EEU, including mineral fuels, machinery and mechanical equipment, pharmaceutical and chemical products, or food products.

Signed and Effective Bilateral Trade Agreements (Part 1/3)

	Affected Industry	Agreement (effective date)
	• All	**New Zealand – Singapore Closer Economic Partnership (2001)** • Eliminated all tariffs on Singapore's exports to New Zealand. • In 2017, New Zealand was Singapore's 6th largest investor.
	• All	**Japan – Singapore Economic Partnership Agreement (2002)** • Eliminated tariffs for 92% of Singapore's exports to Japan. • Increased protection for Singapore investments in Japan.
	• Manufacturing • Agriculture	**European Free Trade Association (EFTA) – Singapore Free Trade Agreement (2003)** • Granted free duty for most industrial and agricultural products exported to Singapore. • Additionally covered investment protection, government procurement, and intellectual property protection.
	• All	**Singapore – Australia Free Trade Agreement (2003)** • Eliminated all tariffs for Singapore's exports to Australia. • Facilitated procedures in areas such as customs, government procurement, e-commerce, intellectual property, and business travel to foster a more open business environment.
	• All	**United States (US) – Singapore Free Trade Agreement (2004)** • Elimination of all tariffs for Singapore's exports to the US. • Highly increased the number of products eligible for preferential tariff treatment. • First FTA that the US signed with an Asian country.

Signed and Effective Bilateral Trade Agreements (Part 2/3)

	Affected Industry	Agreement (effective date)
	• All	**Singapore – Jordan Free Trade Agreement (SJFTA) (2005)** • Eliminated all tariffs for Singapore's exports to Jordan. • The first FTA that Singapore signed with a Middle East country. • The first FTA that Jordan signed with a country in Asia.
	• Electronics • Instrumentation • Plastics • Pharmaceutical	**India – Singapore Comprehensive Economic Cooperation Agreement (2005)** • Tariffs on 82% of Singapore's exports to India were eliminated or reduced. • Additional safeguarded market access to service suppliers.
	• All	**Trans–Pacific Strategic Economic Partnership (TPSEP) (2006)** • Eliminated all tariffs for goods that Singapore exports to other TPSEP countries. • Promoted cross-border economic cooperation.
	• Electronics • Chemistry • Biomedical sciences	**Korea – Singapore Free Trade Agreement (2006)** • About 92% of tariffs on Singapore's exports to Korea were reduced or eliminated. • Sectors that most benefited from the FTA include: chemistry, electronic equipment, biomedical sciences.
	• Electronics • Automotive • Food and Beverage	**Panama – Singapore Free Trade Agreement (2006)** • Eliminated tariffs on 98% of products traded between the two countries and simplified customs procedures to facilitate flows of goods between the two countries. • Key exports that benefited from the FTA include: beer, processed food, refined oil, auto parts, engines and electronics.
	• All	**Singapore – Peru Free Trade Agreement (2009)** • Reduced or eliminated tariffs for more than 87% of Singapore's exports to Peru.
	• All	**Mainland China – Singapore Free Trade Agreement (2009)** • Eliminated 95% of tariffs on Singapore's exports to China. • Allowed third-party invoicing of goods. • Enhanced market access in a number of industry segments.
	• All	**Singapore - Costa Rica Free Trade Agreement (2010)** • Eliminated tariffs for more than 95% of Singapore's exports to Costa Rica. • Allowed a more open market access for both countries' investors.

Signed and Effective Bilateral Trade Agreements (Part 3/3)

	Affected Industry	Agreement (effective date)
	• Construction	**Gulf Cooperation Council (GCC) – Singapore Free Trade Agreement (2013)** • The GCC members include: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. • Eliminated about 98% of tariffs lines on Singapore's exports to GCC. • Enhanced cooperation between Singapore and GCC countries in construction service, education service, legal service and government procurement.
	• Manufacturing	**Turkey – Singapore Free Trade Agreement (2017)** • Eliminated tariffs for more than 95% of Singapore's exports to Turkey. • When manufacturing goods for exports, Turkish and Singaporean manufacturers can source raw materials and parts from the EU and ASEAN at preferential tariffs.
	• All	**Sri Lanka – Singapore Free Trade Agreement (2018)** • Elimination of 80% of all tariff lines through over 15 years. • Sri Lanka's first modern and comprehensive FTA that covers areas such as trade in services, e-commerce, investments and Intellectual Property (IP).
	• Electronics • Financial Services	**European Union (EU) – Singapore Free Trade Agreement (2019)** • Eliminated tariffs on all products that Singapore exports to EU. • Removed unnecessary technical barriers to trade for Singapore and EU exporters. • Enhanced market access to a series of service sectors including financial services, computer and related services, environmental services, and etc.

In addition to these bilateral FTAs, Singapore is a member of the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP) and benefits from FTAs signed between the ASEAN and other countries.

The Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)

The Trans-Pacific Partnership (TPP) was originally an American initiative, but later the US withdrew from the agreement. After that, the remaining 11 countries decided to sign a new FTA called CPTPP, or TPP11. This agreement is set between Canada and 10 countries in Latin America and Asia-Pacific: Chile, Peru, Mexico, Australia, New-Zealand, Singapore, Brunei, Malaysia, Vietnam and Japan. The CPTPP fully entered into force in January 2019, creating a trading network of 495 million consumers representing an estimated 13.5% of the global GDP with reduced tariffs for agriculture, metals, wood and fishery products.

Signed and Effective Regional Trade Agreements as Member of The ASEAN

As a member of the ASEAN, Singapore benefits from agreements signed between the association and other countries. Therefore, the country has entered effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

The Association of Southeast Asian Nations (ASEAN)[10]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

ASEAN Members


Indonesia


Singapore


Malaysia


Philippines


Thailand


Brunei


Vietnam


Laos


Myanmar


Cambodia

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

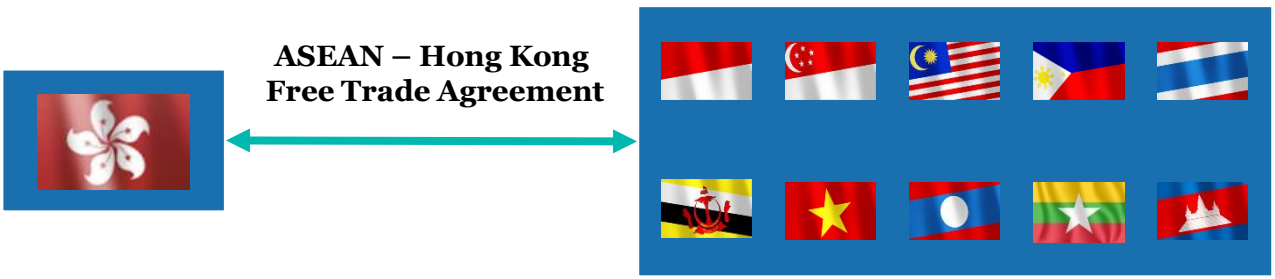
International Trade Agreement between Hong Kong and the ASEAN[11]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement Effective Date:

- 11 June 2019 - Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

Investment Agreement Effective Date:

- 17 June 2019 – Laos, Myanmar, Singapore, Thailand and Vietnam
- 13 October 2019 – Malaysia

The dates of entry for the remaining four countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[12]

Singapore is an unitary parliamentary democracy based on the Westminster model. Since Lee Kuan Yew became the first Prime Minister of Singapore in 1959, the People's Action Party (PAP) has been the only ruling party.

The government comprises three branches: the Executive, Legislative and Judiciary.

- The President of Singapore is directly elected by the people after constitutional changes in 1991. However, its role is mainly limited to representing the nation at state events and abroad. The Prime Minister, appointed by the President, is the effective head of the executive branch. He chairs the Cabinet which is the central decision making body of the state. As chairman, the Prime Minister has the power to approve the agenda, lead the meetings and oversee the government's general policy direction.
- The legislative branch is formed by the President and Parliament which is unicameral. The functions of Parliament include: making laws, taking up a critical role to check on the actions and policies of the government and inspecting the State's finances.
- The judiciary system consists of three levels: the Supreme Court, the State Courts and the Family Justice Courts.

C. Political Uncertainties[13,14,15]

Singapore is one of the world's most politically stable countries. The country ranked third out of 195 countries in the World Bank's Political Stability Index 2017. In addition, due to strong anti-corruption legislation, effective safeguards and audit controls, Singapore remains one of the world's least corrupt countries. It ranked fourth out of 180 countries in the Corruption Perception Index and is the least corrupt country in Asia.

The People's Action Party (PAP) has been ruling Singapore's government since its independence. However, the dominance of the PAP is increasingly being challenged by opposition parties such as the Progress Singapore Party (PSP) created in August 2019 as the country's 10th opposition party. Tan Cheng Bock, the founder of the PSP and the former member of the PAP, criticised the long-standing ruling party for being more focused on its own interests than those of Singaporeans. Even though only two opposition parties have ever held positions in parliament (the Workers' Party and the Singapore Democratic Party (SDP)), the increasing critics and opposition voices may create political uncertainty in the future.

Source:

[1] *The World Bank, 2019*

[2] *Fitch Solutions, Singapore Country Risk Report, 2019*

[3] *The World Factbook, CIA*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), Worldbank*

[5] *Singapore population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Singapore, Worldatlas*

[8] *Singapore FTAs, Enterprise Singapore*

[9] *Free Trade Agreements, Asia Regional Integration Centre*

[10] *ASEAN official website*

[11] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, May 2019*

[12] *Singapore Judicial System, Supreme Court Singapore*

[13] *The Corruption Perceptions Index 2018, Transparency International*

[14] *World Bank Political Stability And Absence Of Violence/Terrorism*

[15] *'I didn't change, the PAP did': Singapore opposition politician Tan Cheng Bock pledges to ask government tough questions, South China Morning Post published on July 26, 2019.*

2. Legal Environment and Competition Law

Executive Summary

Singapore is an open economy, and actively attracts foreign investments. No industries are prohibited for foreign investments, but certain industries will require approval, or have restrictions on foreign shareholding.

Mainland China and Hong Kong investors can choose to set up different types of business entities. It is possible to set up a 100% foreign-owned enterprise such as a Private Limited Company, among other types. In addition, foreign investors can set up a Branch office to expand their business to Singapore and explore opportunities to expand their manufacturing footprint on a short-term basis.

Singapore has a very liberalised import and export regime, with only certain goods requiring licences and approvals to trade. Singapore also has very strong intellectual property protection, and a robust legal system to deal with any business-related cases.

2. Legal Environment and Competition Law

Singapore is very pro-business, and actively attracts foreign direct investment (FDI). There is no specific law governing FDI in Singapore. Instead, investment is covered by general legislation governing businesses such as the Companies Act, and other industry-specific regulations. The Economic Development Board (EDB) was established in 1961 to facilitate both domestic and foreign investments in both the manufacturing and services sectors. The EDB provides assistance in setting up a business in Singapore, with services such as setup cost and cost of living calculators to help investors estimate their needed costs (www.edb.gov.sg/en/setting-up-in-singapore/setup-cost-calculator.html).

Singaporean law only distinguishes between Singaporean and foreign companies and does not outline special laws for Mainland China or Hong Kong companies that consider expanding their manufacturing footprint to Singapore. There are generally no restrictions on FDI, but certain industries have limits on foreign shareholding.

The Principal Industries that are Subject to Restrictions on Foreign Investment Include[1,2]

Industries Where Foreign Shareholding is Regulated:

- Industries affecting national security;
- Public utilities;
- Newspaper publishing;
- Broadcasting.

Industries Where Licences and Approvals are Required:

- Professional services, including legal and medical services; and
- Financial services, including:
    - Banking;
    - Insurance; and
    - Other financial services.

For further information, please refer to section 8 of this report or contact the EDB.

I. Types of Legal Business Entities Available for Foreign Investment[3,4,5]

There are several different main structures available for investors seeking to expand their manufacturing footprint or business from Mainland China or Hong Kong to Singapore. Singapore offers many different types of business entities that foreign investors can choose from. All business entities in Singapore are regulated by the Accounting and Corporate Regulatory Authority (ACRA).

Some main forms of doing business or expanding the manufacturing footprint to Singapore include:

1. Companies
2. Sole Proprietorships and Partnerships
3. Limited Partnerships
4. Limited Liability Partnerships (LLPs)
5. Branch Offices
6. Representative Offices

Companies

All companies in Singapore are governed under the Companies Act. Companies are treated as separate legal entities from the members owning and making up the company, and as a person in law.

Companies must have at least one shareholder, and one director who is a resident of Singapore and at least 18 years old. Foreigners may apply to be the director of a company with the Ministry of Manpower.

Private Companies

Private companies in Singapore can take the form of either a Private Limited Company (PLC), an Exempt PLC, or a Gazetted PLC. PLCs are similar to limited liability companies in other countries, where shareholders of a business cannot be held personally liable beyond their shares in the company. PLCs are limited to 50 shareholders or less. Exempt PLCs are a subtype of PLCs, where there are only 20 shareholders or less, with none of the shareholders being a corporate entity. Exempt PLCs can enjoy certain tax exemptions, but will not be considered exempt if annual revenue exceeds SGD 10 million. Gazetted PLCs are government-owned companies that also enjoy tax exemptions.

PLCs are the most common form of company for entrepreneurs and investors, because of the tax incentives available to them. Companies are taxed at the corporate tax rate of 17%, but can be eligible for tax exemptions of up to 75%.

Public Companies

Public companies can be either limited by shares or limited by guarantee. Companies limited by guarantee are usually for non-profit purposes, such as charities, trade associations, and religious bodies. Companies limited by shares can have more than 50 shareholders, including members of the public through the offering of shares to the public. Public companies must register a prospectus with ACRA before being permitted to make public offers of shares.

Registration Process and Cost

The registration process for all companies is the same. Companies must first be registered with ACRA, which can be done via their online portal, BizFile. If the company name is approved, it will be reserved for 120 days.

Companies must appoint a company secretary within six months, and an auditor within three months of incorporation. A company will also require a local corporate bank account to carry out its operations, and work passes for any foreign employees and investors. For more information about visas and work passes, please refer to section 4 of this report, or the Ministry of Manpower's website (www.mom.gov.sg/passes-and-permits). The setup fee for a company includes SGD 15 for the name application fee, and SGD 300 for the incorporation fee.

Sole Proprietorships and Partnerships

Sole proprietorships and partnerships are similar in Singapore. A sole proprietorship has one owner, while a partnership has between two to 20 partners. A business entity with more than 20 partners must be registered as a company (see above).

Sole proprietorships and partnerships are not considered separate legal entities from their owners/partners. The owners and partners of both sole proprietorships and partnerships have unlimited liability, meaning they can be personally liable for the debts and losses of the business, and can be personally sued in their own names. Owners/partners must be aged 18 years or above, and be a Singapore citizen, permanent resident, or EntrePass holder. If the owner/partner is not ordinarily resident in Singapore, he/she must appoint a representative who is ordinarily resident in Singapore.

Profits of both sole proprietorships and partnerships belong to the owners/partners, and are taxed at their personal income tax rates. Therefore, a sole proprietorship or partnership is not eligible for tax incentives. As sole proprietorships and partnerships are not considered separate legal entities, they are not required to file annual accounts.

A sole proprietorship or partnership can be registered for either one year or three years. Upon expiry of the business name registration, the business can be renewed for one or three years. The setup fee for a sole proprietorship or partnership includes SGD 15 for the name application fee, and either SGD 100 for a one-year registration or SGD 160 for a three-year registration.

Limited Partnerships

Limited partnerships consist of at least two partners: at least one general partner (GP), and one limited partner (LP). There is no restriction on the maximum number of partners. The GPs and LPs of limited partnerships can be either individuals or corporations (companies or LLPs). GPs have unlimited liability, meaning they can be personally liable for all debts and losses of the partnership, while LPs have limited liability, meaning they can only be liable for the debts and losses up to the amount of their agreed contribution. If all GPs are not ordinarily resident in Singapore, they must appoint a local manager who is ordinarily resident in Singapore.

Profits will be taxed according to either the personal or corporate income tax rate, depending on if the partner is an individual or corporation respectively.

Like sole proprietorships and partnerships, limited partnerships can be registered for either one year or three years. Upon expiry of the business name registration, the business can be renewed for one or three years. The setup fee for a limited partnership includes SGD 15 for the name application fee, and either SGD 100 for a one-year registration or SGD 160 for a three-year registration.

Limited Liability Partnerships (LLPs)

LLPs must have at least two partners, who may be individuals or corporations, with no restriction on the maximum number of partners. LLPs are similar to companies in that the business entity is considered a separate legal entity from the partners, meaning partners have limited liability and therefore are not personally liable for the debts and losses of the LLP, including any debts and losses incurred by the other partners. At least one partner must be ordinarily resident in Singapore, and be 18 years of age or older.

Profits will be taxed according to either the personal or corporate income tax rate, depending on if the partner is an individual or corporation respectively. One of the main disadvantages of LLPs compared to companies is that they are not eligible for tax exemptions. LLPs must file an annual declaration of solvency, stating whether the LLP will be able to pay its debts during the normal course of business.

Unlike sole proprietorships, partnerships, and limited partnerships, LLPs do not have to be renewed, and have perpetual succession until wound up or struck off. The setup fee for an LLP includes SGD 15 for the name application fee, and SGD 100 for the registration fee.

Branch Offices

Mainland China and Hong Kong companies that want to expand their operations to Singapore for the short-term may choose to set up a branch office. Branch offices are mainly used to facilitate operations of a foreign parent company in Singapore. As branch offices are considered non-residents for tax purposes, they are not eligible for any tax incentives. Branch offices must have the same entity name as the parent company, must engage in the same activities as the parent company, and are considered extensions of the parent company. Therefore, liabilities of the branch office will also be extended to the parent company.

Branch offices must be registered with ACRA, and the application process will usually take one to two days. The parent company must own 100% of the branch office, and have at least one agent who is ordinarily resident in Singapore. There is no limit on the number of agents that branch offices may have. Branch offices are required to file both its own accounts and the parent company's accounts.

Representative Offices

Representative offices are not permitted to undertake any commercial activities in Singapore, and may only conduct market testing and/or research activities. This is usually set up for the purposes of collecting information and data on investment opportunities, and conducting research and development activities to prepare for later investment into Singapore. Representative offices cannot generate income, and therefore are not required to file accounts. Representative offices are not permitted to have more than five employees, at least one of whom must be a staff member from the parent company.

A representative office must be opened and registered with the Monetary Authority of Singapore (for banking, finance, and insurance businesses), the Legal Services Regulatory Authority (for legal services businesses), or Enterprise Singapore (for all other industries not specified above). The registration process will normally take between three to five days. The representative office is initially registered for one year, and can be renewed annually, for a maximum of a total of three years.

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[1]

The main competition law in Singapore is the Competition Act, which was enacted in 2004. It governs all restrictive agreements and practices, and is enforced by the Competition & Consumer Commission of Singapore (CCCS). The Competition Act prohibits any undertakings and agreements that prevent, restrict, or distort competition in Singapore.

Anti-competitive Agreements or Practices

Examples of prohibited agreements and practices include:

- Fixing, directly or indirectly, a purchase or selling price or any other trading conditions;
- Sharing markets or sources of supply;
- Limiting or controlling i) production, ii) market outlets or market access, iii) technical or technological development, or iv) investment;
- Placing other trading parties at a competitive disadvantage by applying dissimilar conditions to similar transactions; and
- Subjecting the conclusion of contracts to supplementary obligations by other parties that have no connection with the subject of the contract.

Exceptions to the Competition Act

Certain activities are specifically excluded from the scope of the Competition Act. These include, but are not limited to, the following activities:

- Agreements or practices that can be shown to have a net economic benefit;
- Vertical agreements;
- Agreements related to specific prescribed activities, such as water supply and rail services; and
- Agreements between entities that form a single economic unit.

Abuse of Dominant Market Position

The Competition Act also prohibits enterprises from abusing their dominant market position. A market position is considered dominant if one or more enterprises possess such significant power in a market to adjust prices, outputs or trading terms, without effective constraint from competitors or potential competitors. The Act also prohibits activities based abroad that may fall into the definition of “dominant position” in that country or territory.

The Act does not apply for activities where:

- The activity relates to services of general economic interest;
- The activity is performed in order to avoid conflict with international obligations or to comply with other legal requirements;
- The activity is required for exceptional reasons of public policy; or
- Another regulatory authority has jurisdiction over the activity based on existing framework in place regarding the relevant competition.

B. Intellectual Property Protection Law on Trademarks[1,6]

A trademark is defined as a device, brand, heading, label, ticket, name, signature, word, letter, numeral or any combination thereof, which indicates that a certain good or service belongs to the owner of the trademark. Singapore's overarching Intellectual Property (IP) regulation, including those related to trademark, is rated as strong (ranked 10th out of 50).

Trademark protection is regulated mainly under the Trademarks Act in Singapore's legislation as well as in the common law. The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong companies.

Trademarks in Singapore can be registered with the Intellectual Property Office of Singapore (IPOS). If a trademark is not registered, it can still be used and protected by the common law, and the user can rely on the common law against potential infringers. A trademark can be registered if it is distinctive, can be represented graphically, and easily distinguishes a trader's goods and services from another trader's goods and services.

C. Import/Export Regulations and Licences[7,8]

Singapore actively encourages importing and exporting activities. While most activities are not subject to any restrictions or requirements, certain goods are still subject to additional regulations and licences for importation. These are known as controlled goods, and are overseen, and will require authorisation from the corresponding Competent Authorities (CAs) in order to be imported. The controlled goods include, but are not limited to:

- Non-medicinal chewing gum;
- Endangered animals and products of such animals, and rhinoceros horns;
- Certain telecommunications equipment;
- Fire crackers;
- Drugs; and
- Tobacco and cigarette products.

For a detailed list of controlled goods for import in Singapore and their corresponding CAs, please refer to the Singapore Customs website (www.customs.gov.sg/businesses/importing-goods/controlled-and-prohibited-goods-for-import).

Rhinoceros horns, and other items regulated by the Strategic Goods (Control) Act, are controlled goods for export, and will require authorisation from the relevant CAs. For a detailed list of controlled goods for export in Singapore and their corresponding CAs, please refer to the Singapore Customs website (www.customs.gov.sg/businesses/exporting-goods/controlled-and-prohibited-goods-for-export).

For both importing and exporting, businesses will generally require the following documents:

- Invoice;
- Bill of lading or air waybill;
- Packing list;
- Customs Import or Export Permit; and
- Any other specific authorisation for controlled goods.

Singapore uses the Harmonised System (HS) for the classification of goods; all imported or exported goods must be categorised based on the Singapore Customs tariff numbers. For more details on the customs process, please refer to section 6 of this report, or the Singapore Customs website (www.customs.gov.sg).

D. Jurisdiction System on Business Related Matters[9]

As a former British colony, the Singaporean legal system is built upon the British legal system and the principles of common law. There are generally two types of trials: civil and criminal. The Judiciary in Singapore is headed by the Chief Justice, and are made up of the Supreme Court and the Subordinate Courts:

- The Supreme Court hears both civil and criminal cases, and is made up of the High Court and the Court of Appeal. The High Court is comprised of the Chief Justice and the Judges of the High Court. They hear both criminal and civil cases, appeals from the decisions of the Subordinate Courts, and has supervisory and revisionary jurisdiction over the Subordinate Courts. The Court of Appeal hears appeals from the decisions of the High Court in both civil and criminal matters. The Court of Appeal is usually comprised of three judges: the Chief Justice and two Judges of Appeal, but can occasionally have more or less than three judges.
- The Subordinate Courts are made up of the District Courts, Magistrates' Courts, Juvenile Courts, Coroners' Courts, and Small Claims Tribunals. The Family, Night, Community, Syariah, and Traffic Courts have also been recently added to the Subordinate Courts system.

Business-related cases will generally be tried under civil law. For disputes and claims under SGD 10,000 (or SGD 20,000 upon approval by both parties), the case will be dealt with by the Small Claims Tribunal. Cases will be dealt with by the Magistrates' Court if the amount does not exceed SGD 60,000, by the District Court for amounts under SGD 250,000, and by the High Court if the amount of the claim exceeds SGD 250,000. Other specialised courts such as the Copyright Tribunal and the Labour Court also deal with specific business-related cases.

Due to the expensive costs and time consuming process for going to court, business disputes can also be dealt with through other methods such as mediation or arbitration. The Singapore Mediation Centre is a non-profit entity in Singapore that provides mediators to help parties reach an acceptable solution. Other mediation entities also exist to resolve specific types of disputes and disputes in specific industries, such as the Labour Relations Department of the Ministry of Manpower for employer-employee disputes, the Consumers Association of Singapore for disputes between consumers and business, and others.

While mediation is not a legally binding solution, arbitration is legally binding. In arbitration, the arbitrator will hear both parties, before arriving at a decision themselves. The Singapore International Arbitration Centre (SIAC) handles arbitration cases in Singapore, and deals with civil cases, but not criminal or family law cases.

Source:

[1] *Doing Business in Singapore - Practical Law, Thomson Reuters, 2019*

[2] *Investment Laws of ASEAN Countries: A comparative review, International Institute for Sustainable Development, Dec 2017*

[3] *Comparisons of Business Entities, Accounting and Corporate Regulatory Authority, Jan 2019*

[4] *Types of Business & Companies in Singapore, PB Corporate Services*

[5] *Singapore Branch vs Subsidiary vs Representative Office, GuideMeSingapore*

[6] *U.S. Chamber International IP Index, GIPC, 2019*

[7] *Controlled & Prohibited Goods for Import, Singapore Customs*

[8] *Controlled & Prohibited Goods for Export, Singapore Customs*

[9] *Introduction to Singapore's Legal System, GuideMeSingapore*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

Singapore has three main taxes for businesses: corporate income tax (CIT), property tax, and goods and service tax (GST). Singapore is one of the countries that run a single-tiered, flat-rate corporate tax system. The effective tax rate in Singapore is competitively low comparing to other countries. In addition, CIT will only be charged on the income generated in Singapore. The simple and competitive tax system makes the country attractive to foreign companies and investors.

The Monetary Authority of Singapore (MAS) is the central agency that issues currency, oversees the financial market, and governs the country's monetary policy.

Foreign investments have no restrictions in most industries. Moreover, there is no foreign exchange controls, allowing free movement of capital in and out of the city.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice[1,2]

Singapore's corporate tax system has three distinctive characteristics. First, companies, whether registered in Singapore or overseas, are charged at corporate tax for two types of income: income generated in Singapore, and foreign income that is remitted to Singapore. Second, the corporate tax in Singapore is charged at a flat-rate of 17%, and some companies are exempted or partially exempted from paying tax if they fulfil certain criteria. Third, the country currently runs a single-tier corporate tax system. In other words, corporate taxes paid by companies are the only tax, and dividend income received are exempted from tax. The single-tiered, flat-rate, and territorial-based corporate tax system makes Singapore an attractive destination for investors and businesses and contributes to the country's rapid economic growth in the past decades.

A. Corporate Income Tax (CIT)

Applicable Tax Rate and Tax Exemption[3]

Singapore's standard CIT rate is a flat-rate of 17%.

Companies' first SGD 290,000 of chargeable income is eligible for partial tax exemption. In addition, startup companies, except property development and investment holding companies, can enjoy partial or full tax exemption in their first three year of operation. Detailed tax exemption information is provided in the tables below.

Partial Tax Exemption for Chargeable CIT

Year of Assessment 2019		
Chargeable Income (SGD)	**Tax Exemption**	**Income Exemption (SGD)**
First 10,000	75%	7,500
10,000 to 290,000	50%	145,000
Total		**152,000**
Year of Assessment 2020 and Onwards		
Chargeable Income (SGD)	**Tax Exemption**	**Income Exemption (SGD)**
First 10,000	75%	7,500
From 10,000 to 190,000	50%	95,000
Total		**102,500**

Tax Exemption for Startups

Year of Assessment 2019		
Chargeable Income (SGD)	**Tax Exemption**	**Income Exemption (SGD)**
First 100,000	100%	100,000
From 100,000 to 200,000	50%	100,000
Total		**200,000**
Year of Assessment 2020 and Onwards		
Chargeable Income (SGD)	**Tax Exemption**	**Income Exemption (SGD)**
First 10,000	75%	75,000
From 10,000 to 190,000	50%	50,000
Total		**125,000**

Note: 20% CIT rebate, capped at SGD 10,000, is available for the year of assessment 2019.

Dividend Income[1]

Singapore runs a single-tiered corporate tax system, so dividends paid out by Singapore resident companies to their owners and shareholders are not taxed. In addition, no income tax will be charged on capital gains including, but not limited to, the sale of assets, regardless tangible or intangible, and gains on foreign transactions.

Unutilised Items[4,5]

Unutilised items such as losses, capital allowances, and donations can be carried forward to decrease future tax payables. Losses and capital allowances can be carried forward infinitely, but donations can only be carried forward for up to five years.

Companies need to fulfil the Shareholding Test first in order to use unutilised items for future tax reduction purpose. The Shareholding Test is satisfied if 50% or more of a company's shares are held by same owners or shareholders. Companies that fail the Shareholding Test may still be eligible to use unutilised items if the significant change of ownership/shareholders is not for tax-avoidance purposes.

For more information related to tax reduction of unutilised items, please visit the Inland Revenue Authority of Singapore (IRAS) website (www.iras.gov.sg/irashome/Businesses/Companies/Working-out-Corporate-Income-Taxes/Unutilised-Items--Losses--Capital-Allowances-and-Donations-/).

Withholding Taxes[6]

Withholding taxes are charged to Singapore-resident companies for certain types of payments to non-resident companies. Typical payments applicable to withholding taxes in Singapore include interests, royalties and rentals from movable properties.

Payments Applicable to Withholding Taxes

Type of Payment	Withholding Tax Rate
Interest or any loan-related payments	15%
Royalty payments	10%
Rentals from movable property	15%
Technical service and related fees	17%

The withholding taxes paid are only applicable to non-resident companies that meet the following criteria:

- Do not have any business in Singapore;
- Do not have any permanent establishment in Singapore (PE); or
- Have business operating in Singapore through a PE in Singapore, but the funds used by its owners to acquire the assets of PE are not from its business.

Tax Filing

Most Singapore companies are required to submit an Estimated Chargeable Income (ECI) form to the IRAS within the three months of their financial year end. The ECI form is a form that states the company's taxable income for the year of assessment. Generally, the taxable income shown in the ECI form should refer to the company's audited financial statements prepared in accordance with Singapore Financial Reporting Standards (SFRS), except for the companies that are exempted from auditing requirements. For the detailed auditing requirements, please refer to part D of this section.

Companies are required to submit their hardcopy tax filing on or before 30 November, or e-tax filing on or before 15 December of each year.

For detailed information related to CIT filing, please visit the IRAS website (www.iras.gov.sg/irashome/CorporateTax2019/).

Tax Governance

Taxation and relevant affairs in Singapore are governed under the Income Tax Act of Singapore by the IRAS. IRAS is the central governmental agency that collects taxes and administrates efficient taxation practice; it also plays a key role in the formulation and implementation of tax policy in the country.

For details on tax governance, please visit the IRAS website (www.iras.gov.sg/irashome/default.aspx).

Double Taxation Agreement (DTA) with Hong Kong

DTAs aim to eliminate income or profit being taxed in two or more jurisdictions at the same time. Eliminating double taxation allows both foreign investors investing in Singapore and Singapore investors looking to invest abroad to benefit. DTAs usually affect withholding tax rates on dividends, royalties, interest, and technical fees.

Singapore and Hong Kong have not signed a DTA. However, the two governments have signed an "Agreement between Singapore and Hong Kong SAR for Avoidance of Double Taxation on Income of an Enterprise Operating Ships or Aircraft in International Traffic", effective since 1 January 2005. The agreement applies to income generated from the operation of international ship and air transport in either of the two territories.

B. Value Added Tax (VAT)[7,8]

VAT in Singapore is called the Goods & Services Tax (GST). GST is a consumption tax that is charged on all imported goods and most services.

The current standard GST rate is 7%.

Types of Taxable Goods and Services

	Taxable Goods and Services	
	7% GST	**0% GST**
Goods	Most goods sold in Singapore	Goods that are exported to other countries
Services	Most services provided in Singapore	International services *(Note)*

Note: More descriptions about international services can be found in Section 21(3) of the GST Act.

Types of Non-taxable Goods and Services

	Non-taxable Goods and Services	
	Exempt *(Note)*	**Out-of-Scope**
Goods	• Sales and rental of residential property • Important and local supply of investment precious metals (IPM)	• Goods delivered from one foreign country to another foreign country
Services	• Financial services	• Private transactions

Note: The supply of digital payment tokens are exempted from GST starting from 1 January 2020.

GST Registration Policy

Companies must register for GST if they satisfy one of the following criteria:

- The company had revenue over SGD 1,000,000 in the past 12 months; or
- The company is expected to have revenue over SGD 1,000,000 in the next 12 months.

C. Transfer Pricing Provisions[9,10]

Transfer pricing (TP) is related to rules and methods used to price transactions between two parties. TP rules in Singapore is stipulated under the Income Tax Act (Transfer Pricing Documentation) Rules 2018. The IRAS also published the Transfer Pricing Guidelines (Fifth Edition) that provides detailed information on the application of the rules, such as transfer pricing principles and fundamentals, and transfer pricing administration and compliance.

The main points of the Transfer Pricing Guidelines (Fifth Edition) include:

- The arm's length principle applies as the standard to guide transfer pricing in Singapore.
- Taxpayers should have records prepared and kept that show the pricing of the transactions with related parties adheres to the arm's length principle.
- If taxpayers fails to adhere to the arm's length principle and understates their profits, their profits will be adjusted by the IRAS in accordance to the Income Tax Act.
- A contemporaneous basis should be applied when preparing TP documentation.

The arm's length principle is the concept that two parties of a transaction is independent. It requires that transactions between a company and a related party should be made under similar conditions and circumstances as transactions between a company and an unrelated party.

Three Steps to Apply Arm's Length Principle[10]

Step	Description
1. Conduct comparability analysis	• Test the comparability of transactions in the following 4 areas: contract terms, characteristics of properties involved, functional analysis, and relevant economic and commercial conditions; and • Make adjustments for material differences.
2. Identify the tested party and the appropriate method for transfer pricing	• Identify the method that provides the most reliable outcomes; and • Determine the tested party
3. Determine the arm's length results	• Apply the method identified in Step 2 on the transfer pricing transactions.

The Income Tax Act (Transfer Pricing Documentation) Rules 2018[11]

The new transfer pricing rules have the following key amendments:

- Increased penalties for not preparing contemporaneous TP documentation to SGD 10,000;
- Introduced requirement for preparing contemporaneous TP documentation from Year of Assessment 2019 for Singapore taxpayers whose annual revenue is over SGD 10 million;
- 5% surcharge on the amount of TP adjustments is automatically applicable unless it is waived by the IRAS.

D. Statutory Auditing Requirements and Accounting Standards[12,13]

Audit Requirements

Companies in Singapore, regardless of whether they are public or private, are required by the Singapore Company Act to have their financial statements audited. However, private companies that are a subsidiary of a group company are exempted from audit requirement if they satisfy two of the following requirements:

- Annual revenue of the company is no more than SGD 10 million;
- The total number of full-time employees of the company is no more than 50; or
- The value of total assets of the company at the end of that financial year is no more than SGD 10 million.

If a private company belongs to a group company, it is also eligible for audit requirement if the group company (parent) satisfy two of the three requirements above.

Accounting Standards

Singapore companies are required to prepare financial statements in accordance with SFRS. SFRS is based on International Financial Reporting Standards (IFRS), and it is formulated and governed by the Accounting Standards Council (ASC). The current Singapore accounting standards is converged with IFRS.

Due to limited company resources, small companies may have difficulties when preparing their financial statements in accordance with SFRS. Therefore, ASC developed Singapore Financial Reporting Standards for Small Entities (SFRS for SE) in 2010 to help them resolve this issue.

II. Banking & Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)[14]

Bank Account Setup Requirements

The Monetary Authority of Singapore (MAS) is the central agency in Singapore that supervises the banking industry, issues currency, and conducts monetary policy.

Both locally and foreign incorporated companies can open corporate bank accounts in Singapore, and there are no limitations on the types of corporate accounts that foreign companies can open. However, the process, requirements and strictness for a company to open a bank account vary between different banks, and even between branches of the same bank.

Most banks in Singapore require the physical presence of companies' executive director(s) and authorised signatory when opening their corporate bank accounts.

General Requirements for Opening a Corporate Bank Account

The documents described below are for reference only as general requirements vary between commercial banks. It is advised to check with the desired commercial bank on the exact documents required.

#	General Documents Required for Opening a Corporate Bank Account in Singapore
1	Copy of certificate of incorporation
2	Residential address proof and signatures of directors and owners
3	Valid and certified copy of travel documents of all the company's directors
4	Completed corporate bank account application forms
5	A certified copy of the company's business profile from Accounting and Corporate Regulatory Authority (ACRA)
6	A resolution by the company's board of directors
7	Copy of the company's Memorandum and Articles of Association (MAA)

Foreign Direct Investment (FDI) Restrictions[15]

There are no restrictions on FDI for most industries in Singapore. However, some restrictions on foreign investors' ownership exist for certain industries such as broadcasting and domestic news media. In addition, licences and government approvals are required for certain activities conducted by foreign investors.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[16,17]

Local Currency

The Singaporean Dollar (SGD) is the official currency of Singapore, issued and managed by the MAS. It is freely exchangeable, with no restrictions on importing or exporting SGD. Non-residents, including overseas Singaporeans, are also allowed to open SGD accounts with banks in Singapore. SGD deposited into these bank accounts can be used for any purpose, including for exchange into foreign currency.

Foreign Currency

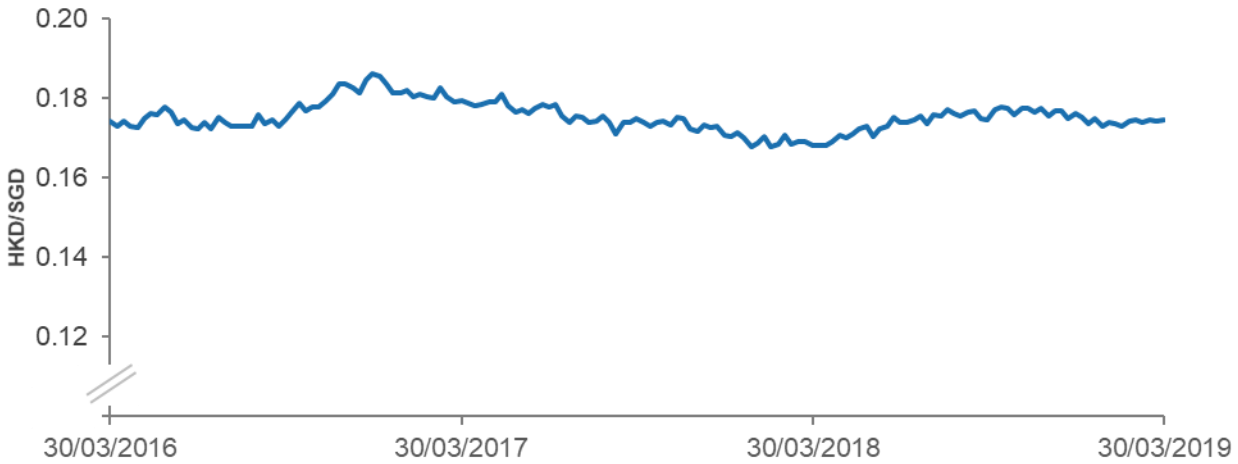
There is no control on foreign currency in Singapore. However, people who enter or leave Singapore with SGD or foreign currency with a total value of SGD 20,000 or more will need to submit the Physical Currency and Bearer Negotiable Instruments Report (Traveller) form at checkpoints.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

Policy on Foreign Exchange Rate

There is no foreign exchange rate control in Singapore. Earnings and capital can be reinvested and repatriated out of the country without restriction. In addition, no limit is placed on remittances, foreign exchange transactions and capital flows.

Three-year Exchange Rate Trend for HKD to SGD[18]



Date	HKD/SGD Rate
30/03/2016	0.1769
30/03/2017	0.1798
30/03/2018	0.1671
30/03/2019	0.1728

D. List of Banks from Foreign Investments[19]

Financial institutions who wish to operate in Singapore must attain licenses from the MAS. As of 3 December 2019, the MAS has issued 3,136 licenses to various financial institutions, including 223 licenses in banking industry. Many of Singapore's local banks also have a presence in the rest of Asia, including Hong Kong. Currently, Singapore has four local banks, nine qualifying full banks, 20 full banks and 39 representative offices (banking).

List of Licenced Banks in Singapore (Part 1/2)

Type	Name of Bank *(Notes)*
Local Bank	Bank of Singapore Limited
	DBS Bank Ltd
	Oversea-Chinese Banking Corporation Limited
	United Overseas Bank Limited
Qualifying Full Bank	Bank of China Limited
	BNP Paribas
	Citibank Singapore Limited
	HSBC Bank (Singapore) Limited
	ICICI Bank Limited
	Industrial and Commercial Bank of China Limited
	Maybank Singapore Limited
	Standard Chartered Bank (Singapore) Limited
	State Bank of India
Full Bank	Bangkok Bank Public Company Limited
	Bank of America, National Association
	Bank of India
	CIMB Bank Berhad
	Citibank N.A.
	Credit Agricole Corporate and Investment Bank
	HL Bank
	Indian Bank
	Indian Overseas Bank

List of Licenced Banks in Singapore (Part 2/2)

Type	Name of Bank
Full Bank	JPMorgan Chase Bank, N.A.
	Malayan Banking Berhad
	Mizuho Bank Limited
	MUFG Bank, Ltd.
	PT Bank Negara Indonesia (Persero) TBK
	RHB Bank Berhad
	Standard Chartered Bank
	Sumitomo Mitsui Banking Corporation
	The Bank of East Asia Ltd
	The Hongkong and Shanghai Banking Corporation Limited
	UCO Bank

As a financial institution may hold multiple licences, the same financial institution may appear in more than one list. The above list of banks in Singapore is occasionally updated and may change from time to time. For detailed lists of other financial institutions, please visit the website of the MAS (eservices.mas.gov.sg/fid).

Source:

[1] *Taxation & Accounting Guides, GuideMeSingapore*

[2] *The Singapore Tax System, Tax in Singapore, Inland Revenue Authority of Singapore*

[3] *Corporate – Tax on corporate income: Singapore, PwC*

[4] *International Tax Singapore Highlights 2019, Deloitte, Feb 2019*

[5] *Utilizing Unabsorbed Capital Allowances, Trade Losses and Donations, IRAS e-Tax Guide, Inland Revenue Authority of Singapore*

[6] *Withholding Tax Rates, Inland Revenue Authority of Singapore*

[7] *International Business Guides Singapore, HSBC*

[8] *Goods and Services Tax (GST), Inland Revenue Authority of Singapore*

[9] *Introduction to Transfer Pricing, Inland Revenue Authority of Singapore*

[10] *Transfer Pricing Guidelines (Fifth Edition), Inland Revenue Authority of Singapore*

[11] *Singapore introduces new transfer pricing rules and guidelines, PwC, Mar 2018*

[12] *Financial Reporting Standards, Institute of Singapore Chartered Accountants*

[13] *Audit Exemption in Singapore, Singapore, Corporate Services*

[14] *Banking, Funding & Finances, GuideMeSingapore*

[15] *Doing Business in Singapore: overview, Thomson Reuters Practical Law*

[16] *Singapore – Foreign Exchange Controls, Singapore Country Commercial Guide, export.gov*

[17] *Taking Cash In and Out of Singapore, Immigration & Checkpoints Authority*

[18] *Bloomberg*

[19] *Financial Institutions Directory, Monetary Authority of Singapore*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Singapore has established labour laws providing guidance on matters such as minimum working age, retirement age minimum wages, maximum working hours and welfare to protect employees.

The Singaporean government offers various training programmes that are intended to improve workforce quality and build infrastructure enabling employees to improve their skills throughout their careers.

Foreign workers are required to obtain a work permit for legal employment in Singapore. The requirements to obtain work permits and passes vary based on the employment type and job nature.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2]

The Employment Act is Singapore's major labour law. All employees, no matter local or foreign, full-time or part-time, are covered under the Act. Employees are defined as workers who have a service contract with their employers. Part IV (Rest Days, Hours of Work and Other Conditions of Service) of the Employment Act provides additional protection to workmen earning basic monthly salary of not more than SGD 4,500 or employees who are covered under the Act but earned a basic monthly salary of not more than SGD 2,600.

Foreign employees are also covered by the Employment of Foreign Manpower Act, which stipulates the responsibilities and obligations for employers hiring foreign employees. However, the Employment Act does not cover seafarers, domestic workers and statutory board employees or civil servants.

Minimum Legal Working Age

The minimum legal working age in Singapore is 17 years old.

Children and young persons aged 13 to 16 are protected under the Employment Act. They may be allowed to perform certain works specified in the Act, including light works in a non-industry setting. No one under 17 years old is allowed to perform work prejudicial to their health, morals or safety.

Labour Contract

A contract of service is an agreement that employees agree with their employers, and it can be in either written or verbal form, or both. The contract of service must include terms and conditions that are covered and stipulated under the Employment Act. Otherwise, it is considered illegal, null, or void.

Termination of Employment

Terms and conditions for termination of employment are covered in the Employment Act. Both employees or employers can notify the other party of his or her intention to terminate the contract of service. The notification to terminate the contract of service should be given to employees in accordance with the Act. The longer an employee has been working for the employer, the longer the notification should be, as shown below:

Period of Employment	Notice Period (Minimum)
Less than 26 weeks	1 day
More than 26 weeks but less than 2 years	1 week
More than 2 years but less than 5 years	2 weeks
More than 5 years	4 weeks

The Employment Act also gives both the employee or employer the right to terminate the contract of service without notice if the other party intentionally breaches a condition of the service contract.

When an employee's position is likely to or does become redundant, the employer may terminate his or her contract of service. However, a notice of retrenchment must be given in advance. For employees whose employment period is or above three years, benefits should also be given. The Employment Act does not stipulate terms for the nature and amount of retrenchment benefits, but they should be agreed upon by the two parties.

B. Minimum Wage Level[3]

Singapore does not have a specified minimum wage level. However, there are two exceptions: the minimum monthly wages for cleaners and security guards are SGD 1,000 and SGD 1,100 respectively.

The minimum wage rate will be updated occasionally by the Singaporean government.

C. Maximum Working Hours and Days[4]

The maximum number of working hours is eight hours per day, or 44 hours per week.

The Employment Act also stipulates that employees are not allowed to work consecutively for six hours without taking a break.

Overtime

For work performed in excess of the maximum number of hours, fixed either by regulations or by specific agreement (whichever is lower), employees must be compensated with overtime pay not less than 1.5 times their normal wage rate. The maximum number of overtime hours is 72 hours per month.

D. Mandatory Welfare

Centre Provident Fund (CPF)[5,6,7]

The CPF Act stipulates that employees and employers are required to make monthly contribution to the CPF, which aims to ensure employees' financial security after retirement. Foreign employees are exempt from CPF contributions.

CPF is comprised of three basic accounts:

- Ordinary Account (OA): funds used for housing, investment, insurance and education;
- Special Account (SA): funds used for investing in financial products related to retirement; and
- MediSave Account (MA): funds used for future medical-related expenses, such as healthcare insurance and hospitalisation.

In addition, a Retirement Account (RA) is created when the CPF owner is 55 years old. The savings in the OA and SA will be transferred to the RA, where the CPF owner can then withdraw savings from if needed. The RA balance will depend on the balance of OA and SA.

As of 2019, the CPF contribution rate for employees aged 55 and below with a monthly wage of SGD 750 or more is 17% for employer and 20% for employee. CPF contribution rate for employees aged 55 to 60 with a monthly wage of SGD 750 or more is 13% by employer and 13% by employee. For more details about CPF contribution, please refer to the CPF Board website (www.cpf.gov.sg/Employers/).

Skills Development Levy (SDL)[8]

SDL is a levy that all employers are required to pay for each employee working in Singapore. SDL will be collected by the CPF Board as a Skills Development Fund (SDF), which will be used to provide trainings for employees.

SDL is charged at 0.25% up to the first SGD 4,500 of employee's monthly remuneration. The minimum monthly SDL charged is SGD 2, and the maximum monthly SDL charged is SGD 11.25.

Notes: 1) Employees include full-time, casual, part-time, temporary and foreign employees rendering services wholly or partly in Singapore. 2) Remuneration is any wage, salary, commission, bonus, leave pay, overtime pay, allowance and other payments in cash.

Fair Employment Practice

Fair Employment Practice highlights employers' obligations to ensure that all job candidates, regardless of race, gender, religion, age, disability, marital status or family responsibilities, should be equally treated and selected only based on merit. In addition, when advertising a job, employers should not use words that may be perceived as discriminatory.

More guidelines about fair employment practices are provided in the Tripartite Guidelines on Fair Employment Practice (www.tal.sg/tafep#).

Other Benefits and Rights[1,3]

In addition to these provisions, workers in Singapore are entitled to various rights, as described below.

- Public holidays: employees working in Singapore are entitled to have paid holiday on public holidays. Singapore public holidays include Chinese New Year, New Year's Day, Good Friday, Labour Day, Vesak Day, National Day, Hari Raya Puasa, Deepavali, Hari Raya Haji, and Christmas Day.
- Annual leave: employees who have worked continuously for one full year are entitled to seven days of annual leaves in the first year and additional one day of annual leave for every 12 months of consecutive employment (maximum 14 days annual leave in total).
- Sick leave: employees whose employment period over six months are entitled 14 days sick leave per year if no hospitalisation is required. If hospitalisation is required, annual sick leaves would be the lesser of 60 days or the sum of 14 days and hospitalisation period.

Apart from the above mentioned legal provisions, Singapore employers are required by law to provide safe working conditions and acceptable accommodation for employees and are responsible for the cost of medical treatment in case of accident. The required extent of such facilities depends on the nature of the business and the number of employees.

E. Labour Law Governing Authorities, Enforcements, and Restrictions

Governing Authorities

The Ministry of Manpower is the official government body responsible for the enforcement of the Employment Act, which stipulates regulations and laws in all aspects of employment in order to promote high standard work environment in Singapore.

Employment of Foreign Manpower Act (EFMA)[9]

The Employment of Foreign Manpower Act (EFMA) regulates the employment of foreign employees including the presumptions of employment, work permit requirements and application process, and penalty for offences The EFMA covers foreigners who hold a work permit or pass issued by the Ministry of Manpower.

For more information on the EFMA, please refer to the website: (sso.agc.gov.sg/Act/EFMA1990).

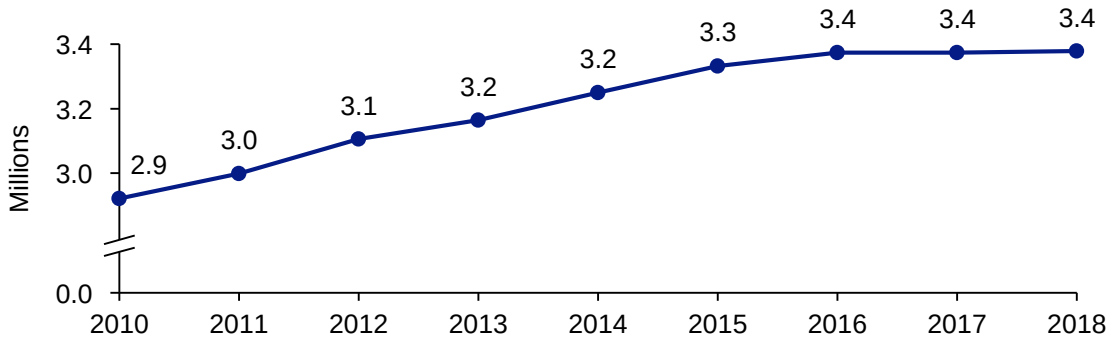
Relevant penalties for offences related to foreign labour employment are as below:

Offence	Penalty
Employing a foreign employee who does not have a valid work permit or pass	• A fine between SGD 5,000 and SGD 30,000; and/or • Imprisonment for up to 1 year; or • A mandatory imprisonment and a fine between SGD 10,000 and SGD 30,000 if offenders have subsequent convictions.
Violating any condition stipulated in a work permit or pass	• A fine up to SGD 10,000; and/or • Imprisonment for up to 1 year.
Providing false documents and making false statements in the application or renewal of work permit or pass	• A fine up to SGD 20,000; and/or • Imprisonment for up to 2 years.
Receiving money in connection with an employment of a foreign employee	• A fine up to SGD 30,000; and/or • Imprisonment for up to 2 years.
Obtaining a work permit or pass for a foreign employee for a business that is • Nonexistent; • Not operational; or • Has no need to hire foreign employees.	• An imprisonment term of 6 months; and • A fine not exceeding SGD 6,000. • Offenders may also be subject to caning.

II. Local Labour Supply Market Condition

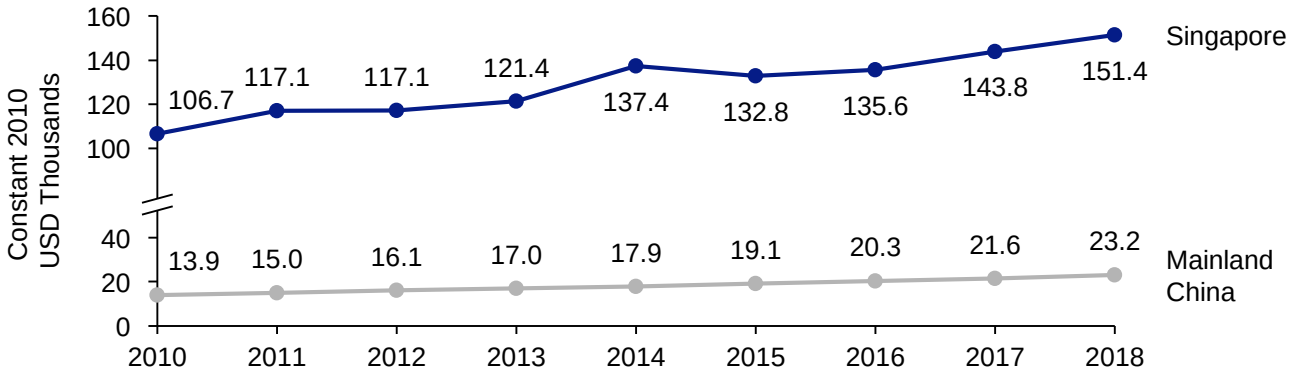
A. Supply Situation for Total Labour Force

Singapore Total Labour Force (2010 – 2018)[10]



The estimated total labour force in Singapore was around 3.4 million in 2018. The supply of labour has been quite stable over the past three years.

Singapore Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)[11]

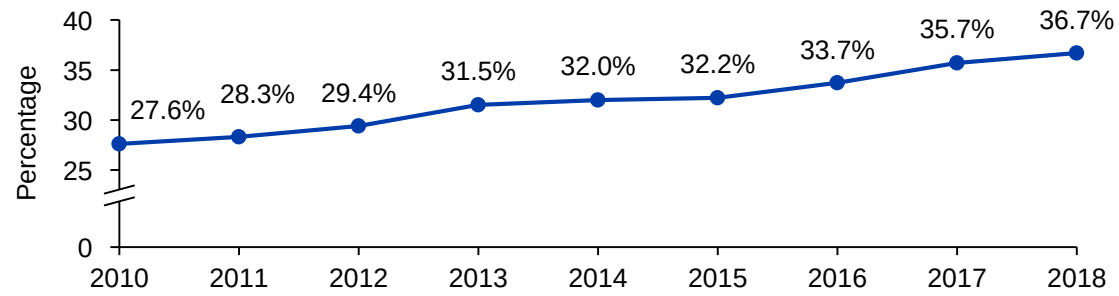


Singapore's labour productivity grew at a lower rate (around 4.5%) than Mainland China's (around 6.7%) between 2010-2018. However, Singapore's industry labour productivity was 6.5 times greater than Mainland China's in 2018. Singapore has second highest productivity among ASEAN countries.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying as well as public utility sectors.

B. Supply on Educated Employees

Singapore Percentage of Labour Force with Degree (2010 – 2018)[12]



The educational composition of Singapore labour force is concentrated on higher education. The estimated percentage of labour force with degree was around 36.7% in 2018.

C. Government Support on Employee Training[2]

The Singaporean government provides several training programmes for employers and employees aimed at improving the competitiveness of Singapore's workforce. These programmes are detailed below.

SkillsFuture Singapore (SSG)[13,14]

SSG is governed by the Ministry of Education. It is established to promote the national SkillsFuture movement, enhance the education and quality of training, and establish a comprehensive training system where Singaporeans can improve their professional skills throughout their life.

SSG enhances the adult training system and improves the quality of adult educators in terms of their capabilities and professionalism. In addition, SSG helps private education institutions and adult training centers attain higher teaching quality by working closely with the tutors and professors. Students and working adults, as a result, will have more access to high-quality and industry-driven training courses throughout life. SSG also promotes the integration and collaboration between different employment and pre-employment training institutions so that students and working adults can continuously acquire knowledge and skills to meet the ever-changing demands in different industry segments.

The SSG focuses on the following four key areas:

- Helping Singaporeans make better decision regarding career, employment, and education;
- Developing a comprehensive, high-quality education and training system to meet changing industry needs;
- Enhancing Singaporeans' career development by increasing employer's recognition of their skills; and
- Encouraging learning throughout Singaporeans' lives.

For more information about SSG, please visit its official website (www.skillsfuture.sg/).

Continuing Education & Training (CET)[15]

Employers and employees have various opportunities to learn professional skills relevant to their jobs and improve their competitiveness through the CET.

The CET Masterplan was initialised by the Ministry of Manpower in 2008 in order to improve Singaporean workers' competitiveness, adapt to the ever-changing industry landscape, and enhance the country's competitive advantages. It provides working adults with opportunities that they can learn and enhance their skills at every stage of their career. The refreshed CET Masterplan focuses on three major areas:

- Encouraging more workers to focus on skills learning and career development;
- Helping Singaporeans make better decisions about their careers by offering relevant trainings and guidance; and
- Building a CET system that provides comprehensive opportunities.

Singapore Workforce Skills Qualifications (WSQ)[16]

The Singapore Workforce Skills Qualifications (WSQ) is a national credentialing system that trains, develops, assesses and recognises individuals to help equip them with the skills and knowledge required for their work. The WSQ system is designed to be practical, convenient, and affordable, giving every employee control over their careers. Employers can also use the system to strengthen their competitive advantages and develop their businesses by accessing a large candidate pool and maintaining a skilled and competitive workforce.

WSQ Benefits

Individuals	Employers
Enhance competitive advantages in job market and career development by building and enhancing skills	Improve workforce quality and gain some guidance related to employee training and development
Obtain professional qualifications and certificates that recognise their values	Learn and build efficient performance management system
Improve employability and competitiveness	Enhance training efficiency
Gain some insights related to work standards	Enhance workforce competency by attracting candidates who have relevant qualifications and certifications and are equipped with the required skills.

Human Resource (HR) Programmes[17]

The SgIS-HR CET Grant is available for Singapore Industry Scholarship (SgIS) scholars pursuing HR studies in university. SgIS is the a scholarship supported by the Singaporean government. The maximum scholarship is SGD10,000 per scholar. It allows SgIS scholars to further enhance their HR skills and knowledge in their careers.

D. Labour Unionisation and Related Government Regulations[18]

Trade Union is defined as any association organised by workers or employers in order to manage relations between employers and workers for the following purposes:

- Encourage a harmonious relationship between employers and employees.
- Enhance the working environment and social recognition of workers
- Improve workers' productivity to benefit workmen, employers and the economy of Singapore.

Trade Unions in Singapore are registered and regulated by the Registry of Trade Unions. The Trade Unions Act is the main legislation that regulates trade unions. The list of trade unions can be found in the trade union directory by visiting the website below (www.mom.gov.sg/employment-practices/trade-unions/trade-union-directory#/).

In Singapore, there are multiple laws governing labour unions. A few examples are described in the table below.

Law	Description
Trade Unions Act (Cap 333), Trade Unions Regulations	The Trade Unions Act and its Regulations is the major legislation in Singapore that regulates all trade unions related affairs, including registration of trade unions, rights and liabilities of trade unions, funding and accounts management, and property management.
Trade Disputes Act (Cap 331)	The Trade Disputes Act regulates the affairs related to industrial actions and lock-outs.
Singapore Labour Foundation Act (Cap 302)	The Singapore Labour Foundation Act was established to promote the improvement of the welfare of trade union members and their families.
Part III of the Criminal Law (Temporary Provisions) Act (Cap 67)	This section of the Criminal Law Act regulates activities related to strikes and lock-outs including restrictions, illegal activities, and penalty for illegal strikes and lock-outs.

E. Work Permits[3,19]

Foreigners intending to work in Singapore must hold a valid work permit or pass before they start employment. There are several types of work permit or pass available. Each work permit or pass is designated for different foreign employees based on the type of job and the nature of work. Foreigners should check their eligibility before they submit application.

Employment Pass

The Employment Pass is the general work permit required for foreign professionals, managers, and executives. Employers or appointed employment agents need to apply for an Employment Pass on behalf of the applicants. The duration of the pass is two years for first-time applicant. The Pass can be renewed after expiration, and the renewal duration will be up to three years. Eligibility for Employment Pass includes:

- A job offer in Singapore is required;
- The job type is specialised, either managerial or executive;
- Fixed salary must be at least SGD 3,600 per month; and
- Relevant qualifications (professional or academic) are required.

S Pass

The S Pass is the work permit for mid-level foreign employees. The duration of S Pass is up to two years. Eligibility for S Pass includes:

Applicant should have relevant work experience;

- Fixed salary must be at least SGD2,300 per month (fixed salary must be at least SGD2,400 starting from January 1, 2020);
- Holding a one year or above relevant diploma or degree from accredited institutions.

Employment Pass and S Pass holders who earn at least SGD6,000 per month can also apply pass for their family members if they meet certain criteria. In addition, medical insurance must be provided by an S Pass holder's employer.

Training Employment Pass

The Training Employment pass is the work permit for foreign students and trainees who intend to work in Singapore for practical training purpose. The duration of the Pass is up to three months and is not renewable. A foreign student is eligible for applying Training Employment Pass if he or she fulfils the following requirements:

- The training must be related to the field of study;
- The student must study in an institute that is recognised by the Ministry of Manpower or must earn a fixed monthly wage at least SGD3,000;
- Sponsorship by a Singapore-registered company must be provided.

A foreign trainee is eligible for applying Training Employment Pass if he or she fulfils the following requirements:

- The trainee must earn a fixed monthly wage at least SGD3,000;
- Sponsorship by a Singapore-registered company must be provided.

Note: a person cannot apply the Training Employment Pass twice for the same type of training.

For other types of work permits and more information related to work permit requirements, please visit the website of Ministry of Manpower (www.mom.gov.sg/passes-and-permits).

Travelling to Singapore[20]

Hong Kong passport holders are permitted to stay up to 30 days in Singapore without a visa. However, a valid visa is required for Hong Kong Document of Identity holders.

F. Religious Concerns or Considerations[21]

Religion[21]

Singaporeans have the freedom to decide and choose religion. Around 80% of Singaporeans have a religion affiliation. Buddhism and Taoism are very popular in Singapore. The General Household Survey 2015 shows around 43% of the residents over 15 years old follow Buddhism or Taoism. Christianity and Islam are the third and fourth largest religions in the country, followed by 18.8% and 14% of the population respectively. Older Singaporeans have higher percentage of religious affiliation than younger Singaporeans.

Source:

[1] *Employment Act, Employment Practices, Ministry of Manpower*

[2] *Employment of Foreign Manpower Act, Singapore Ministry of Manpower*

[3] *Guide to Hiring Employees in Singapore, GuideMeSingapore Hawksford*

[4] *Employment Act, Singapore Statures Online*

[5] *CPF Overview, Central Provident Fund Board*

[6] *Centre Provident Fund Act (Chapter 36), Singapore Statures Online*

[7] *CPF Contribution and Allocation Rates, Centre Provident Fund Board*

[8] *Skills Development Levy (SDL), Centre Provident Fund Board*

[9] *Employment of Foreign Manpower Act, Singapore Ministry of Manpower*

[10] *Total labour force, The World Bank*

[11] *Industry (including construction), value added per worker (constant 2010 US$), The World Bank*

[12] *Summary Table: Labour Force, Labour Market Statistical Information, Ministry of Manpower*

[13] *Available Training Programmes for Employers & Workers, The SME Portal*

[14] *SkillsFuture Singapore Introduction, SkillsFuture SG*

[15] *Refreshed Continuing Education and Training (CET) Masterplan, Singapore Ministry of Manpower*

[16] *About the Singapore Workforce Skills Qualifications (WSQ), SkillsFuture SG*

[17] *Singapore-Industry Scholarship (SgIS)-HR Continuing Education Training (CET) Grant, National HR Capability, Singapore Ministry of Manpower*

[18] *About trade unions, Singapore Ministry of Manpower*

[19] *A Guide to Doing Business in Singapore, RSM International*

[20] *Apply for Visa to Singapore in Hong Kong, VFS. Global*

[21] *General Household Survey 2015, Singapore Department of Statistics*

5. Research and Development Environment

Executive Summary

Singapore can be considered as the most advanced country in Southeast Asia in the research and development (R&D) field. For more than 25 years, the Singaporean government has focused on R&D and science, technology and innovation (STI) in order to boost the country's economic competitiveness. Currently, Singapore is implementing its sixth five-year plan, the Research, Innovation and Enterprise 2020 (RIE2020) which aims to transform the nation into a knowledge-based society and economy.

Overall, Singapore has strong R&D assets which help the nation fulfil the objectives of the RIE2020: high government spending and funding, numerous top of the class infrastructure, knowledgeable and abundant STI workforce and a strong enforcement of intellectual property (IP) framework.

5. Research and Development Environment

I. The Science and Technology (S&T) in Singapore[1]

For more than 25 years, Singapore has focused on science, technology and innovation (STI) to drive economic growth. Since the first masterplan, enacted over the 1991-1995 period, the government developed a total of six five-year masterplans targeted at enhancing the country's research and development (R&D) ecosystem. With the Research, Innovation and Enterprise 2020 (RIE2020), Singapore is now striving to develop an innovation-driven economy and society.

Timeline of Singapore's Six S&T Masterplans

1991-1995	*1996-2000*	*2001-2005*	*2006-2010*	*2011-2015*	*2016-2020*
Budget: SGD 2 bn	*SGD 4 bn*	*SGD 6 bn*	*SGD 13 bn*	*SGD 16 bn*	*SGD 19 bn*
National Technology Plan 1995	National S&T Plan 2000	S&T Plan 2005	S&T Plan 2010	RIE 2015	RIE 2020
Key focus: R&D in nine sectors, especially electronics	*Key focus: Develop S&T infrastructure (institutions)*	*Key focus: Enhance human and intellectual S&T capital*	*Key focus: R&D to drive industry growth*	*Key focus: Reinforce the entire S&T framework*	*Key focus: Create a knowledge-based economy*

A. Policies and Trends in S&T[2,3,4]

Research, Innovation and Enterprise 2020 (RIE2020)

The RIE2020 is the sixth S&T plan developed by Singapore, which is effective over the 2016-2020 period. For this plan, the government has committed SGD 19 billion (around USD 14 billion) to support the country's R&D activities. These funds are currently allocated to four strategic technology domains which should help Singapore gain a competitive advantage:


Advanced Manufacturing and Engineering


Health and Biomedical Sciences


Urban Solutions and Sustainability


Services and Digital Economy

In addition, the plan focuses on developing the entire STI ecosystem by:

- Supporting academic research leading to industrial applications to sustain Singapore's growth;
- Enhancing R&D manpower by building a strong R&D community;
- Fostering "innovation and enterprises" by supporting innovative companies that can create value for the country.

Outlook

Overall, Singapore's STI ecosystem is the most advanced of the Southeast Asian region. The country ranked 14th out of 140 countries in the "Innovation Capability" criteria of the 2018 Global Competitiveness Index and ranked first among the ASEAN countries. Singapore especially ranked high in diversity of the workforce (second), international co-inventions (seventh) and buyer sophistication (11th). Comparatively to its overall ranking, Singapore had low scores in scientific publications (24th), trademark applications (22nd), and quality of research institutions (21st).

Nevertheless, a lack of transparency in R&D expenditure data has been highlighted. The latest available data dates back to 2016; that year the R&D expenditure reached 2.22% of the GDP. Even though this figure is not the most updated, the percentage is still the highest among ASEAN countries.

B. S&T Related Organisations[5,6]

Even though Singapore does not have a Ministry of Science and Technology, the government still plays a key role in strategic plans formulation and policies enforcement. Currently, there are two main organisations handling S&T related matters, and both report directly to the Prime Minister or to the Minster of Trade and Industry.

The Research, Innovation and Enterprise Council (RIEC)

Created in 2006, the RIEC is chaired by the Prime Minster and composed of S&T industry experts from the public and private sectors. The Council's main mission is to set the strategic direction for Singapore's R&D. To fulfil this mission, the RIEC:

- Drives Singapore's transformation to a knowledge-based society by advising the government on research and innovation policies and strategies;
- Drafts Singapore's five-year R&D strategy (i.e. the RIE2020); and
- Identifies new levers of long term economic growth by leading national efforts in STI.

To efficiently carry out this mission, two other organisations support the RIEC:

- The National Research Foundation: focusing specifically on the development and coordination of national policies; and
- The Scientific Advisory Board: assisting in R&D management by reviewing policies, identifying new research areas and highlighting emerging global trends and risks.

The Agency for Science, Technology and Research (A*STAR)

A*STAR is an agency operating under the Ministry of Trade and Industry. It's vision is to become a global leader in STI and help convert research results into outputs benefiting the economy and society. The agency's main missions are:

- Carrying out R&D in two main fields (biomedical, and science and engineering) by managing around 25 research centres throughout the country;
- Accelerating the research output commercialisation process and enhancing technology transfer between the private and public sectors; and
- Developing a strong STI manpower through the A*STAR Graduate Academy.

II. The Infrastructure of Science and Technology

A. Government R&D Institutes and/or Funding Agencies[6,7,8]

In Singapore, the government plays a key role in the development of R&D activities. Most of the public R&D centres are managed by two main agencies: the A*STAR and The Campus for Research Excellence and Technological Enterprise (CREATE). In addition, the Singapore Science Park serves as a prestigious campus regrouping startups, technology companies, public or private research institutions and national agencies.

The Agency for Science, Technology and Research (A*STAR)

The agency manages around 25 R&D centres which carry out research in eight main domains:

Chemicals and Materials

Electronics

Engineering

Food, Nutrition & Consumer Care

Pharmaceuticals & Biologics

Energy

Information and Communications Technology

Media Technology

For additional information please visit A*STAR's official website (www.a-star.edu.sg/Research/Research-Entities-Capabilities).

The Campus for Research Excellence and Technological Enterprise (CREATE)

CREATE is an international collaboration campus that hosts R&D centres from local and foreign universities. Currently, there are around 15 joint research programmes between local and foreign universities, which have produced more than 2,000 scientific publications, and collaborated with over 100 international companies. Some examples of universities working at CREATE are: the Massachusetts Institute of Technology (MIT), University of California (Berkeley), and Cambridge University.

Singapore Science Park

The Singapore Science Park is considered one of the best locations in Asia for setting up an R&D centre. It hosts more than 300 international companies, including a community of 10,000 startups, local companies, national research institutions, etc. Entities located in the park are mostly focused on the hi-tech and electronics industries. Some of the main research areas are: information technologies (IT) & IT-enabled services (ITES), bioinformatics, software development, telecommunications, electronics, and other hi-tech industries.

For additional information, please visit Singapore Science Park's official website (www.sciencepark.com.sg/en/).

B. University-based R&D Institutes[9,10]

Apart from the government, universities are also important players in the R&D field. According to the 2019 QS Asia University Rankings, Singapore has only three universities ranked in the top 300. The QS Institute ranks the top universities in Asia according to six criteria, among which the most important are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). Even though Singapore has only three ranked universities, all of them are in the top 100; with two of them among the top three Asian universities. This ranking therefore indicates a very high research and teaching quality, and implies that Singapore has a strong impact on the international S&T scene.

University (ranking)	Description and Research Focus
National University of Singapore (NUS) (1st)	NUS hosts more than 30 research centres which carry out research in eight main topics, including: • Biomedical sciences and translational medicine (e.g. new drugs, diagnostic devices, specific treatment devices); • Integrative sustainability solutions (e.g. clean energy materials, environmental surveillance, waste-to-energy conversion); • Material sciences (e.g membrane technologies used in environmental systems or hybrid magnetic sensors used in consumer electronics); and • Smart Nation (e.g data sciences, artificial intelligence, cyber security).
Nanyang Technological Univeristy Singapore (NTU) (3rd)	NTU research is focused on sciences, social science, arts and humanities, accounting and business management, etc. Among the STI related topics, the university focuses on: • Engineering and technology (e.g aerospace, computer sciences, electronics, nanotechnology); • Life sciences and biomedicine (e.g biology, engineering, biomedical sciences); and • Natural sciences (e.g energy, mathematics, physics, water and sustainability).
Singapore Management University (SMU) (78th)	SMU hosts multiple research centres carrying out studies in economies and financial markets, social fabric and quality of life, boundaries and borders, sustainability, and innovation and technology. Among the last two topics, some research centres focus on: • Management of innovation; • Automated intelligence and augmented intelligence; • Smart, safe and secure cities; and • Sustainable resource management.

C. Private Business Firms (Research Centres)[11]

Following one of the RIE2020's objectives, Singapore has been successful at attracting foreign investors to the city. Indeed, many multinational companies have set up R&D centres in the country. As a result, Singapore is now considered as one of the top 10 locations for innovation centres in the world.
The table below describes some of the main private R&D centres located in Singapore.

Selected Major R&D Centres in Singapore

Investor	Research Focus	Description[15,16,17,18]
Nestle	Food and Beverages	Nestle's R&D centre is responsible for: • Global product development for the Nescafé and Milo lines; • Innovation services for the Asia and Oceania businesses; and • Quality controls.
Mondelez	Food and Beverages	The hub is designed to improve speed, efficiency and effectiveness of the Group by quickly addressing changing consumer needs. It carries out research in: • New product development (including packaging research); and • Technological improvements (including production efficiency research).
Panasonic	Technology	Defined as a core technology R&D centre, the hub focuses on applying technologies to real-life use. The centre mainly focuses on two technologies: • Image recognition; and • 3D technology.
Dyson	Home appliances	The company, which is known for creating vacuum cleaners and bladeless fans, opened this R&D centre focusing on: • Artificial intelligence; • Machine learning; • Robotics; • Fluid dynamics; and • Vision systems.
Grab	Automotive	The car-hailing company opened this R&D centre in order to investigate two new growth opportunities: • Support startups engaged in the fresh groceries supply chain sector; and • Trial partnership with Indonesia e-commerce firm Kudo.
Zuelling Pharma	Healthcare	This is the company's only R&D centre. It focuses on digital technologies and big data to: • Help doctors develop efficient treatment plans; and • Support patients throughout their journey (from disease detection to service payment).

D. Infrastructure Availability for Foreign Investments[5]

As part of the RIE2020, Singapore aims to attract numerous cutting-edge companies to bring value to the nation. Therefore, the country welcomes foreign investments and aims to offer the best infrastructure and partnership opportunities. The main destination for companies wishing to set up their Asian headquarters or R&D centre in Singapore is the Singapore Science Park, with more than 300 innovative multinational companies already established there. In addition, companies can approach the A*STAR to establish joint laboratories. A*STAR is already involved in multiple projects across multiple industries: semiconductor laboratories with Dai Nippon Printing, pharmaceutical research with Novartis, and the creation of a new food, nutrition and consumer care innovation cluster attracting companies such as Nestle and Danone. Foreign investors have therefore many options to establish R&D facilities in Singapore.

III. Priority Areas in Singapore (major exports)[12,13]

Singapore is not rich in raw natural resources. Instead, the country's main exports are manufactured value added products. In 2018, Singapore's top five exports were:

Top 5 Exports	% of Total Exports (in 2018)
Electrical Machinery and Equipment	31.3%
Machinery and Mechanical Appliances	14.3%
Mineral Fuels	13.1%
Other Commodities	6.4%
Optical, Technical, Medical Apparatus	4.7%

As an innovation-focused country, Singapore mainly focuses on exporting high value added products. According to the World Bank, in 2018, 52% of the country's manufactured exports were labelled as hi-tech products (e.g. products with high R&D intensity, such as in the computers, aerospace, pharmaceuticals industries). This percentage is one of the highest among the ASEAN countries, but lower than that of the Philippines (61%) and Malaysia (53%).

IV. Funding for S&T and R&D[5]

In Singapore, companies have access to multiple funding options, especially if they operate in one of the technology areas encouraged by the RIE2020.

Key Funding Schemes in the Advanced Manufacturing and Engineering (AME) Sector

Fund	Description	Requirements	Conditions
Individual Research Grants	• Grant for research ideas supporting capabilities related to advanced manufacturing and engineering.	• Open to all public research performers.	• Awarded through open grant calls.
Programmatic Grants	• Grant supporting thematic programmes that deliver long term trainings.	• Open to all public research performers.	• Awarded through open grant calls.
Industry Alignment Fund	• Grant for forward-looking programmes that train manpower in emerging industries.	• Open to all public research performers. • Projects require support from both A*STAR and the Economic Development Board.	• Awarded through open grant calls.

Key Funding Schemes in the Health and Biomedical Sciences (HBMS) Sector

Fund	Description	Requirements	Conditions
HBMS Open Fund Large Collaborative Grant	• Grant supporting public institutions research in advanced human health and wellness.	• Research team must operate in a public institution.	• Maximum funding of SGD 25 million (USD 18 million) for a maximum of 5 years.
HBMS Open Fund Individual Research Grant	• Grant for clinical research looking into cause, consequence and treatment of human diseases.	• N/A	• Maximum funding of SGD 1.5 million (USD 1.1 million) for a maximum of 5 years.
Singapore Translational Research Investigator Award	• Award supporting clinical researchers undertaking forward-looking translational research.	• Proposed research must be conducted in Singapore.	• Award up to SGD 8 million (USD 5.9 million) over 5 years.

Key Funding Schemes in the Urban Solution and Sustainability (USS) Sector

Fund	Description	Requirements	Conditions
Capability Building Programmes	• Support training of local STI talents to conduct research in the USS field.	• Train local manpower.	• N/A
Industry Alignment Fund	• Fund collaborative research with companies to build USS capability.	• N/A	• N/A
USS Competitive Research Programmes for Energy	• Target cutting-edge research in the USS field.	• Open to S&T areas related to USS.	• Examples of possible fields: solar, power system, green building, waste management.

Key Funding Schemes in the Services and Digital Economy (SDE) Sector

Fund	Description	Requirements	Conditions
Smart Systems SRP Emergent Areas Research Projects	• Support R&D research in new or emerging areas.	• Project must be at seed stage.	• N/A
Industry Alignment Fund	• Grant for forward-looking research projects.	• N/A	• N/A
Smart Systems SRP Strategic Capabilities Research Centres	• Funds SDE R&D projects linked to deep capability building.	• Project carried in a Singaporean research institute or university.	• Funding method: dollar matching for industry co-funding.

For additional details regarding S&T funding, please visit the section “Growing a vibrant national innovation system” in the official RIE2020 document (www.nrf.gov.sg/docs/default-source/default-document-library/rie2020-publication-(final-web).pdf).

V. Human Resources for S&T[14]

Singapore benefits from an established S&T workforce. In the 2019 Global Innovation Index, Singapore ranked fifth out of 126 countries in the criteria "Researchers, FTE/million population". The country ranked first among the ASEAN countries, with a ratio of 6,730 researchers per one million people.

In addition, Singapore can leverage its strong base of S&T educated people. The country ranked fifth worldwide in the criteria "% of graduates in science and engineering", with around 35% of the total number of tertiary graduates graduating in science and engineering *(Note)*.

Note: The figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Supports in Testing and Verification[6]

As one of the main R&D players in Singapore, A*STAR provides a full range of services to companies. The agency tailors to both startups and mature companies. Startups can benefit from the A*ccelerate programme or the A*Start Central which help them overcome common hurdles (e.g. high failure risk, high capital needs) by offering facilities (e.g. prototyping laboratories) and services (e.g. licensing). More established companies can benefit from the A*Star R&D or the A*Star Patent programmes enabling them to easily and efficiently license and patent their innovations.

VII. Intellectual Property (IP) Policy[15]

IP rights are an important factor to consider when entering a country. Some nations have trouble implementing a strong framework to protect IP rights which can lead to serious damages to the companies. Each year the Global Innovation Policy Center (GIPC) publishes a worldwide ranking which analyses eight IP protection related categories: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, as well as membership and ratification of international treaties. According to the 2019 IP Index published by the GIPC, Singapore's IP Protection is strong. Globally, the country ranked 10th out of 50 analysed countries. Regionally its performance is above Asian countries' average. Overall Singapore scored 82% compared with 52% for the Asian average (as a reference the top five world economies averaged 92% on the index).

The report underlines areas where Singapore's IP protection is strong:

- The country's IP framework is seen as advanced;
- The nation is leading the online copyright protection (i.e. strong laws); and
- Patent prosecution is one of Singapore's top priorities.

However, some areas of improvements are also noted**:**

- Online piracy rate of 27% is considered high for a developed country, despite the country's proficiency in copyright protection; and
- Lack of transparency at an international level on seizure of goods found to be infringing IP laws.

Source:

[1] *Singapore: 50 Years of Science and Technology, National University of Singapore, 2018*

[2] *The RIE2020 Plan, National Research Foundation, 2016*

[3] *The Global Competitiveness Report 2019, World Economic Forum*

[4] *Research and development expenditure (% of GDP), The World Bank*

[5] *The Research, Innovation and Enterprise Council homepage*

[6] *The Agency for Science, Technology and Research homepage*

[7] *CREATE, The National Research Foundation*

[8] *Singapore Science Park homepage*

[9] *QS Asia University Rankings 2019, QS World University Rankings*

[10] *Universities official homepages*

[9] *Office of Science Advisor, MIGHT, 2019*

[10] *Focus Area, MIMOS*

[11] *Singapore a hot spot for global R&D centres, The New Paper, 2017*

[12] *Trade Map, International Trade Centre*

[13] *High-technology exports (%of manufactured exports), The World Bank*

[14] *Global Innovation Index 2019, INSEAD*

[15] *GIPC IP Index, Global IP centre, 2019*

6. Supply Chain Environment

Executive Summary

Singapore's economy is heavily dependent on services and manufacturing, with virtually no agriculture in the country's economy. In 2016, the Singaporean government introduced 23 Industry Transformation Maps (ITMs) to further improve the country's competitive advantage in 23 key industries, including electronics, precision engineering, and healthcare, among others.

Singapore boasts some of the best infrastructure in the world, consistently ranking high in various global rankings. Both Singapore Changi Airport and the Port of Singapore are major Asian logistics and trade hubs, and efficiently handle millions of tonnes of cargo annually. With the implementation of the Logistics ITM, Singapore's logistics infrastructure will continue to improve and maintain its status as one of the world's most logistically advanced countries.

6. Supply Chain Environment

I. Industry Profiles in Singapore

Breakdown of 2018's Top 10 Exports[1,2,3]

Singapore's major sectors by gross domestic product (GDP) in 2017 were services (75.2%), industry (24.8%) and agriculture (0%).

In Singapore, the services sector mainly includes financial services, telecommunications, and shipping. The major industries are electronics, chemicals, biomedical and scientific instruments, food and beverage, and oil and petroleum. There is virtually no agriculture in Singapore.

In 2018, Singapore's total global shipments amounted to USD 411.7 billion of which over 85% were contributed by its top 10 exports.

Product Groups	Value in 2018	% of Total Exports
1. Electrical machinery and equipment	USD 128.7 billion	31.3%
2. Machinery	USD 58.7 billion	14.3%
3. Mineral fuels including oil	USD 54.0 billion	13.1%
4. Other commodities	USD 26.4 billion	6.4%
5. Optical, technical, medical apparatus	USD 19.2 billion	4.7%
6. Precious metals and stones	USD 17.0 billion	4.1%
7. Organic chemicals	USD 16.9 billion	4.1%
8. Plastic and related products	USD 15.9 billion	3.9%
9. Cosmetics, perfumes, and oils	USD 8.4 billion	2.0%
10. Pharmaceutical products	USD 8.4 billion	2.0%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp.

Singapore's exports are heavily dominated by electronics and machinery. Singapore was the world's largest exporter of integrated circuits in 2017 with around USD 115 billion. Singapore was also the second largest exporter of computers in Asia with around USD 7.4 billion.

Other major exports of Singapore in 2017 include refined petroleum (third largest in the world with around USD 43 billion) and gold (fourth largest in Asia with around USD 10 billion).

II. The Key Supported Industries in Singapore[4,5,6]

Singapore is one of the largest economies in Asia, and a major international trading and shipping hub. The strong economy enables Singapore to attract and support many industries. In 2016, the Singaporean government developed 23 Industry Transformation Maps (ITMs), predicted to cost a total of around SGD 4.5 billion, to develop strategies and improve productivity and innovation for each industry. Each industry has a lead government agency responsible for implementing the ITM. Some of the main supported industries in Singapore include electronics, medical and biotechnology, and precision engineering.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations[6,7,8]

Electronics

The electronics industry is a major contributor to the Singapore economy, with electronics manufacturing alone contributing to around 4.4% of GDP. The electronics industry in Singapore is currently mainly focused on the manufacturing of high-value components, especially semiconductor integrated circuits.

The Electronics ITM is overseen by the Singapore Economic Development Board (EDB). The main objectives of the ITM include boosting productivity through encouraging automation, and promoting innovation in local companies. As new possible applications for integrated circuits emerge, such as in autonomous vehicles, artificial intelligence, and healthcare, the possibility of growth for the electronics industry also increases. The ITM aims to leverage this potential, and assist companies in innovating and diversifying into these new fields. The Singaporean government will create multi-party platforms to facilitate collaboration and development, bringing together multinational corporations (MNCs), small and medium-sized enterprises (SMEs), and startups to cooperate. New facilities such as the JTC nanoSpace will also provide the space necessary for semiconductor manufacturers.

Healthcare

The biomedical industry in Singapore is quickly growing to become an important pillar of the country's manufacturing economy. In 2016, the Singaporean government committed SGD 4 billion to research in health and biomedical sciences. The ageing population will continue to increase the demand for healthcare products and services.

Private Singaporean healthcare companies, such as Alliance Healthcare and Raffles Medical Group are already major players in Asia, along with a strong public healthcare system. The Healthcare ITM aims to further improve this competitive advantage through encouraging innovation and the use of advanced technologies to improve access to healthcare services for its citizens, and improve private and public healthcare cooperation. The well-established local integrated circuits manufacturing industry will also provide a strong foundation for the growth of the healthcare and biomedical industries, and the necessary components for more advanced medical devices.

Precision Engineering

The precision engineering (PE) industry is a major pillar of Singapore's manufacturing economy. The PE industry is crucial in providing components and support for the development and growth of other manufacturing industries in Singapore, including the semiconductor, aerospace, and medical technology industries, among others.

The PE ITM aims to shift the local PE industry towards higher value-added activities, providing the foundation for the development of other manufacturing industries such as semiconductors, laser and optics, robotics, additive manufacturing, advanced materials, and sensors. This will be done mainly through developing the robotics and digital supporting industries.

III. Key Raw Materials Sourcing Platforms/Channels[7,8,9]

Singapore is home to many B2B e-Procurement platforms, with two of the largest being Eezee and Zeemart focusing on industrial hardware, and food and beverage respectively, in addition to many other local B2B platforms. The Singaporean government is also developing a National Digital Identity (NDI) project for government procurement projects. The NDI project will allow businesses to provide secure authentication and digital signing certificates, providing more security and assurance for businesses.

In addition to procurement platforms, many trade fairs are also hosted in Singapore annually, for industries including food and beverage, maritime, healthcare, and information and communications technology, etc. These trade fairs will usually require registration from professional visitors, and are typically hosted at the Sands Expo & Convention Centre.

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered[10,11]

Singapore is one of the most important trading hubs in Asia, with millions of tonnes of cargo passing through the country annually. Re-exporting plays a major role in the Singapore trade environment, mainly including importing raw materials, providing value added services, and re-exporting higher value products.

Due to the land scarcity, Singapore always needs to incorporate innovation and technology to maintain logistics quality and efficiency. In line with the Logistics ITM 2020, Singapore's logistics firms are continually incorporating the most advanced technologies in their operations, such as automated forklifts and pallet movers on warehouse floors, telematics and real-time visibility systems for road truck fleets, and even experimenting with exoskeleton outfits to complement ageing workforce.

According to the 2019 report by the World Bank, Singapore ranked second in the world in terms of ease of doing business, and ranked first out of the ASEAN countries (Hong Kong ranked fourth globally in the same report). Singapore ranks well in the Enforcing Contracts (first), Starting a Business (third), and Protecting Minority Investments (seventh) criteria, but relatively worse in the Getting Credit (32nd) and Trading Across Borders (45th) criteria.

B. Efficiency of Customs and Clearance Process[12,13,14]

Singapore applies two systems of tariff classification. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Singapore and the other ASEAN countries. The AHTN is based on the 6-digit Harmonized Commodity Description and Coding System (commonly called the HS Code), which applies for trade with non-ASEAN countries. For more information regarding tariff classification in Singapore, please refer to the Singapore Trade Classification, Customs & Excise Duties (STCCED) (www.customs.gov.sg/-/media/cus/files/business/harmonized-system-classification-of-goods/resources/stcced/stcced-2018-march-2019-version/index.html).

Imports and exports are overseen by Singapore Customs under the Customs Act, the Regulation of Imports and Exports Act, the Strategic Goods (Control) Act, and other relevant legislation. Businesses that wish to import into or export out of Singapore must Register with the Accounting and Corporate Regulatory Authority (ACRA) or the relevant Unique Entity Number (UEN) agency to get a UEN. Importers will also need a customs permit, and an Inter-Bank GIRO (IBG) with Singapore Customs for payment of duties, taxes, fees, penalties, and other charges.

Goods and Services Tax (GST) is payable for most imported goods, but exported goods are exempt from GST. Importers are responsible for determining if duties and/or GST should be paid for their imported goods.

For more information on registering to import or export in Singapore, please refer to the Singapore Customs website (www.customs.gov.sg/businesses/importing-goods/quick-guide-for-importers) or (www.customs.gov.sg/businesses/exporting-goods/quick-guide-for-exporters).

Customs Clearance Process

Controlled Goods Check

Step 1:

Importers and exporters should check whether the goods they intend to export are classified as controlled goods. These goods may be subject to additional restrictions by Competent Authorities (CAs).

Businesses can apply for official classification ruling for their goods, at a fee of SGD 75 per product.

Preparing Documents

Step 2:

For the import of containerised cargo by air or land, and import of conventional cargo, importers will be required to produce the customs permit and relevant supporting documents to the checkpoint officer.

For import of containerised cargo by sea, importers are not required to prepare printed copies of customs permits and supporting documents.

Payment of Duties/ Taxes

Step 3:

Importers should determine if duty and/or GST payment should be made. Exporters are generally not required to pay GST.

Importers should make these payments through their IBG with Singapore Customs.

Retaining Documents

Step 4:

All supporting documents relating to the purchase, import, sale, or export of goods should be retained for 5 years. The documents may be stored as physical copies or as images. Singapore Customs may request a business to produce these supporting documents at any time.

The following table shows the documents needed for customs declaration:

#	Import and Export Goods
1	Invoice
2	Bill of lading or air waybill
3	Packing list
4	Customs Import/Export Permit, if necessary
5	Inter-Bank GIRO (IBG)
6	Certificate of Origin, if necessary
7	Any other specific authorisation for controlled goods

For more details regarding importing, exporting, and transshipments procedures in Singapore, please refer to the Singapore Customs website, and relevant legislation (www.customs.gov.sg/businesses/compliance/overview).

V. Logistic Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[15,16,17,18]

Singapore benefits from an advantageous geographical location in the Strait of Malacca, and one of the most developed infrastructures in the world. Singapore is a major trading hub in Asia, with most of the Southeast Asian trade passing through the country.

Airports

Singapore Changi Airport (SIN) is one of the largest airport hubs in Asia. It was voted the World's Best Airport in 2019 for the seventh consecutive year by Skytrax. Changi Airport is also one of the best connected airports in the world, with connections to over 380 cities in over 100 countries and territories. The airport is also one of the busiest passenger and cargo hubs in the world, handling over 66.3 million passengers and 2.14 million tonnes of cargo in 2018.

Changi Airport officially opened the Jewel Changi complex on 18 October 2019, which is an entertainment and retail facility to help improve Changi Airport's status and attractions. Terminal 4 was also recently opened in 2017, bringing the airport's total annual handling capacity to 80 million passengers.

Seaports

The Port of Singapore is one of the major trading hubs in Asia, with strong business and cultural links to the other Asian markets, connecting to over 600 ports in over 120 countries. The Port of Singapore is the second largest port in the world, handling over 36 million TEUs (twenty-foot equivalent units) in 2018. The port is well-equipped with modern, reliable, and efficient equipment and infrastructure, capable of servicing the largest vessels in the world.

Highways

The road network in Singapore is 3,500 km in length, and is managed by the Land Transport Authority (LTA). The roads in Singapore are all paved, and are separated into four categories: expressway, arterial road, collector road, and local road.

Singapore has 10 expressways, with the 11th (the North-South Corridor) scheduled to be completed in 2026. The Singaporean expressway network is also connected to the Malaysian expressway network.

Railways

The main railway systems in Singapore are the Mass Rapid Transit (MRT) and Light Rail Transit (LRT). The MRT and LRT systems are connected, with the MRT being the main system and the LRT connecting to the MRT. The MRT network is currently around 200 km long. The LTA has plans to upgrade the MRT network to about 360 km long, allowing eight in 10 households access to a station within 10 minutes.

The Singaporean and Malaysian governments currently have plans to develop a Rapid Transit System Link between the two countries. The project will cost around USD 760 million, and is projected to be able to carry up to 10,000 passengers per hour each way.

B. Key Logistics Hubs[19]

Singapore has some of the best logistics infrastructures in the world. With its advantageous location and strong infrastructure, Singapore is one of the main shipping and trading hubs in Southeast Asia. The Singaporean government aims to further strengthen their strong position in international trade with the Logistics ITM 2020. This ITM aims to improve the domestic logistics system to optimise long-term use, develop Singaporean talent, and encourage innovation and internationalisation of Singaporean logistics enterprises. The goals for the logistics industry set for 2020 under the ITM include:

- Reach a value-add of SGD 8.3 billion; and
- Create 2,000 new professional, managerial, executive, and technical jobs.

C. Logistics Information Tractability and Transparency[20]

Singapore has a very strong logistics performance as compared to the other ASEAN countries. In the 2018 World Bank's Logistics Performance Index (LPI), Singapore ranked seventh out of 160 countries for the overall LPI, a slight drop from the 2016 result (ranked fifth out of 160). Singapore ranked first among the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing, and (6) Timeliness. Singapore ranked relatively better in Logistics competence (third), but scored relatively poorly in International shipments (15th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *The World Factbook: Singapore, Central Intelligence Agency*

[3] *Singapore, Observatory of Economic Complexity*

[4] *Electronics Industry Transformation Map – Media Release, EDB Singapore, Sep 2017*

[5] *Precision Engineering Industry Transformation Map – Media Release, EDB Singapore, Oct 2016*

[6] *Healthcare ITM for a Future-ready Healhtcare System – Press Release, Nov 2017*

[7] *Singapore is Changing the B2B Market, Sourcesage, Jul 2019*

[8] *Singaporere reveals 2020 GovTech procurement plans, GovInsider, May 2019*

[9] *Trade Fairs Singapore, TradeFairDates*

[10] *Future of logistics in Singapore 'cannot be more exciting', sgsme.sg, Jun 2018*

[11] *Doing Business 2019, The World Bank*

[12] *Harmonised System (HS) Classification of Goods, Singapore Customs*

[13] *Quick Guide for Importers, Singapore Customs*

[14] *Quick Guide for Exporters, Singapore Customs*

[15] *Annual Report 2018/19, Changi Airport Group*

[16] *Introduction to Maritime Singapore, Maritime and Port Authority of Singapore*

[17] *ASEAN Statistics, ASEAN Secretariat*

[18] *Upcoming Projects, Land Transport Authority*

[19] *Logistics ITM to Strengthen Singapore's Position as a Globally Leading Logistics Hub – Media Release, EDB Singapore, Nov 2016*

[20] *Logistics Performance Index (LPI), The World Bank, 2018*

7. Infrastructure

Executive Summary

Singapore has a fair number of industrial parks and highly established transportation infrastructure.

Domestic and foreign investors can choose to locate their manufacturing operations in one of the 16 specialised industrial parks (SIPs) and business parks (BPs). In Singapore, most of the SIPs cater to specific manufacturing industries e.g chemicals, oil and gas or aerospace whereas the BPs target innovative enterprises that can help the country transform into a knowledge-based society.

Singapore's transportation infrastructures are among the best worldwide. The high quality of existing facilities is mainly due to continuous government investments and public-private partnerships. In addition, the country's infrastructure outlook is positive as it is expected that nearly 100% of the country's investment need will be met by 2040.

7. Infrastructure

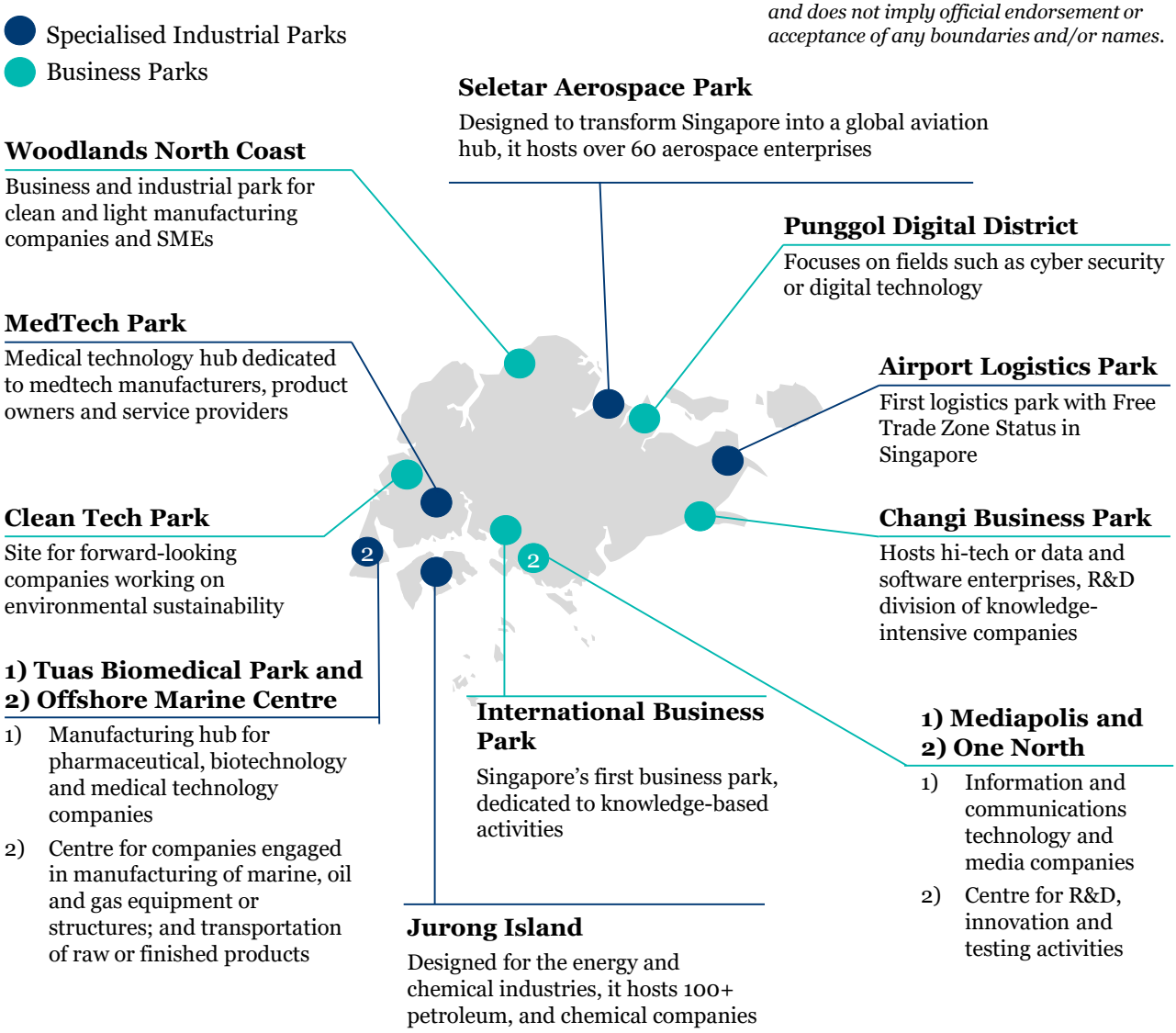
I. List of Major Industrial Parks or Zones and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Parks or Zones[1,2]

While Singapore's economy is mainly services-based, the country has nevertheless developed two different parks to cater for manufacturers' needs: specialised industrial parks (SIPs) and business parks (BPs). SIPs target enterprises carrying out light manufacturing activities, whereas BPs are tailored for companies engaged in more knowledge-based activities (e.g. research and development). Currently there are eight SIPs and eight BPs in Singapore.

Locations of the Major SIPs and BPs in Singapore[4]

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.



Foreign Direct Investment (FDI)

Singapore is attractive to foreign investors due to its simple regulatory system, low tax rates, high quality infrastructures and political stability. Therefore, Singapore is among the top five largest FDI inflow recipients worldwide. In 2018, the country recorded net inflows of around USD 77.7 billion, a 2.6% increase from USD 75.7 billion in 2017. The main investors in the country were the United States, British Virgin Islands, Cayman Islands and the Netherlands. Most of their investments are directed at services, specifically financial and insurance activities.

Cost of Usage

The price of land (for both rent and sale) in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links as well as proximity and access to raw materials. For more details on the cost of industrial land, please refer to Appendix 1.

As Singapore offers industry-specific parks, companies need to consider the best fit before investing in the country. For example, parks such as the Medtech Park, the Aerospace Park or the Offshore Marine Centre offer facilities and equipment tailored for the medical, aerospace, and oil and gas industries respectively. These parks are therefore likely to charge a premium compared to non-specialised parks, for the availability of specific equipment.

In addition to the land cost and facilities rent cost, industrial parks generally charge various fees. Investors can expect to pay domestic waste fees, maintenance fees and general fees.

Outlook

In Singapore, most of the industrial and business parks are developed by the JTC Corporation. From 1968 to 2018, JTC developed more than 7,000 hectares of industrial land and 4 million m² of ready-built facilities in order to meet companies' evolving needs along their industrialisation journey (the SIPs and BPs described previously were all developed by JTC). Singapore's industrial parks' outlook is quite positive, as JTC has already planned additional investments to further develop the current infrastructure. Some of the main ongoing projects are:

- Jurong Rock Caverns: a project looking into subterranean depths to optimise land use;
- Tukang Innovation Park: designed to support innovative companies and facilitate the growth of new industry clusters; and
- Jurong Island Version 2.0: an initiative to enhance the competitiveness of the current chemicals hub.

B. Land or Building for the Major Industrial Parks or Zones[3]

As most of the industrial and business parks in Singapore are managed by the JTC, investors can visit their Customer Service Portal in order to perform any business-related transactions. The portal is designed to shorten business turnaround time by providing a one-stop service. For additional information, please visit the JTC portal (www.jtc.gov.sg/customer-services/pages/default.aspx#pageheader).

Examples of Services Available on the Portal

Search and Apply for Properties	Perform Lease-related Transactions	Manage Investments	Pay
Companies can invest in: flatted or ramp-up or standard factories, business space or lands	Renew lease, sublet space, register for a property, transfer or terminate tenancy, etc.	View property details, applications status, statement of account, etc.	Online payment available for: rent or administration fees, etc.

II. Potential Infrastructure Shortfall[4]

Overall, Singapore has well-established infrastructure. In the World Economic Forum's 2019 Global Competitiveness Report, Singapore ranked first out of 140 countries. The country has therefore the most established infrastructure worldwide. However, on some criteria, Singapore had relatively low scores, indicating that there is room for improvements:

- Moderate airport connectivity: Singapore ranked 23rd; and
- Population is moderately exposed to unsafe drinking water: Singapore ranked 25th.

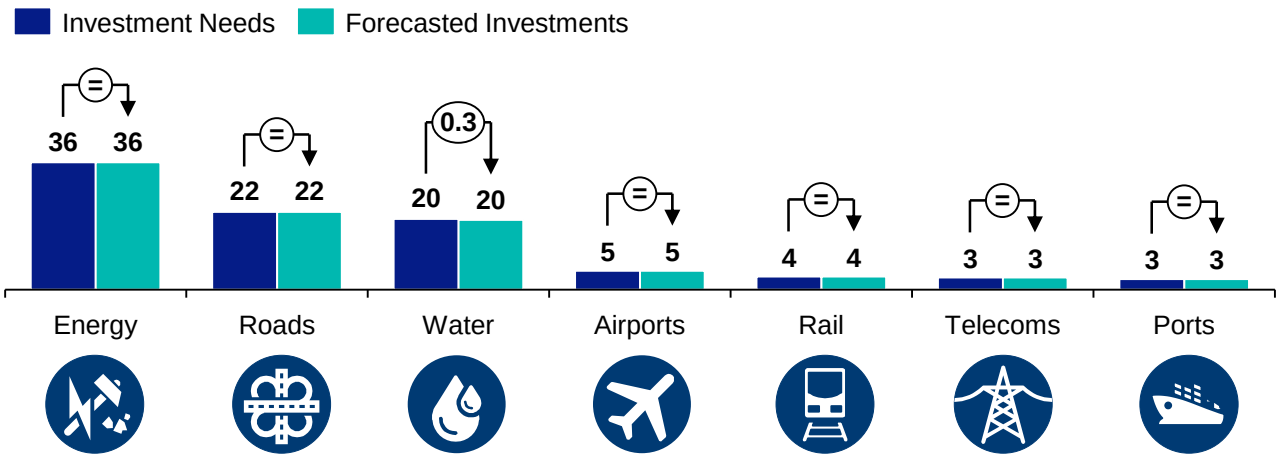
III. Latest and Upcoming Major Local Infrastructure Projects and Spending[5,6]

The government's continued support to national infrastructure development in Singapore has led to a quality of infrastructure among the highest in the world. Over the years, the Singaporean government has continuously invested money through national projects or public-private partnerships and is projected to pour USD 10 billion per year in 2020 and 2021. Some of Singapore's major infrastructure development projects are described below.

- Railway: the government aims to create a railway network of 360 km in 2030 (from 230 km in 2018). This project focuses on strongly increasing the number of household covered by the Mass Rapid Transit system (i.e. Singapore's subway).
- Airport: the government is providing 70% of the funding for a USD 10 billion project to build a new terminal in Changi Airport. The new terminal is expected to be open in 2030 and should increase the airport's passenger handling capacity by 50 million per year (i.e. from 85 million in 2018 to 135 in 2030).
- Water: Singapore is investing in a USD 4.8 billion sewer project. The Deep Tunnel Sewerage System (Phase II) should create an comprehensive sewer network linked to a new water reclamation plant by 2025.

From 2016 to 2040, around USD 94 billion will be needed to upgrade or develop new infrastructure in Singapore (see chart below for breakdown by sector). Over the period it is forecasted that the country's public and private sectors will invest more than USD 93 billion, therefore covering nearly 100% of the country's needs. The total investment gap is estimated to be USD 0.3 billion which can be attributed to lower investment in the water sector.

Singapore's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



IV. Availability of Natural Resources[7,8,9,10,11,12]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• Vegetation covers more than 50% of Singapore's territory. • Around half of the country's vegetation is "managed" which is to say that it takes the form of parks, gardens, lawns, etc. • Singapore's vegetation is mostly tropical rainforest.
Agriculture	• The agriculture sector is estimated to represent 0% of Singapore's GDP. • According to Singapore Food Agency, there are six agrotechnology parks in the country which offer 600 hectares allocated to 200 farms.
Fishing/ Aquaculture	• Fishing is a negligible activity in Singapore. • The few Singaporean fish-farming practitioners partner with international companies (e.g. Oceanus Group) to create tech-driven operations.
Livestock	• Singapore's livestock production is very limited. • Most of the nation's animal protein needs are met by importing from neighbouring countries (e.g. Thailand).
Water Resources	• Singapore has 4 different water sources: local catchment water, imported water, NEWater and desalinated water. • Imported water from Johor River supplies 60% of the country's needs. • NEWater plant treats and purifies used water with membrane and ultra-violet technologies. It can meet 30% of the country's water needs. • Desalination plants meet the rest of the country's needs.
Minerals	• Singapore's mining activity is nearly nonexistent as it does not have coal mines or precious stones mines. • However, the country is located near mining regions (e.g. Indonesia, Mainland China) and could become important in the regional supply chain.
Coal, Oil and Fossil Fuels	• 95% of electricity generated in Singapore is produced by burning natural gas, the rest is produced by coal, oil and municipal waste. • Most of the fuels used in Singapore are imported.
Renewable Energy	• Singapore has a limited renewable energy generation potential due to the lack of available space for renewable energy development. • Nevertheless, the government has committed to increasing capacity of solar energy from 71 megawatts in 2016 to 350 megawatts in 2020.

Source:

[1] *All Properties, JTC*

[2] *Singapore Foreign Investment, Santander Trade Markets*

[3] *Customer Service Portal, JTC*

[4] *2019 Competitiveness Report, World Economic Forum*

[5] *Singapore infrastructure spending set to exceed USD 10 bn per year, Design Build, 2019*

[6] *Forecasting infrastructure investment needs and gaps, G-20, 2017*

[7] *The vegetation of Singapore, CABI*

[8] *Farming in Singapore, Singapore Food Agency*

[9] *Singapore's farming revival: 'Tech is the only way to go', Today, 2019*

[10] *Singapore's water supply: Where does it come from?, Straits Times, 2015*

[11] *Singapore has potential to become key hub for mining, Today, 2014*

[12] *Singapore International Analysis, Eia Beta*

8. Types of Industries Encouraged by the Local Government

Executive Summary

Singapore's national strategy is to develop a knowledge-based and innovation-driven economy, and it focuses on three key areas: research, innovation and enterprise.

In Singapore, there are no foreign direct investment (FDI) restrictions for most industries. However, some restrictions on foreign ownership exist in broadcasting and domestic news media sector. In addition, licences and government approvals are required for certain activities conducted by foreign investors.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries[1,2]

Industry development remains a major focus area for the Singaporean government. According to the Singapore Ministry of Finance and Industry, the country's national strategy is to develop a knowledge-based and innovation-driven economy, by focusing on three key areas: research, innovation and enterprise. Over the 2016-2020 period, the government is therefore planning to invest SGD 19 billion (USD 14 billion) in order to meet the objective set in the Research, Innovation and Enterprise 2020 plan (RIE2020). These amount will be mainly invested for three major business functions where the Economic Development Board (EDB) considers that Singapore has a competitive advantage in: Headquarters, Advanced Manufacturing and Innovation.

Headquarters

Given its geographic position, well-developed financial system and infrastructure, Singapore is an ideal headquarters location for companies operating or planning to expand in the region.

Advanced Manufacturing

With the challenges of increasing labour cost and competition, Singapore defends its leading industrial position by moving up to the top of value chain and embracing Industry 4.0 (i.e. the fourth industrial revolution).

Innovation

As one of the most innovative cities in the world, Singapore hosts a thriving ecosystem of companies that are experimenting new ways of solving challenging problems. To support this ecosystem, the Singaporean government encourages investments in a number of industries through the EDB:


Aerospace


Consumer Businesses


Creative Industries


Electronics


Chemicals


Information & Communications Technology


Logistics & Supply Chain Management


Oil & Gas Equipment and Services


Medical Technology


Natural Resources


Pharmaceuticals & Biotechnology


Precision Engineering


Professional Services


Urban Solutions & Sustainability

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[3]

For most industries, Singapore does not impose any FDI restriction. However, in sectors such as broadcasting and domestic news media, foreign ownership is restricted. In addition, licences and government approvals are required for certain activities conducted by foreign investors.

Lists of Industries Subject to Authorities Approvals

Industry	Authority	Restrictions
Financial services	Monetary Authority of Singapore (MAS)	• MAS approval required for: merger and acquisition of a local bank and financial institutions (including shares purchasing). • Foreign banks must obtain a licence of "qualifying full bank" from the MAS before they access some customer services (e.g. ATM network).
Professional services	Multiple authorities	• Licences from the Legal Service Regulatory Authority required before practicing Singapore law. • Foreign law firms can be restricted to practice law in some areas (e.g family law, criminal law). • Foreign lawyers can own a maximum of 30% of a Singaporean law firm. • All medical professionals must be registered with the Singapore Medical Council.
Broadcasting and Media	Info-communications Media Development Authority (IMDA)	• Foreign newspaper-related activities are controlled by the Singaporean government through regulations and licensing by IMDA.
Real estate	Land Dealings Approval Unit (LDAU)	• Foreign acquisition of residential land or property is regulated by the LDAU. • Foreign acquisition of commercial and industrial properties is not restricted.

Source:

[1] *Industries & Key Activities, Economic Development Board of Singapore*

[2] *Research, Innovation and Enterprise (RIE) 2020, Ministry of Trade and Industry*

[3] *Investing in Singapore, Thomson Reuters Practical Law*

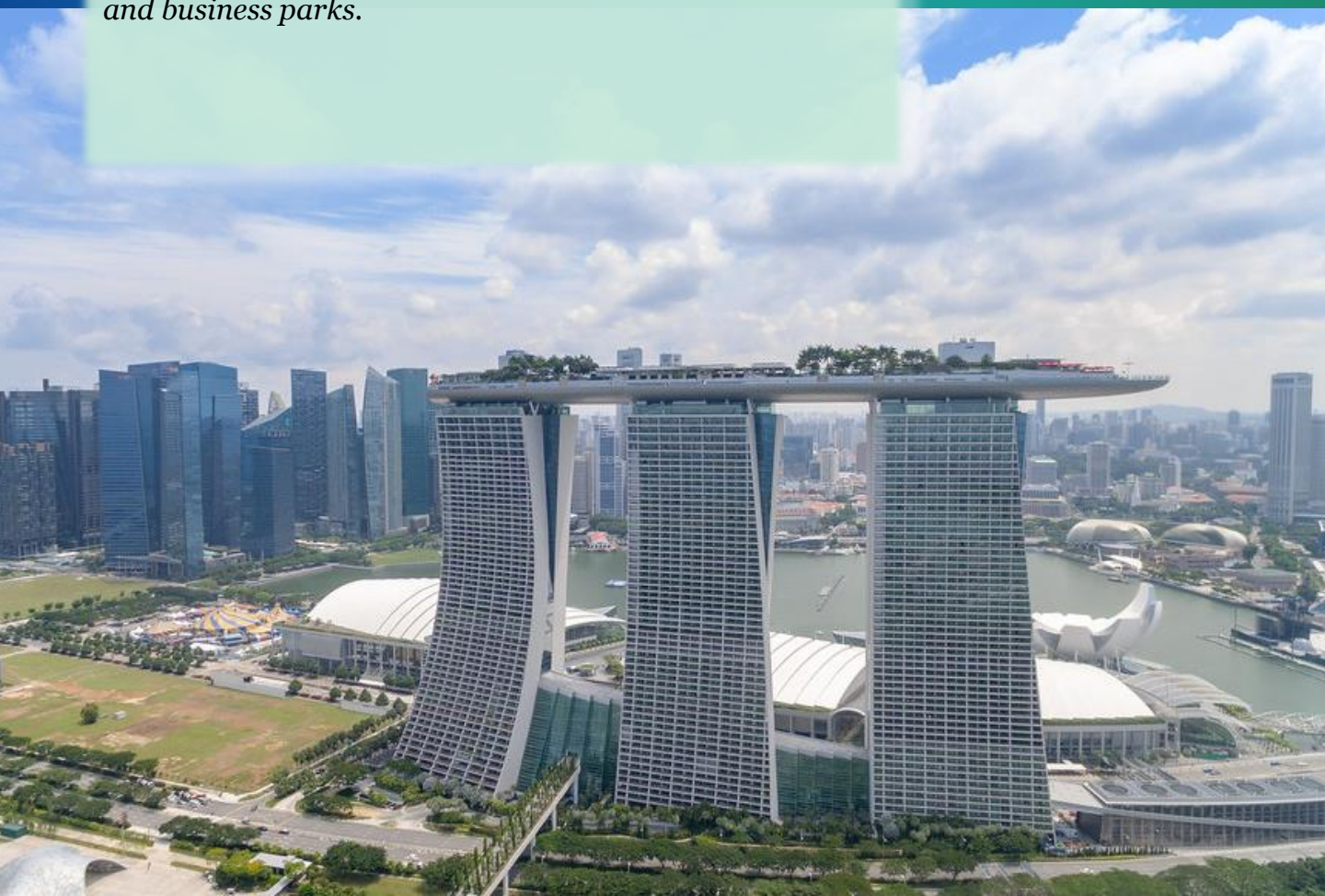
9. Key Government Incentives

Executive Summary

The Economic and Development Board (EDB) is the government body in charge of planning and executing investment strategies designed to strengthen Singapore's position as an international business centre.

Local and foreign companies can apply for one of the multiple incentive programmes of the EDB. These programmes target different industries and are envisioned to support companies in multiple aspects. The schemes are divided into three main segments aligned with Singapore's five-year plan: 1) growing industries; 2) innovation, research and development (R&D) and capability development; and 3) productivity.

There are no specific investment incentives or schemes available for companies investing in Singapore's industrial and business parks.



9. Key Government Incentives

I. Eligibility of Incentive Programmes for Foreign Investments[1]

The Economic and Development Board (EDB) is the government body that plans and executes investment strategies with the aim of enhancing Singapore's position as an international business centre. The EDB has several incentive programmes, available to both local and foreign companies, to foster the development of certain industries. These incentive programmes are designed for companies engaged in three main economic activities: 1) growing industries (e.g. help companies expand their capabilities); 2) innovation, research and development (R&D) and capability development (e.g. support digital companies in the recruitment process; and 3) productivity (e.g assist companies investing in land or buildings). The major programmes in each category are described below. For more information please visit the EDB homepage (www.edb.gov.sg/en/how-we-help/incentives-and-schemes.html).

Incentive Programmes: Growing Industries

Scheme	Description	Eligibility Criteria	Incentive
Pioneer Certificate Incentive & Development and Expansion Incentive	• Aims to encourage companies to expand their activities and grow their capabilities. • Companies with headquarters in Singapore can apply to the programme.	• Commitment to grow the capabilities in Singapore. • Commitment for manufacturing companies to make fixed asset investments. • Company should introduce advanced technology, skills and expertise in Singapore.	• Corporate tax exemption or concessionary tax rate of 5% or 10%. • Incentive period limited to 5 years with possible extension.
Finance & Treasury Centre Incentive	• Aims to encourage companies to choose Singapore as their preferred location to carry out strategic finance and treasure management activities.	• Company must perform strategic activities in Singapore: e.g. cash and liquidity management, provision of corporate finance advisory services, management of interest rate. • Company must have at least 10 staff, and generate SGD 3.5 million in total company expenses.	• Reduced corporate tax rate to 8%. • Withholding tax exemption on interest payments. • Incentive period limited to 5 years with possible extensions.

Incentive Programmes: Innovation, R&D and Capability Development

Scheme	Description	Eligibility Criteria	Incentive
Tech@SG Programme	• Helps digital companies find the talents (employees) matching their needs. • Facilitates immigration processes.	• Company's core business product or service must be digital/technology-related. • Company secured at least a USD 10 million funding in the past 36 months.	• Endorsement by the Ministry of Manpower enabling company to receive 10 Employment Passes over two years. • Employment Pass renewal fee will be covered.
Intellectual Property Development Incentive	• Helps companies to commercialise and apply the results of their R&D activities.	• Companies must be prepared to make significant investment in Singapore: i.e. minimum SGD 6 million. • Company must create at least 15 skilled jobs.	• Reduced corporate tax rate of 5% or 10%. • Reduced corporate tax rate will increase by 0.5% every 5 years. • Incentive period limited to 10 years with possible extensions.
Research Incentive Scheme for Companies	• Supports companies' research and development projects related to science and technology.	• N/A	• N/A
Training Grant for Company	• Helps companies to develop their manpower capabilities through training programmes.	• N/A	• N/A

Incentive Programmes: Productivity

Scheme	Description	Eligibility Criteria	Incentive
Land Intensification Allowance	• Promotes a land-efficient and high value-added use of industrial lands.	• Multiple criteria linked to zoning, business nature, occupancy rate, relationship between user and owner of the building/land.	• Company is granted an allowance of a value equal to 25% of expenditure incurred on the construction or renovation, extension of an approved building.
Resource Efficiency Grant for Energy	• Encourages manufacturing companies to be more energy efficient, reduce carbon emissions and improve competitiveness.	Eligible companies (including SMEs) must be: • Engaged in the manufacturing sector with a Singapore-registered owner; or • Power generation companies.	• Funding support up to 50% of qualifying costs.

II. Scope of Special Economic Zone Scheme and Geographical Location

Singapore's main industrial and business parks are described in section 7 of this report. There are no specific incentives for companies wanting to locate their activities in the parks. However, investors are entitled to all the incentives programmes listed previously if they meet the eligibility criteria.

Source:

[1] *Incentives and Schemes, Economic Development Board*

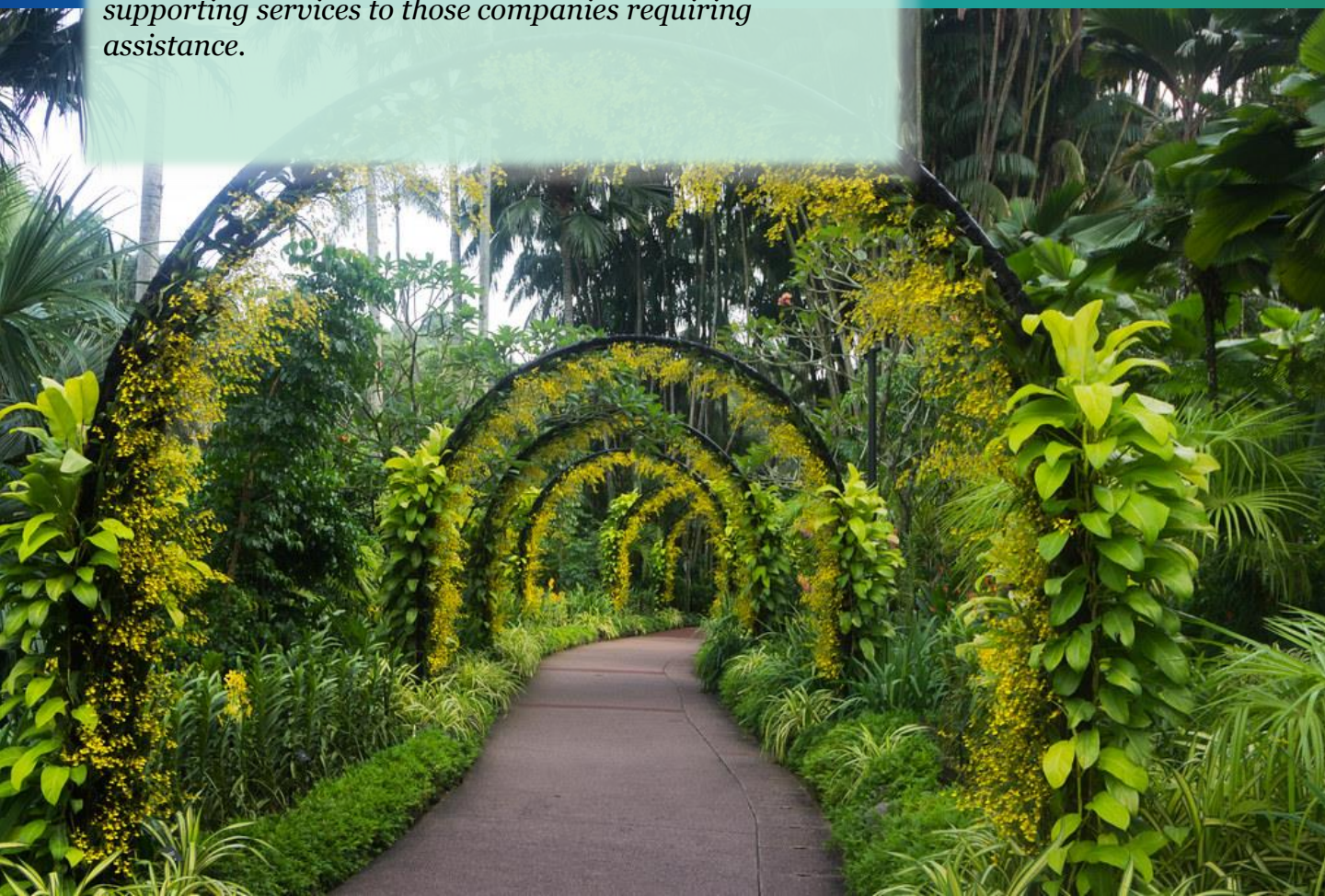
10. Environmental Requirements

Executive Summary

In Singapore, Ministry of the Environment and Water Resources (MEWR) is the primary regulatory body responsible for management and administration of environmental policy and standards, as well as the enforcement of law. Environmental Protection and Management Act (EPMA) is the fundamental law in relation to environmental management in Singapore. Any foreign businesses wishing to invest or do business in Singapore must abide by the law.

Factories in Singapore may encounter environmental hurdles or problems, such as historical pollution and licence requirements.

There are environmental organisations and agencies in Singapore that can provide relevant environmental supporting services to those companies requiring assistance.



10. Environmental Requirements

I. Environmental Laws and Regulations in Singapore[1]

The Ministry of the Environment and Water Resources (MEWR) is committed to providing Singaporeans with a clean and sustainable environment, and resilient supplies of safe food and water.

The MEWR consists of three statutory boards – the National Environment Agency (NEA), Public Utilities Board (PUB), and the Singapore Food Agency (SFA), which all work together to ensure a clean, sustainable environment, as well as supply of safe food and water for Singapore.

The Environmental Protection Law was established in 1999, and last revised in 2012. The Environmental Protection Law defines principles, regulations and measures relating to the management, monitoring, protection, control, preservation and rehabilitation of both natural environment and social environment.

A. The Main Environmental Protection Administrations in Singapore[1,2,3]

Ministry of the Environment and Water Resources (MEWR)

MEWR takes responsibilities to ensure a sustainable, resource-efficient and climate-resilient Singapore. The Ministry was renamed from the Ministry of Environment (ENV) in 2004, to better reflect its expanded role in managing Singapore's water resources.

The three strategic directions of the MEWR are economic resilience, resource resilience and climate resilience. Under its permanent Secretary, MEWR has seven divisions on regular management. Some of them have direct impacts on enterprises' environmental behaviors in Singapore. Environmental Policy Division formulates, reviews and implements sustainable environment strategies in Singapore. Communications and 3P Partnership Division supports the implementation of environmental and water policies and programmes. Water Food Policy Division works on policies to provide a reliable water and food supply, and regulate performance and demand management through tariff and cost control.

National Environment Agency (NEA)

NEA is one of the key players for ensuring a clean and green environment, as well as the sustainable development of Singapore, under the supervision of the MEWR. NEA develops and spearheads environmental initiatives and programmes including high public health standards and services, pollution control measures, energy efficiency promotion and conservation.

NEA safeguards the public, workers, and the environment against the harmful effects of pollution, and is responsible for licence-related matters covering different areas such as radiation protection, pollution control, waste management, public cleansing, vector control and fumigation (under the authority of Director-General of Public Health).

Public Utilities Board (PUB)

PUB is the national water agency that manages Singapore's water supply, water catchment and used water in an integrated way, which is also a statutory board under the MEWR.

Responsible for the collection, production, distribution and reclamation of water in Singapore, PUB built the Deep Tunnel Sewerage System to channel used water to a centralised water reclamation plant for treatment.

B. The Main Environmental Legislation in Singapore [4]

Environmental Protection and Management Act (EPMA)

EPMA was enacted originally in 1999, and last revised in December 2002. This is an Act to consolidate the laws relating to environmental pollution control, to provide protection and management for the environment and resource conservation, and for purposes connected therewith.

The Act and its subsidiary legislations authorise NEA to control water, air, soil and noise pollution and manage environmentally hazardous substances, as well as grant discretion of the Director-General to any licence. According to Part Nine of Licences and Industrial Plant Works, where a person is required by the Act to obtain more than one licence, he/she may apply to the Director-General for a single licence to carry out the activities specified in his/her application and the Director-General may, if he/she thinks fit, grant or refuse to grant the single licence.

Penalties

EPMA specifies penalties on various incompliance with the sections. In particular, violation related to effluent and hazardous substance control could be serious.

- Any person who fails to comply with the subsection on treatment of trade effluent shall be guilty of an offence and shall be liable —

  (a) on the first conviction to a fine not exceeding SGD 20,000 or to imprisonment for a term not exceeding three months or to both and, in the case of a continuing offence, to a further fine not exceeding SGD 1,000 for every day or part thereof during which the offence continues after conviction; and

  (b) on a second or subsequent conviction to a fine not exceeding SGD 50,000 or to imprisonment for a term not exceeding three months or to both and, in the case of a continuing offence, to a further fine not exceeding SGD 2,000 for every day or part thereof during which the offence continues after conviction.

- Any person who discharges or causes or permits to discharge any toxic substance or hazardous substance into any inland water so as to be likely to cause pollution of the environment shall be guilty of an offence and shall —

  (a) be liable on the first conviction to a fine not exceeding SGD 50,000 or to imprisonment for a term not exceeding 12 months or to both; and

  (b) be punished on a second or subsequent conviction with both imprisonment for a term of not less than one month and not more than 12 months and a fine not exceeding SGD 100,000.

Environmental Public Health Act (EPHA)[5]

EPHA consolidates the law relating to environmental public health and provides for matters connected therewith. The Act was amended on 1 April 2014 to enable the mandatory reporting of waste data and submission of waste reduction plans by any owner, occupier or lessee of a work place, upon their receipt of a written Notice.

Currently, commercial premises that have been served a written Notice include hotels with more than 200 rooms and shopping malls with over 4,600 m^2 of net lettable area.From 2020, factories with more than 20,000 m^2 of gross floor area (GFA), warehouses with more than 50,000 m^2 of GFA, and convention/exhibition centres with more than 8,000 m^2 of GFA, will also be included.

Other Environmental Laws and Regulations

Singapore has issued other environmental-related laws, such as Radiation Protection Act (revised in 2008), Hazardous Waste (Control of Export, Import and Transit) Act (amended in 2019), etc. Disposal of industrial waste, stable refuse, radioactive waste, etc., sanitary measures regarding operations, and radiation levels in the working environment are all regulated according to provisions. Any violation of such laws and regulations could be punished.

A detailed list of environmental laws and regulations in Singapore can be found in Appendix 2.

C. Main Environment-related Joint Announcements and Statements Which HK and Mainland China Have Issued with Singapore

The Chinese Ministry of Foreign Affairs issued a joint statement between the People's Republic of China and the Republic of Singapore in 2018, to further strengthen China and Singapore's comprehensive strategic partnership. The statement encourages cooperation in the environment-related fields.

In addition, there are also a series of statements and plans to further enhance the environmental cooperation between China and the ASEAN that will affect Singapore.

Main Environment-related Joint Announcements and Statements[6,7,8]

Statements	Impact	Clause
Joint Statement between the Government of the People's Republic of China and the Government of the Republic of Singapore	Encourage cooperation in ecological civilisation, circular economy, environmental research and development as well as environmental governance, and promote China-ASEAN cooperation in environmental protection. Deepen collaboration in urban governance to create new knowledge, insights and innovative solutions to address the current and future urban challenges, and also support the creation of highly liveable cities that are economically competitive and environmentally sustainable with a high quality of life.	Clauses 9 & 10
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in environmental awareness.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Singapore

Singapore has enacted laws and announced numerous environmental regulations that specify which environmental permits are required.

Pollution Control Study (PCS)

Singapore has issued the Guidelines for Pollution Control Study (PCS), which was revised in January 2019. The guideline states that anyone intending to carry out any activity, which could cause substantial pollution of the environment or increase the level of such pollution, may be required to conduct a PCS. This is provided for under Article 36 of the EPMA.

The PCS should identify the sources of emission of air pollutants, discharge of trade effluent, generation of wastes and emission of noise; quantify and evaluate the impact of such pollution emissions, and finally based on the results of the environmental impact assessment, recommend the measures to be incorporated in the design and operation of the plant to reduce the pollutive emissions to acceptable levels that would not pose nuisance or harm to the people and the environment.

When a factory obtains a land lease permit for a building permit application, it must submit an Industrial Allocation Form (IA Form) to the National Environment Agency (NEA), including the development site, pollution prediction, etc. NEA's Development Control and Licensing Department (DCLD) will evaluate whether the factory will have a significant impact on the environment. If the DCLD deems that the factory may have a significant impact, the business will need to conduct a PCS.

Effluent Discharge Permit

According to Article 15 of the EPMA, factories that intend to discharge any trade effluent, oil, chemical, sewage or other polluting matters into any drain or land must apply for a written permission from NEA.

II. Environmental Situations in Singapore

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period		Operation Period
Historical Pollution Issues	**Licence Requirements**		**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	PCS	Effluent Discharge Permit	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The Processes are as below:

- Supporting agency selection: There are no licence requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify significant potential environmental risks in a report.

EDD Case

The DNV.GL consultant company was appointed to perform EDD services for a hi-tech project in Singapore.

As part of the due diligence process, the services included overview of hidden environmental liabilities, information on the demands of the authorities, and other environmental-related compliance risk assessments. As a result, the investor of the project successfully invested after the EDD evaluation, with the hi-tech product project proceeded smoothly.

For a list of organisations/agencies providing EDD services in Singapore, please refer to Section 10.III.A.

Pre-construction Period: Pollution Control Study (PCS)

The local environmental laws stipulate that any person intended to conduct any activity that may cause substantial pollution of the environment or increase the level of such pollution must carry out a PCS, based on evaluation by the NEA's DCLD.

Resolutions

PCS

According to the Guidelines for Pollution Control Study, PCS reports must be prepared by the consulting company registered with the NEA.

PCS Processes:

- Supporting agency selection: Hiring a registered consulting company to prepare the PCS report;
- Report: The PCS report should include quantitative assessment of air pollutants, wastewater, waste and noise generated by operations, and related mitigation measures; and
- Submission and approval: Submitting the PCS report to the NEA for review, usually the NEA will take two to four months for review and approval.

For a list of organisations/agencies providing PCS services in Singapore, please refer to Section 10.III.B.

Pre-construction Period: Effluent Discharge Permit

The factories that discharge any trade effluent, oil, chemical, sewage or other polluting matters into any drain or land must apply for a written permission from NEA.

Resolutions

Effluent Discharge Permit

- Related Organisation: NEA.
- The businesses could submit the declaration form online in the official website of NEA.
- In the declaration form, the applicants should specify the peak discharge rate and pre-treatment information etc.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The NEA is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous wastes;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

Environmental Pollution Case

A printing company in Singapore has been fined by the Singaporean government due to pollution caused. The factory had been caught four times for polluting Singapore's sewers with toxic industrial wastewater that are copper-tainted. According to Sewerage and Drainage (Trade Effluent) Regulations in Singapore, the recalcitrant offender was fined SGD 12,000 for its most recent breach of the law.

For the list of organisations/agencies providing monitoring services and other related services in Singapore, please refer to Section 10.III.C.

B. Study on Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Singapore

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environment-related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment-related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standard between Singapore and Mainland China

Please refer below legend for the symbols list out in the comparison tables within this section.

In Singapore, all wastewater must be discharged into the public sewerage system. The discharge of wastewater into open drains, canals and rivers is regulated by the EPMA. Besides, industrial wastewater must be treated to meet specified standards before being discharged into a sewer or watercourse if a public sewer is not available.

For the Mainland China and Singapore standards , values in brackets refer to the limit of effluent discharged into public sewers.

For the Mainland China standards (except for electronic industry and textile industry)and Singapore standards, the values outside the brackets refer to the limit of effluent discharged into watercourse other than a controlled watercourse, which refers to non-potable water source. For the electronic and textile industry in Mainland China, values outside the brackets refer to the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Singapore.

"↑" indicates the requirement of Singapore is stricter than Mainland China.

"=" indicates the requirement of Mainland China is the same as Singapore.

"-" indicates there is no requirement in the standard.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. And except for the substances listed in the table below, Singapore standards clearly listed the substances that shall not be contained in the trade effluent discharged. For a complete list, please refer to the Notes section below each table for relevant standards.

If two or more of the metals (cadmium, chromium (trivalent and hexavalent), copper, lead, mercury, nickel, selenium, silver and zinc) are present in the trade effluent, the concentration of the metals shall not be more than 1 mg/L where the trade effluent is discharged into a watercourse other than a controlled watercourse, and not be more than 10 mg/L where the trade effluent is discharged into public sewers.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non-industrial areas in Singapore at the moment, i,e. residential areas. If there are plans to build or operate factories in such areas, a business should confirm with local environmental department whether specific regional requirements exist.

Electronics (Part 1/6)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	pH		6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids		50 (400)	50 (250)	= (↓)
		COD		100 (600)	80 (300)	↓ (↓)
		BOD		50 (400)	-	N/A
		Mercury		0.05 (0.5)	-	N/A
		Ammonia as NH_3-N	Special electronic materials	-	10/20[c] (25/45[c])	N/A

Electronics (Part 2/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Ammonia as NH_3-N	Electrical units	-	5 (25)	N/A
			Printed circuit boards		20 (45)	N/A
			Semiconductor devices		10 (40)	N/A
			Display device and photoelectron components		5 (25)	N/A
			Electron terminals products		5 (25)	N/A
		Total nitrogen	Special electronic materials	-	20/30[c] (40/60[c])	N/A
			Electrical units		15 (40)	N/A
			Printed circuit boards		30 (60)	N/A
			Semiconductor devices		15 (60)	N/A
			Display device and photoelectron components		15 (40)	N/A
			Electron terminals products		15 (40)	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[c] (6.0)	N/A
			Electrical units		0.5 (6.0)	N/A
			Printed circuit boards		1.0 (6.0)	N/A
			Semiconductor devices		1.0 (6.0)	N/A
			Display device and photoelectron components		0.5 (6.0)	N/A
			Electron terminals products		0.5 (6.0)	N/A
		Phosphates		5.0 (-)	-	N/A
		Sulphide	Special electronic materials	0.2 (1.0)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0 (1.0)	↑ (=)
			Semiconductor devices		1.0 (1.0)	↑ (=)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	0.1 (5.0)	0.5 (0.5)	↑ (↓)

Electronics (Part 3/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Copper	Electrical units	0.1 (5.0)	0.5 (0.5)	↑ (↓)
			Printed circuit boards		0.5 (1.0)	↑ (↓)
			Semiconductor devices		0.5 (1.0)	↑ (↓)
			Display device and photoelectron components		0.5 (0.5)	↑ (↓)
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	1.0 (10)	1.5 (1.5)	↑ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5 (1.5)	↑ (↓)
			Display device and photoelectron component		1.5 (1.5)	↑ (↓)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1 (1.0)	0.05 (0.05)	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05 (0.05)	↓ (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Chromium (trivalent and hexavalent)	Special electronic materials	1.0 (5.0)	1.0 (1.0)	= (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5 (0.5)	= (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	-	0.2 (0.2)	N/A
			Electrical units		-	N/A

Electronics (Part 4/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Hexavalent chromium	Printed circuit boards	-	-	N/A
			Semiconductor devices		0.1 (0.1)	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	0.1 (5.0)	0.3 (0.3)	↑ (↓)
			Electrical units		0.3 (0.3)	↑ (↓)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	↑ (↓)
			Display device and photoelectron components		0.2 (0.2)	↑ (↓)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.1 (5.0)	0.2 (0.2)	↑ (↓)
			Electrical units		0.1 (0.1)	= (↓)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	↑ (↓)
			Display device and photoelectron components		0.2 (0.2)	↑ (↓)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (10)	0.5 (0.5)	↓ (↓)
			Electrical units		0.5 (0.5)	↓ (↓)
			Printed circuit boards		0.5 (0.5)	↓ (↓)
			Semiconductor devices		0.5 (0.5)	↓ (↓)
			Display device and photoelectron components		0.5 (0.5)	↓ (↓)
			Electron terminals products		-	N/A

Electronics (Part 5/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Cyanide	Special electronic materials	0.1 (2.0)	0.2 (0.4)	↑ (↓)
			Electrical units		0.2 (0.4)	↑ (↓)
			Printed circuit boards		0.2 (0.4)	↑ (↓)
			Semiconductor devices		0.2 (0.4)	↑ (↓)
			Display device and photoelectron components		0.2 (0.4)	↑ (↓)
			Electron terminals products		-	N/A
		Silver	Special electronic materials	0.1 (5.0)	0.3 (0.3)	↑ (↓)
			Electrical units		0.3 (0.3)	↑ (↓)
			Printed circuit boards		0.3 (0.3)	↑ (↓)
			Semiconductor devices		0.3 (0.3)	↑ (↓)
			Display device and photoelectron components		0.3 (0.3)	↑ (↓)
			Electron terminals products		-	N/A
		Manganese		5.0 (10)	-	N/A
		Fluoride	Special electronic materials	- (15)	10 (20)	N/A (↑)
			Electrical units		10 (20)	N/A (↑)
			Printed circuit boards		10 (20)	N/A (↑)
			Semiconductor devices		10 (20)	N/A (↑)
			Display device and photoelectron components		10 (20)	N/A (↑)
			Electron terminals products		-	N/A

Electronics (Part 6/6)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
Electronics	Water Pollutants mg/L (Except pH)	Petroleum[d]	Not detectable	3.0 (8.0)	↑ (↑)
		Oil and grease[e]	10/10 (60/100)	-	N/A
		Selenium	0.5 (10)	-	N/A
		Boron	5.0 (5.0)	-	N/A
		Iron	10 (50)	-	N/A
		Barium	2.0 (10)	-	N/A
		Tin	5.0 (10)	-	N/A
		Phenolic compounds	0.2 (0.5)	-	N/A
		Detergents	15 (30)	3.0 (6.0)	↓ (↓)
		Colour[f]	7.0 (-)	-	N/A
		Free chlorine	1.0 (-)	-	N/A
	Air Pollutants mg/m^3	TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for factory premises	Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[14], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

d. *Petroleum in Singapore refers to petroleum or other inflammable solvent while in Mainland China it refers to petroleum hydrocarbons which scope is smaller. As a result, the comparison result is marked as ↑(↑).*

e. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

f. *In Mainland China, the method of measuring colour is the dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

Garment & Clothing (Part 1/2)

Water and air pollutants are the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
Garment & Clothing	Water Pollutants mg/L (Except pH, temperature and colour)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	50 (400)	50 (100)	= (↓)
		COD	100 (600)	80 (200)	↓ (↓)
		BOD	50 (400)	20 (50)	↓ (↓)
		Colour[c]	7.0 (-)	50 (80)	N/A
		Temperature[d]	45 (45)	-	N/A
		Detergents	15 (30)	-	N/A
		Ammonia as NH_3-N	-	10 (20)	N/A
		Total nitrogen	-	15 (30)	N/A
		Total phosphorus	-	0.5 (1.5)	N/A
		Phosphates	5.0 (-)	-	N/A
		Chlorine dioxide	-	0.5 (0.5)	N/A
		Free chlorine	1.0 (-)	-	N/A
		AOX	-	12 (12)	N/A
		Sulphide	0.2 (1.0)	0.5 (0.5)	↑ (↓)
		Aniline	-	Not detectable	NA
		Hexavalent chromium	-	Not detectable	NA
		Chromium (trivalent and hexavalent)	1.0 (5.0)	-	N/A
		Phenolic compounds	0.2 (0.5)	-	N/A
		Oil and grease[e]	10 /10(60/100)	-	N/A
		Cyanide	0.1 (2.0)	-	N/A

Garment & Clothing (Part 2/2)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
Garment & Clothing	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for factory premises	Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[16], Integrated Emission Standard of Air Pollutants[17], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *In Mainland China, the method of measuring colour is dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

d. *The unit of temperature is °C.*

e. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

Watches & Jewellery

Water pollutants from washing process and air pollutants from polishing process are the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
Watches & Jewellery	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	50 (400)	150 (400)	↑ (=)
		COD	100 (600)	150 (500)	↑ (↓)
		BOD	50 (400)	30 (300)	↓ (↓)
		Colour[c]	7.0 (-)	80 (-)	N/A
		Ammonia as NH_3-N	-	25 (-)	N/A
		Cyanide	0.1 (2.0)	0.5 (1.0)	↑ (↓)
		Hexavalent chromium	-	0.5 (0.5)	N/A
		Chromium (trivalent and hexavalent)	1.0 (5.0)	1.5 (1.5)	↑ (↓)
		Petroleum[d]	Not detectable	10 (20)	↑ (↑)
		Oil and grease[e]	10/10 (60/100)	15 (100)	↑/↑ (↑/=)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for factory premises	Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[18], Integrated Emission Standard of Air Pollutants[17], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *In Mainland China, the method of measuring colour is the dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

d. *Petroleum in Singapore refers to petroleum or other inflammable solvent while in Mainland China it refers to petroleum hydrocarbons which scope is smaller. As a result, the comparison result is marked as ↑(↑).*

e. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

Toys & Games

Water pollutants from washing process, the air pollutants resulting from production and storage of polymers and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
Toys & Games	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	50 (400)	150 (400)	↑ (=)
		COD	100 (600)	150 (500)	↑ (↓)
		BOD	50 (400)	30 (300)	↓ (↓)
		Colour[c]	7.0 (-)	80 (-)	N/A
		Ammonia as NH_3-N	-	25 (-)	N/A
		Sulphide	0.2 (1.0)	1.0 (1.0)	↑ (=)
		Volatile phenols	-	0.5 (2.0)	N/A
		Phenolic compounds[d]	0.2 (0.5)	0.4 (1.0)	↑ (↓)
		Petroleum[e]	Not detectable	10 (20)	↑ (↑)
		Oil and grease[f]	10 /10(60/100)	15 (100)	↑/↑ (↑/=)
		Cyanide	0.1 (2.0)	0.5 (1.0)	↑ (↓)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for factory premises	Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[18], Integrated Emission Standard of Air Pollutants[17], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *In Mainland China, the method of measuring colour is the dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

d. *Expressed as phenol*

e. *Petroleum in Singapore refers to petroleum or other inflammable solvent while in Mainland China it refers to petroleum hydrocarbons which scope is smaller. As a result, the comparison result is marked as ↑ (↑).*

f. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

Hi-tech (Part 1/6)

Water and air pollutants from chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants		Singapore[a]	Mainland China[b]	Comparison
Hi-tech	Water Pollutants mg/L (Except pH)	pH		6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids		50 (400)	50 (250)	= (↓)
		COD		100 (600)	80 (300)	↓ (↓)
		BOD		50 (400)	-	N/A
		Mercury		0.05 (0.5)	-	N/A
		Ammonia as NH_3-N	Special electronic materials	-	10/20[c] (25/45[c])	N/A
			Electrical units		5 (25)	N/A
			Printed circuit boards		20 (45)	N/A
			Semiconductor devices		10 (40)	N/A
			Display device and photoelectron components		5 (25)	N/A
			Electron terminals products		5 (25)	N/A
		Total nitrogen	Special electronic materials	-	20/30[c] (40/60[c])	N/A
			Electrical units		15 (40)	N/A
			Printed circuit boards		30 (60)	N/A
			Semiconductor devices		15 (60)	N/A
			Display device and photoelectron components		15 (40)	N/A
			Electron terminals products		15 (40)	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[h] (6.0)	N/A
			Electrical units		0.5 (6.0)	N/A
			Printed circuit boards		1.0 (6.0)	N/A
			Semiconductor devices		1.0 (6.0)	N/A
			Display device and photoelectron components		0.5 (6.0)	N/A
			Electron terminals products		0.5 (6.0)	N/A
		Phosphates		5.0 (-)	-	N/A

Hi-tech (Part 2/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Sulphide	Special electronic materials	0.2 (1.0)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0 (1.0)	↑ (=)
			Semiconductor devices		1.0 (1.0)	↑ (=)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	0.1 (5.0)	0.5 (0.5)	↑ (↓)
			Electrical units		0.5 (0.5)	↑ (↓)
			Printed circuit boards		0.5 (1.0)	↑ (↓)
			Semiconductor devices		0.5 (1.0)	↑ (↓)
			Display device and photoelectron components		0.5 (0.5)	↑ (↓)
			Electron terminals products		-	N/A
		Zinc	Special electronic materials	1.0 (10)	1.5 (1.5)	↑ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5 (1.5)	↑ (↓)
			Display device and photoelectron component		1.5 (1.5)	↑ (↓)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1 (1.0)	0.05 (0.05)	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05 (0.05)	↓ (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Hi-tech (Part 3/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Chromium (trivalent and hexavalent)	Special electronic materials	1.0 (5.0)	1.0 (1.0)	= (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5 (0.5)	= (↓)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	-	0.2 (0.2)	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1 (0.1)	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Special electronic materials	0.1 (5.0)	0.3 (0.3)	↑ (↓)
			Electrical units		0.3 (0.3)	↑ (↓)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	↑ (↓)
			Display device and photoelectron components		0.2 (0.2)	↑ (↓)
			Electron terminals products		-	N/A

Hi-tech (Part 4/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Lead	Special electronic materials	0.1 (5.0)	0.2 (0.2)	↑ (↓)
			Electrical units		0.1 (0.1)	= (↓)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	↑ (↓)
			Display device and photoelectron components		0.2 (0.2)	↑ (↓)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (10)	0.5 (0.5)	↓ (↓)
			Electrical units		0.5 (0.5)	↓ (↓)
			Printed circuit boards		0.5 (0.5)	↓ (↓)
			Semiconductor devices		0.5 (0.5)	↓ (↓)
			Display device and photoelectron components		0.5 (0.5)	↓ (↓)
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	0.1 (2.0)	0.2 (0.4)	↑ (↓)
			Electrical units		0.2 (0.4)	↑ (↓)
			Printed circuit boards		0.2 (0.4)	↑ (↓)
			Semiconductor devices		0.2 (0.4)	↑ (↓)
			Display device and photoelectron components		0.2 (0.4)	↑ (↓)
			Electron terminals products		-	N/A
		Silver	Special electronic materials	0.1 (5.0)	0.3 (0.3)	↑ (↓)
			Electrical units		0.3 (0.3)	↑ (↓)
			Printed circuit boards		0.3 (0.3)	↑ (↓)
			Semiconductor devices		0.3 (0.3)	↑ (↓)
			Display device and photoelectron components		0.3 (0.3)	↑ (↓)
			Electron terminals products		-	N/A

Hi-tech (Part 5/6)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Singapore[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH)	Manganese		5.0 (10)	-	N/A
		Fluoride	Special electronic materials	- (15)	10 (20)	N/A (↑)
			Electrical units		10 (20)	N/A (↑)
			Printed circuit boards		10 (20)	N/A (↑)
			Semiconductor devices		10 (20)	N/A (↑)
			Display device and photoelectron components		10 (20)	N/A (↑)
			Electron terminals products		-	N/A
		Petroleum[d]		Not detectable	3.0 (8.0)	↑ (↑)
		Oil and grease[e]		10/10 (60/100)	-	N/A
		Selenium		0.5 (10)	-	N/A
		Boron		5.0 (5.0)	-	N/A
		Iron		10 (50)	-	N/A
		Barium		2.0 (10)	-	N/A
		Tin		5.0 (10)	-	N/A
		Phenolic compounds		0.2 (0.5)	-	N/A
		Calcium and Magnesium		150 (-)	-	N/A
		Detergents		15 (30)	3.0 (6.0)	↓ (↓)
		Colour[f]		7.0 (-)	-	N/A
		Free chlorine		1.0 (-)	-	N/A
	Air Pollutants mg/m^3	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		Noise limits for factory premises		Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Hi-tech (Part 6/6)

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Emission Standard of Pollutants for Electrical Industry[14], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

d. *Petroleum in Singapore refers to petroleum or other inflammable solvent while in Mainland China it refers to petroleum hydrocarbons which scope is smaller. As a result, the comparison result is marked as ↑(↑).*

e. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

f. *In Mainland China, the method of measuring colour is the dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc. In Singapore, the relevant standards for pollutants are general effluent standards.

Compared with other industries, chemicals & plastics industry typically involves more significant environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Singapore, the chemicals & plastics industry should be in compliance with the general effluent standards.

General Industries (Part 1/2)

General industries refer to those industries which do not produce massive or characteristic pollutants (such as the logistics & transportation industry, furniture industry, etc.). These industries should be in compliance with the general effluent standards available in both countries.

The following table compares the general effluent/emission standards of Singapore and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Singapore[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH)	pH	6.0-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	= (=)
		Total suspended solids	50 (400)	150 (400)	↑ (=)
		COD	100 (600)	150 (500)	↑ (↓)
		BOD	50 (400)	30 (300)	↓ (↓)
		Colour[c]	7.0 (-)	80 (-)	N/A
		Ammonia as NH_3-N	-	25 (-)	N/A
		Sulphide	0.2 (1.0)	1.0 (1.0)	↑ (=)
		Copper	0.1 (5.0)	1.0 (2.0)	↑ (↓)
		Iron	10 (50)	-	N/A
		Free chlorine	1.0 (-)	-	N/A
		Petroleum[d]	Not detectable	10 (20)	↑ (↑)
		Oil and grease[e]	10 /10(60/100)	15 (100)	↑/↑ (↑/=)
		Phenolic compounds[f]	0.2 (0.5)	0.4 (1.0)	↑ (↓)
		Cyanide	0.1 (2.0)	0.5 (1.0)	↑ (↓)
		Phosphates	5.0 (-)	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise limits for factory premises	Day (7 a.m-7 p.m) 75 Evening (7 p.m-11 p.m) 70 Night (11 p.m-7 a.m) 65	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

General Industries (Part 2/2)

Note:

a. *Singapore Standards: Environmental Protection And Management (Trade Effluent) Regulations[10], Regulations for Discharge of Trade Effluent in to the Public Sewers[11], Environmental Protection and Management (Air Impurities) Regulations[12] and Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[18], Integrated Emission Standard of Air Pollutants[17], and Emission Standard for Industrial Enterprises Noise at Boundary[15].*

c. *In Mainland China, the method of measuring colour is the dilution method, while in Singapore, and method of analysis is in accordance with the latest edition of "Standard Methods for the Examination of Water and Wastewater". The measuring method applied in the standards of two countries are different, therefore the comparison result is marked as N/A.*

d. *Petroleum in Singapore refers to petroleum or other inflammable solvent while in Mainland China it refers to petroleum hydrocarbons which scope is smaller. As a result, the comparison result is marked as ↑ (↑).*

e. *The concentration of both Oil and Grease(Total) and Oil and Grease(Hydrocarbons) should not exceed 10mg/L while trade effluent discharged into watercourse other than a controlled watercourse. 60 refers to the limit of oil and grease (Hydrocarbon) discharged into public sewage while 100 refers to the limit of oil and grease (Non-hydrocarbon) discharged into public sewage.*

f. *Expressed as phenol*

III. The Main Local Supporting Organisations/Agencies in Singapore

The Singaporean government focuses on source management and environmental legislation. Environmental management ministries such as MEWR and NEA are requiring all construction, manufacturing and other projects to be licensed to comply with environmental laws. Penalties could be serious if the investor fails to comply with environmental laws and regulations in Singapore.

To ensure environmental compliance and maintain a good relationship with the public, the investor should pay attention to the environmental impact assessment, licence application and to meet the local discharge standards in design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environment-related support services.

A. EDD Services in Singapore

Agency/ Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Impact Assessment; • Sustainability Policy, Strategy and Risk Management; • Supply Chain EHS Audits; and • Sustainability Report Assurance, etc.	+65 9118 2347
ERM	• Environmental Due Diligence; • Independent 3rd Party Conformance Audits; • PCS supporting services; and • ISO certification, etc.	+65 6324 9636
CPG	• Environmental Due Diligence; • Remediation of Contaminated Sites; and • Green Design, etc.	+65 6357 4888

B. PCS Supporting Services in Singapore

Agency/ Organisation	Service Coverage	Contact
ERM	• Environmental Due Diligence; • Independent 3rd Party Conformance Audits; • PCS supporting services; and • ISO certification, etc.	+65 6324 9636
AECOM	• EHS Management Consulting and Compliance; • Management Information Systems — EHS, Sustainability, Quality; and • PCS supporting services, etc.	+65 6299 2466
Arcadis Consultants	• Environmental Health & Safety Compliance Audit; • Environmental Due Diligence; and • PCS supporting services, etc.	+65 6239 8525

C. Monitoring Services in Singapore

Agency/ Organisation	Service Coverage	Contact
Als Technichem (Singapore) Private Limited	• Environmental Testing; • Food Safety and Quality; • Geochemistry Testing; and • Laboratory Design and Build, etc.	+65 6589 0118
GBAD Services Private Limited	• Toxicity Test on Sand and Soil; • Noise Control Monitoring; • Ambient Air Monitoring; • Water Quality Monitoring; and • Geotechnical Services, etc.	+65 6899 5020
STATS	• Industrial Hygiene Testing; • Indoor Air Quality Assessment; and • Inventory of Hazardous Materials, etc.	+65 6252 6686

D. Waste Management Services in Singapore

Agency/ Organisation	Service Coverage	Contact
ELMS Industrial Private Limited	• Electronic Waste Collection; • Percious Metal Scrap Collection; and • IC Trays Recycling, etc.	+65 6862 8880
Eco Special Waste Management Private Limited	• Toxic Industrial Waste Treatment; • Industrial and Commercial Waste Collection; • Bio Hazardous Waste Collection; • Sludge Treatment; and • Destruction Services, etc.	+65 6517 3653
Veolia Es Singapore Industrial Private Limited	• Integrated Waste and Recycling Management; • Tank Cleaning; • Facility Management and Plant Maintenance; and • Designing and Building Treatment Plants, etc.	+65 6865 3140

For more information about Wastes Management Services in Singapore, please refer to the official webpage (www.nea.gov.sg/our-services/waste-management/waste-collection-systems#collectors).

Source:

[1] *The official website of Ministry of the Environment and Water Resources (MEWR)*

[2] *The official website of National Environment Agency (NEA)*

[3] *The official website of Public Utilities Board (PUB)*

[4] *Environmental Protection and Management Act (EPMA), revised in 2002*

[5] *Environmental Public Health Act (EPHA), latest amended in 2018*

[6] *Joint Statement between the Government of the People's Republic of China and the Government of the Republic of Singapore, 2018*

[7] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[8] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[9] *Guidelines for Pollution Control (PC) Study, 2019*

[10] *Environmental Protection And Management (Trade Effluent) Regulations, 2011*

[11] *Regulations for Discharge of Trade Effluent in to the Public Sewers, 2016*

[12] *Environmental Protection and Management (Air Impurities) Regulations, 2015*

[13] *Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations, 2008*

[14] *Emission Standard of Pollutants for Electrical Industry, 2nd Edition for Suggestion*

[15] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*

[16] *Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry, GB 4287-2012*

[17] *Integrated Emission Standard of Air Pollutants, GB 16297-1996*

[18] *Integrated Wastewater Discharge Standard, GB 8978-1996*

[19] *Radiation Protection Act, 2008*

[20] *Hazardous Waste (Control of Export, Import and Transit) Act, 1998*

[21] *Hydrogen Cyanide (Fumigation) Act, 2014*

[22] *Carbon Pricing Act 2018, 2018*

[23] *Workplace Safety and Health Act, 2009*

[24] *Building Control Act, 1999*

Appendix

Appendix 1

Land Rental Cost in Singapore's Major Industrial Parks

Location	Land Rent (SGD per m² per year)	Land Price 30—year lease (SGD per m²)
International Business Park	51.87 – 82.36	785 – 1,243
Changi Business Park	43.21 – 78.57	575 – 1,153
Offshore Marine Centre	24.06 – 50.32	N/A
LogisPark	16.52 – 44.35	255 – 689
Airport Logistics Park	23.21 – 40.62	351 – 714
Cleantech Park	31.25	550
Seletar Aerospace Park	14-04 – 17.56	219 – 278
Tuas Biomedical Park	11.56 – 15.10	190 – 239

Appendix 2

The Main Environmental Laws/Regulations in Singapore

National Environment Agency		Government	Building and Construction Authority
Environmental Protection and Management Act, 2002[4]	Hazardous Waste (Control of Export, Import and Transit) Act, 1998[20]	Workplace Safety and Health Act, 2009[23]	Building Control Act, 1999[24]
Environmental Public Health Act, amended in 2018[5]	Hydrogen Cyanide (Fumigation) Act, 2014[21]		
Radiation Protection Act, 2008[19]	Carbon Pricing Act 2018[22]		

The Main Environmental Effluent Standards in Singapore

Effluent Standards	1	Environmental Protection And Management (Trade Effluent) Regulations[10]
	2	Regulations for Discharge of Trade Effluent in to the Public Sewers[11]
	3	Environmental Protection and Management (Air Impurities) Regulations[12]
	4	Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations[13]

Glossary – Section 1 to 9 Operational Requirements

A*STAR	Agency for Science, Technology and Research
ACRA	Accounting and Corporate Regulatory Authority
AHTN	ASEAN Harmonised Tariff Nomenclature
AME	Advanced Manufacturing and Engineering
ASC	Accounting Standards Council
ASEAN	Association of Southeast Asian Nations
BP	Business Parks
CA	Competent Authorities
CET	Continuing Education & Training
CIT	Corporate Income Tax
CPF	Centre Provident Fund
CPTPP	Comprehensive and Progressive Trans-Pacific Partnership
CREATE	Campus for Research Excellence and Technological Enterprise
DTA	Double Taxation Agreement
ECI	Estimated Chargeable Income
EDB	Economic Development Board
EEU	Eurasian Economic Union
EFMA	Employment of Foreign Manpower Act
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreements

GDP	Gross Domestic Product
GIPC	Global Innovation Policy Center
GST	Goods and Service Tax
HBMS	Health and Biomedical Sciences
IFRS	International Financial Reporting Standards
IMDA	Info-communications Media Development Authority
IP	Intellectual Property
IRAS	Inland Revenue Authority of Singapore
IT	Information Technologies
ITM	Industry Transformation Maps
LDAU	Land Dealings Approval Unit
LLP	Limited Liability Partnership
LPI	Logistics Performance Index
LRT	Light Rail Transit
LTA	Land Transport Authority
MA	MediSave Account
MAS	Monetary Authority of Singapore
MNC	Multinational Corporations
MRT	Mass Rapid Transit
NDI	National Digital Identity
OA	Ordinary Account
PAP	People's Action Party
PE	Permanent Establishment
PLC	Private Limited Company
PSP	Progress Singapore Party

R&D	Research and Development
RIE2020	Research, Innovation and Enterprise 2020
RIEC	Research and Enterprise Council
SA	Special Account
SDE	Services and Digital Economy
SDL	Skills Development Levy
SFS	SkillsFuture Singapore
SGD	Singapore Dollar
SPI	Specialised Industrial Parks
STI	Science, Technology and Innovation
TP	Transfer Pricing
USD	United States Dollar
USS	Urban Solution and Sustainability
VAT	Value Added Tax
WSQ	Workforce Skills Qualifications

Glossary – Section 10 Environmental Requirements

ASEAN	Association of Southeast Asian Nations
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DCLD	Development Control and Licensing Department
EDD	Environmental Due Diligence
EIA	Environmental Impact Assessment
EPMA	Environmental Protection and Management Act
EPHA	Environmental Public Health Act
MEWR	Ministry of the Environment and Water Resources
NEA	National Environment Agency
NMHC	Non-methane Hydrocarbon
PEIA	Preliminary Environmental Impact Assessment
TVOC	Total Volatile Organic Compounds
PCS	Pollution Control Study

3.11 Guide to Thailand

Opportunities and Limitations in Manufacturing

Contents

Published in November 2019

1. Overview of Thailand

Executive Summary

Thailand witnessed strong economic growth over the last decade partly as a result of effective reforms and policies introduced by the government. The country is now one of the most advanced economies in Southeast Asia and has managed to strike major agreements with international partners to foster trades.

Thailand is engaged in seven bilateral trade agreements with countries in Asia Pacific as well as Latin America. These agreements eliminate tariffs and incentivise investments in a number of industries. As part of the Association of Southeast Asian Nations (ASEAN), Thailand also benefits from six other multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Foreign investors may benefit from Thailand's favourable trade agreements, but need to consider the risks related to continuous political turmoil and uncertainties before investing in the country.

1. Overview of Thailand

I. Country Profile[1,2,3,4,5,6,7]

The economic and social development of Thailand over the last few decades has been a success story. As a result of its economic policies, Thailand evolved from being a low income country to a middle income economy in less than a generation; millions of jobs were created, welfare, healthcare and education have improved significantly and poverty rate has been on decline. The Thai government sets its 20-year development goals to attain the status of a developed country by 2036. Reforms have been put in place to address economic stability, human capital, equal economic opportunities, environmental sustainability, competitiveness, and government efficiency.

GDP *(in USD)*
539.1 billion (2019f)
503.3 billion (2018)

GDP Per Capita *(in USD)*
7,778 (2019f)
7,275 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 8.2%
Industry: 36.2%
Services: 55.6%

External Trade *(% of GDP)*
Import: 56.5% (2018)
Export: 66.8% (2018)

Population
69.31 million (2019)
World ranking: 20/191

Median Age
38.1 (2018)
World ranking: 63/228 (from oldest to youngest)

Language
Thai (official)
Burmese
English

English Literacy
Low proficiency (2018)
World ranking: 64/88

Government Structure
Constitutional monarchy

Land Area
510,890 sq km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions[9]

International trade agreements provide various benefits for participating countries with the aim of enhancing economic growth for all parties. It allows companies located in two or more countries to trade goods with each other at reduced or zero tariffs.

Thailand first signed the Framework Agreement on Enhancing ASEAN Economic Cooperation in 1992, under which all member states agreed to establish and participate in the ASEAN Free Trade Area (AFTA) and are eligible for favourable tariffs arrangement under the Common Effective Preferential Tariff (CEPT) Scheme. It was one of Thailand's first and most important trade agreements, and is instrumental to the country's participation in the region's economic integration agenda. Nowadays, Thailand has a total of 13 trade agreements in place, including seven bilateral and six regional trade agreements. In addition, the ASEAN – Hong Kong Free Trade Agreement came into effect in June 2019 (see section below). There are nine trade agreements currently under negotiation and another 13 proposed. One of the proposed agreements between ASEAN and the EU covers restructuring import quotas and tariffs for services, regulatory issues, intellectual property, and sustainable development.

Signed and Effective Bilateral Trade Agreements[8] (Part 1/2)

	Affected Industry	Agreement (effective date)
	• All	**Laos-Thailand Preferential Trade Agreement (1991)** • Preferential import and export tariffs for goods and services with Laos.
	• Agriculture	**People's Republic of China-Thailand Free Trade Agreement (2003)** • The countries had opened their agricultural markets for trade before the broader deal with ASEAN countries came into place in 2010. • Eliminated tariffs for 188 fruits and vegetables.
	• Food • Mining • Construction	**Australia-Thailand Free Trade Agreement (2005)** • Eliminated nearly all import tariffs for goods from Australia (tariffs for some dairy products are set to be eliminated by 2025). • Increased Thailand's attractiveness to Australian investors by allowing an Australian dominated ownership in important sectors such as restaurants, mining operations or construction services.
	• Food	**New Zealand-Thailand Closer Economic Partnership Agreement (2005)** • Import tariffs from New Zealand have been progressively reduced or eliminated until 2025. As of 2015, around 65% of imports from New Zealand were already duty free, which included forestry products, buttermilk and wine. • Imports and exports have almost doubled since the agreement came into place.

Signed and Effective Bilateral Trade Agreements[8] (Part 2/2)

	Affected Industry	Agreement (effective date)
	• Food • Textile • Jewellery	**Japan-Thailand Economic Partnership Agreement (2007)** • More than 99% of tariffs on imported goods from Japan have been reduced or eliminated. • The top three beneficiary sectors were processed food, textiles and garments, jewelry and ornaments. • Japan is allowed to establish businesses, holding up to 50% investment equity in the automotive production in Thailand and provide services such as management consulting, marketing or computer services.
	• Food • Automobile • Home appliances	**Thailand-Peru Free Trade Agreement (2011)** • First agreement between Thailand and a South American country. • Eliminated 70% of all tariff lines. • Increase imports from Peru for products such as canned food, flour, frozen fish, grapes etc. • Thai goods that benefit from zero tariffs: automobiles, components and parts, washing machines and rubber products.
	• Food • Energy • Automobile	**Thailand-Chile Free Trade Agreement (2015)** • Eliminated tariffs on over 90% of products traded between the two countries. • For the remaining products, the tariffs will be eliminated within the first eight years after signing in 2015. • Export tariffs are cut to zero for products such as auto parts, canned seafood, natural gas, construction materials and digital cameras, etc. • Chilean products that benefit from zero tariffs: meat, dairy, vegetables, auto parts, forest, papers and packaging products etc.

Signed and Effective Regional Trade Agreements as Member of The ASEAN

As a member of the ASEAN, Thailand benefits from agreements signed between the association and other countries. Therefore, the country has entered effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).[9]

The Association of Southeast Asian Nations (ASEAN)[9]

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

The Association's Three Major Goals:

- Acceleration of economic growth, social progress and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

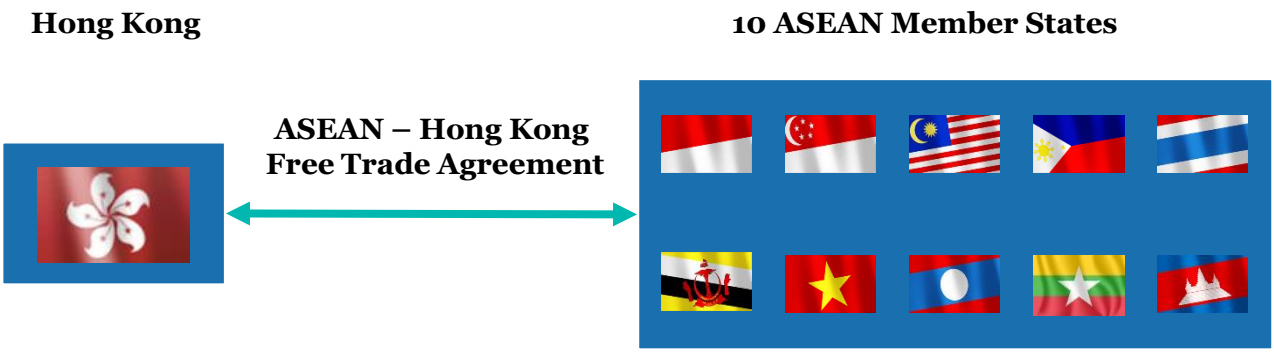
International Trade Agreement between Hong Kong and the ASEAN[10]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods and services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[11]

Thailand is a constitutional monarchy. The King acts as the leader of the country and the Prime Minister as leader of the government. The country comprises three branches: the Executive, Legislative and Judiciary.

Since the coup d'état in May 2014, the National Council for Peace and Order (NCPO), a military junta, has been ruling Thailand. The NCPO repealed Thailand's existing constitution, declared new laws and banned political assemblies. Since then, Thailand has been under an interim constitution.

Formally, the Prime Minister is the head of the Executive Branch as well as the leader of the Cabinet, who formulates and executes government policies. The Prime Minister has the prerogative to choose or remove any minister from the Cabinet at his discretion. He also represents Thailand abroad.

The Legislature of Thailand is a bicameral system, comprising the House of Representatives and the Senate. The two houses are equipped with the power to remove the Prime Minister as well as Cabinet Ministers through a vote of no confidence. The Senate generally has limited legislation power, however it retains the power to advise on the appointment of the Judiciary members.

The Judiciary of Thailand consists of judges nominated by the monarch and comprises four systems: the Court of Justice, the Military Court, the Constitutional Court, and the Administrative Court.

C. Political Uncertainties and Historical Coup Records[12,13]

Thailand has been marked by political polarisations and conflicts for a very long time. Since 1932, the country experienced 20 military coups of which 12 succeeded. Therefore, Thailand is not considered as a politically stable country and ranked 157th out of 195 countries in the World Bank's Political Stability Index.

The latest coup took place in 2014, when Thailand's constitution was revoked by NCPO, a military organisation. The NCPO eliminated the influence of former Prime Minister Thaksin Shinawatra by overthrowing his younger sister Yingluck Shinawatra who was the Prime Minister at that time. The NCPO's goal was to establish an unelected People's Council which oversees political reforms. The NCPO provoked protests, occupied governmental offices and boycotted general elections. As a result, the House of Representatives, which used to be the primary legislative of Thailand, was dissolved, martial laws were imposed and the military junta was established. In March 2019, the first election since the 2014 coup took place under the NCPO's orchestration, and coup leader Prayut Chan-o-cha was elected by the Council as the new Prime Minister. Therefore, tensions between the pro-military forces and their populist opponents are likely to remain in the near future.

Political instability in Thailand has negatively impacted investment in the country. With investment standing at 24% of GDP, Thailand is approximately 5-6% behind some of Southeast Asia's largest economies. Foreign direct investment also declined during the same period as some foreign investors were wary of future instabilities after the general election in May 2019. Longer term investors are holding onto a more optimistic outlook.

Source:

[1] *The World Bank in Thailand, The World Bank, Apr 2019*

[2] *Thailand 10-Year Forecast, Fitch Solutions, 2019*

[3] *The World Factbook, Central Intelligence Agency*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), The World Bank*

[5] *Thailand population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Thailand, Worldatlas*

[8] *Free Trade Agreements, Asia Regional Integration Centre*

[9] *ASEAN official website*

[10] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, May 2019*

[11] *Government And Society – Constitutional Framework, Britannica*

[12] *Thailand's Investment Outlook for 2019, Nikkei Asian Review, Feb 2019*

[13] *Foreign investors upbeat over Thailand's prospects, Bangkokpost, Feb 2019*

2. Legal Environment and Competition Law

Executive Summary

Thailand generally welcomes and attracts foreign investors. However, there are certain sectors that are limited to domestic participation only.

Investors from Mainland China and Hong Kong can choose to set up different types of business entities. The most common type is a private limited company, where 100% foreign ownership is allowed through obtaining a Foreign Business License.

The legal environment is supportive of foreign investors engaging in the import and export as no partnership with a domestic company is required to operate in Thailand.

Depending on the type of trade, operators from Mainland China and Hong Kong may have to obtain a license from the Ministry of Commerce.

2. Legal Environment and Competition Law

Foreign direct investment (FDI) are governed under the Foreign Business Act B.E. 2542 (1999) (FBA). The FBA considers a company as foreign if half or more of its shares are held by non-Thai natural or juristic persons. The law only distinguishes between Thai and foreign companies and does not outline special laws for Mainland China or Hong Kong companies.

Thailand is generally an open market economy and welcomes foreign investments. However, there are a number of restrictions that investors should be aware of.

The FBA Defines Three Lists with Restricted Businesses for Foreign Investors[1]

List 1

Businesses that are Strictly Prohibited for non-Thais

Examples:

- Newspapers and radio broadcasting;
- Operating a television station;
- Land farming and rice farming.

List 2

Businesses that are Restricted and Require a Special Permission from the Minister of Commerce with the Approval of the Cabinet

Examples:

- Businesses concerning safety or national security: production of military weapons, firearms or explosives;
- Arts: trading of antiques, production of Thai instruments and making of goldware;
- Exploitation of natural resources: salt farming, mining, and production of sugar.

List 3

Businesses that are Restricted and Require Permission from the Director-General of the Department of Business Development with the Approval of the Foreign Business Board (Businesses in which Thais are Not Yet Ready to Compete Against)

Examples:

- Professional services;
- Operating restaurants;
- Wholesale and retail where minimum capital thresholds have not been met.

For further details please refer to section 8 of this report or visit the official website of Department of Business Development of Thailand (www.dbd.go.th/dbdweb_en/more_news.php?cid=273) .

I. Types of Legal Business Entities Available for Foreign Investment

As in most countries, there are several different main structures to relocate a factory or a business as an investor from Mainland China or Hong Kong to Thailand. The most common form for foreign companies is the private limited company.[2] Some other forms of doing business or relocating a factory to Thailand include branch, regional and representative offices.

Partnerships

There are three types of partnerships in Thailand, which basically differ in terms of the liability that the partners assume for the obligations.

- Unregistered ordinary partnership: all partners are jointly and wholly liable for all obligations of the partnership. There is no registration needed.
- Registered ordinary partnership: this partnership needs to be registered with the Department of Business Development (DBD). Once registered, the partnership becomes a legal entity, separate and distinct from the individual partners.
- Limited partnership: individual partner liability is restricted to the amount of capital contributed to the partnership. Limited partnerships must be registered at the Partnership Registration Office under the Ministry of Commerce.

Under the Civil and Commercial Code (CCC), there is no minimum investment amount required. However, when engaging in restricted activities under the Foreign Business Act, there may be a minimum investment requirement.

Limited Companies (private or public)

There are two types of limited companies, which are covered by different regulatory bodies dealing with legal affairs.

Private Limited Companies

This is the most common business structure in Thailand. It is a company of which the liability of the shareholders is limited to the unpaid amount of the shares held. Generally, the maximum share structure is 49% foreign ownership, however, by obtaining a Foreign Business License (FBL) or a promotion from the Board of Investment (BOI), foreign companies can hold up to 100% of the shares. Business activities eligible for a promotion by BOI are detailed in Section 8.

Setting up a limited company requires various steps and involves different authorities, meetings and documents: register a company name, fill out the Memorandum of Association, hold the Statutory Meeting, register the company at the Ministry of Commerce, and register for income tax and value added tax (VAT).

Depending on the nature of the business, different licenses may be required: the FBL (if seeking more than 49% of the shares), the value added tax license (if the revenues per year exceed THB 1.8 million), and other licenses (depending on the type and the size of the business).

The minimum required capital for Private Limited Companies are as follows:

- If no FBL is required: THB 2 million
- If a FBL is required: THB 3 million

Public Limited Companies

These are companies established with the purpose to offer shares for sale to the public whereby the liability of the shareholders is limited to the amount payable on the shares. The objective of the company has to be stated in its Memorandum of Association.

The minimum capital required is the same as for the Private Limited Companies.

Joint Venture (JV)

A JV is a group of people (natural and/or juristic) entering into an agreement in order to carry out a business together. JVs are one of the most popular vehicles for foreign investments in Thailand. They are often established between foreign and Thai companies if the foreign company is restricted by the FBA. If the foreign company wants to hold more than 50% of the shares, its status has to change and it must be registered under the Foreign Business Act. A JV has to be incorporated under the Civil and Commercial Code.

Others

Foreign companies have three more options to enter the Thai market. For all of these options, they are allowed to hold 100% of the shares.

Branch Office

Foreign companies can establish a branch in Thailand which would be recognised as foreign juristic person (and not as an independent legal entity). Therefore, the head office abroad would generally be liable for the actions taken by the local branch in Thailand. To establish a branch office, a potential foreign investor has to renew the FBL every five years. In addition, for the registration, a value added tax registration number, a taxpayer identification number, and a Commercial Registration Certificate are needed. Setting up a branch office takes on average 12 weeks.

Regional Office

Foreign companies can also set up regional offices in Thailand in order to own and supervise Group subsidiaries. The permitted activities of a regional office are limited (e.g. they can provide consultancy services and manage the Asian operations, train and develop people in Asia or undertake product development activities), but at the same time, they can enjoy a corporate tax rate of 10%. Setting up a regional office requires an FBL as well as an investment promotion from the Board of Investment. Establishing a regional office takes around 14 weeks on average.

Representative Office

This company type is not allowed to make direct sales within Thailand. A representative office is often used for market research, promoting the business of the parent company, finding sources to purchase goods or services and controlling the goods purchased or manufactured in Thailand. The manager of the office must be a Thai citizen. In addition, a corporate tax identification number is needed, income tax returns have to be submitted and audited financial statements have to be provided to the Revenue Department. The average set up time of a representative office is approximately 12 weeks.

II. Overview on Other Business Laws and Regulations

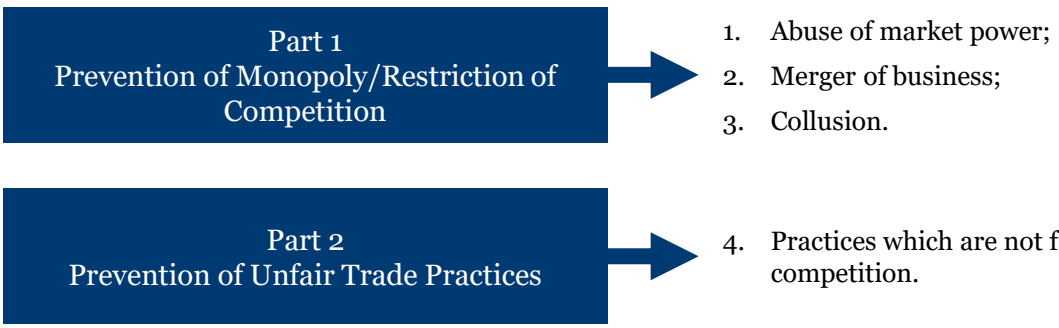
A. Legal and Administrative Framework on Competition Law[4]

Thailand's first regulation on competition dates back to 1979. The first effective competition law came into force in 1999 and aims to provide fair and free trade within a competitive environment. Thailand is the first country in Southeast Asia to implement a competition law.

Due to the lack of enforcement, amendments on the competition law were made in October 2017: the new Trade Competition Commission is now independent of the government, has its own budget and is made up of individuals with no political or business ties. Further changes, such as the inclusion of state-owned enterprises into the ambit of the new act, have been made.

The law outlines general regulations and does not specify particular rules for Mainland China or Hong Kong businesses that want to relocate factories to Thailand.

The key provisions of the new act can be divided into two sections:



1. Abuse of Market Power

Being a dominant market player does not automatically indicate violation of the competition law. Instead, in order to identify a breach of the law, specific manners have to be observed. This includes unfair fixing, maintaining purchasing or selling price of goods or services, and destroying or causing damage to goods in order to reduce the quantity to be lower than the market demand.

2. Merger of Business

Under the new merger control scheme, both a pre-merger approval as well as a post-merger notification are required: mergers that may cause significant decrease of competition in a particular market must be reported to the Commission within seven days from the date of the merger, while mergers that may result in a monopoly or a dominant business operator must obtain prior approval.

Exception: a merger of business for the purpose of internal restructuring for business operators that are related by policy or administration.

3. Collusions (cartels)

Collusions are anti-competitive agreements between horizontal competitors or vertical business operators, (e.g. between retailers and distributors). The 2017 Act differentiates between two kinds of cartels: 1) "hardcore cartels" which are agreements between competitors, and 2) "non-hardcore cartels" which are agreements with other business operators. Hardcore cartels are subject to criminal penalties, whereas non-hardcore cartels are subject to administrative fines.

The acts that define the various collusions are summarised below:[4]

Agreement Between Competitors ("Hardcore Cartel")	Agreement with Other Business Operators ("Non-hardcore Cartel")	Agreement with Business Operators in a Foreign Country
• Fixing purchasing or selling price, or commercial conditions • Limiting quantity of goods or services • Bid-rigging • Fixing geographical sale and purchase areas	Actions in 1, 2, and 4 where the business operators are not competitors • Reducing quality of goods or services • Appoint or entrust any person as a sole distributor • Fixing conditions • Others as prescribed by notifications	Any juristic act or contract which results in monopoly or unfair restriction of trade without justifiable reason, and has a severe impact on the economy and the consumers' interests.
Excludes • Affiliated companies	Excludes • Affiliated companies • R&D agreements • Licensing agreement • Specific forms of business as prescribed in the Ministerial Regulation	Excludes • N/A

4. Practices Which are not Free and Fair Competition

A business operator shall not carry out any act which causes damage to other business operators in the following manners: 1) unfairly restrict the business operation of other business operators; 2) unfairly exercise their superior market power or bargaining power; and 3) unfairly fix commercial conditions which restricts or impedes the business operations of other people, or other acts as notified by the Commission.

B. Intellectual Property Protection Law on Trademarks[5,6]

Trademarks are protected and governed by the Trademark Act of Thailand B.E. 2534 which came into force in 1991. A trademark is defined as a symbol which indicates that a certain good belongs to the owner of the trademark.

In Thailand, overall intellectual property protection is very low (ranked 42nd out of 50). Even within the specific category of trademark protection, Thailand's score is low compared to other Asian countries. The trademark law is rather general and does not specify particular protection rules for companies from Mainland China or Hong Kong that are considering to relocate factories to Thailand. For more details, please refer to section 5.

The trademark can be registered by the proprietor or through an agent. An approved trademark will be published in the Official Journal; if not opposed, the owner will have the exclusive right to use the trademark. It is valid for 10 years and can be renewed indefinitely. The Trademark Act allows the protection of service marks, service names, collective marks, certification marks, and trade names.

C. Import/Export Regulations and Licenses[7,8]

Generally, the import/export business in Thailand is appealing to foreign companies, as it is not restricted by the Foreign Business Act of 1999. This means that foreign companies can engage in the import/export business without a partnership with a Thai company holding 51% of the shares, and without applying for permission from the government. In addition, there is no overarching law regulating the import of goods, with the exception of some laws regulating the import of specific goods. Therefore, foreign companies might require licenses depending on the goods imported.

For Mainland China and Hong Kong companies, licenses from the Ministry of Commerce in Thailand are required for the import of raw materials, petroleum, industrial, textiles and agricultural items.

Foreign companies that want to import or export goods from Thailand are recommended to seek advice from the Department of Foreign Trade (a subdivision of the Ministry of Commerce), which regulates the corresponding activities.

D. Jurisdiction System on Business Related Matters[9]

Civil actions are lawsuits brought before courts whereby a party sues another for the enforcement or protection of a right, or the prevention or redress of a wrong. In Thailand, there are three levels of Courts of Justice, which also cover civil cases such as property and business disputes.

- Courts of First Instance: trial courts where the cases are first lodged;
- Court of Appeals: proper court where issues on decisions from the Court of First Instance are brought; and
- Supreme (Dika) Court: highest Court of Justice in Thailand whose judgement is considered as final. The Dika also handles special cases related to violation of intellectual property and international trading or procedural law on labour.

Buying property or land in Thailand can be appealing for foreign investors, yet by the law of Thailand it is generally prohibited for foreigners to own freehold land. However, there are some legal exceptions and methods for acquiring valid and legal rights to land and real estate in Thailand that do not amount to outright ownership. Foreigners are permitted to hold a 100% interest in a Thailand land lease: the Thai citizen would remain the owner of the land, however, a foreigner can lease it for 30 years with the possibility of renewing for additional 30 years period. In addition, foreigners are allowed to own buildings and houses in Thailand as the Real Estate Law does not impose nationality restrictions on ownership of such.

Under the Thai property law it is illegal for a Thai citizen to act as a nominee to purchase real estate on behalf of a foreigner.

Source:

[1] *Foreign Business Act of 1999 and activities restricted to Thai Nationals, Thailand Board of Investment*

[2] *Types of Thailand Business Structures, Thaiembassy*

[3] *Public Limited Company Act B.E.2535, Department of Business Development – Ministry of Commerce; Thaiembassy*

[4] *Thailand's New Trade Competition Act, Rajah & Tann, Aug 2017*

[5] *U.S. Chamber International IP Index, GIPC, 2019*

[6] *Trademark Act B.E. 2534*

[7] *Foreign Business Act B.E. 2542 (1999)*

[8] *Thai Customs official website*

[9] *Buying Land and Property in Thailand, Chaninat & Leeds Thailand and International Attorneys*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The principal tax law in Thailand is the Revenue Code. The main forms of taxation are personal and corporate income tax (CIT), and value added tax (VAT). Other specific business taxes also exist.

Transfer pricing provisions have been legalised and shall be applied for accounting periods after 1 January 2019.

Thailand adopts a managed float exchange rate regime by the Bank of Thailand. Foreign direct investment is generally welcomed in Thailand, with the exception of investment in key sensitive industries which are restricted from participation by foreign companies and individuals. Investment and repatriation of foreign funds into and out of Thailand is basically without limitation, subject to relevant taxes and administrative requirements.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice

A company incorporated in Thailand is taxed on its worldwide income.

A company incorporated abroad is taxed on its net profits arising from the business carried in Thailand. If it does not conduct business in Thailand, but has received certain types of income (e.g. service fees, interests, dividends, rent, or professional fees), it may be subject to corporate income tax on its gross amount received, via withholding tax.

In addition, foreign companies can also be subject to a separate profit remittance tax of 10%. This rate applies to all profits remitted from the Thailand to overseas.

A. Corporate Income Tax (CIT)[1]

Tax Calculation

CIT in Thailand is calculated from net profits on an accrual basis. The calculation includes all revenues arising from/or in consequence of the business conducted during an accounting period (i.e. 12 months). All expenses incurred for the purpose of deriving profits or for conducting business in accordance with the conditions prescribed by the Revenue Code are deductible.

Applicable Tax Rate

The standard CIT rate is 20% in Thailand. The rates vary depending on the types of taxable person. In particular, small and medium-sized enterprises (SMEs) enjoy certain tax benefits as shown in the following table.

Taxable Person	Tax Base	CIT Rate
Companies Or Juristic Partnerships	All taxable profit	20%
Small and Medium-sized Enterprises (SMEs) *(Note)*	THB 1 – 300,000	0%
	THB 300,001 – 3 million	15%
	Over THB 3 million	20%

Note: SME hereby refers to any company or juristic partnership with 1) paid-up capital of less than THB 5 million on the last day of the accounting period, and 2) with an income from sales of goods and provision of services in any accounting period of not more than THB 30 million.

Dividend Income[2]

Dividend income received by different types of companies enjoy different degrees of tax exemptions.

Source of Dividend	Tax Exemption Condition	Tax Exemption
Dividends received from Thai resident company	The taxpayer is a Stock Exchange of Thailand (SET) listed company.	100%
	The taxpayer owns at least a 25% equity interest in another Thai resident company, provided that the latter company does not own a direct or indirect equity interest in the recipient company.	100%
	All other unlisted companies not mentioned above.	50%
Dividends received from overseas company	The taxpayer owns at least a 25% equity interest in another overseas company, provided that it has held the investment for at least 6 months before receiving such dividends, and that the profit out of which the dividends are distributed is subject to income tax in the overseas country at a standard rate of not less than 15%.	100%

Deductible Expenses[1,2]

Some of the key CIT deductible expenses for the manufacturing industry include:

- Ordinary and necessary expenses. However, the following expenses are entitled to 200% deduction:
  - Research and development expense;
  - Job training expense; and
  - Expenditure on the provision of equipment for the disabled.
- Interest, except interest on capital reserves or funds of the company;
- Taxes, except for CIT and value added tax paid to the Thai government;
- Net losses carried forward from the last five accounting periods;
- Bad debts; and
- Provident fund contributions.

- Depreciation: must be based on historical cost of an asset acquired. Companies shall adopt any generally accepted accounting methods in depreciation but in no case shall the rate of deduction exceed the following percentage:

Asset Type	Maximum Depreciation Rate/Duration per Annum	
	General Company	SME *(Note)*
1. Buildings	5%	5%, with initial allowance of 25% on the acquisition date
2. Depletive Natural Resources	5%	
3. Leasehold Rights	• 10% (without a lease agreement) • 100% divided by lease period plus any renewable periods (under a written lease agreement)	
4. Trademarks, Goodwill, Licenses, Patents and Copyrights or Other Rights	• Period of use • 10% (if period of use is unlimited)	
5. Computer Hardware and Software	Within 3 accounting periods from the acquisition date	Within 3 accounting periods, with initial allowance of 40% on acquisition date
6. Machinery and Equipment Used in R&D	20%, with initial allowance of 40%	
7. Cash Registers Used for Issuing Abbreviated Tax Invoices by Retail Business or Other Business	A choice of either 5 years, or 5 years with 40% upfront depreciation or 1 year	
8. Passenger Car or Bus with No More Than 10 Passengers Capacity	20%, depreciable value is limited to THB 1 million	
9. Other Assets Not Mentioned Above Excluding Land and Inventory	20%	

Note: SME hereby refers to any company or juristic partnership with 1) fixed assets (excluding land) of no more than THB 200 million, and 2) no more than 200 employees.

Losses and Consolidation[3]

Tax losses can be carried forward for a maximum of five years to deduct against future profits. There is no claw-back provision. Each company is taxed independently, without any form of group relief or relief by consolidation.

Tax Filing[5]

Thailand operates a self-assessment based tax system. Thus each legal entity is obliged to submit a CIT return.

- Half-year tax return: a half-year tax return must be filed, with related tax paid, within two months from the end of the first six months of the accounting period. The prepaid tax is creditable against its annual tax liability.
- Annual tax return: an annual tax return must be filed, with related tax paid, within 150 days from the end of the accounting year.

Tax Governance[1,5]

The Revenue Department of Thailand is the highest tax collection agency of the country governed under the Ministry of Finance. It is responsible for collecting taxes according to the rules and regulations prescribed in the Revenue Code. (www.rd.go.th/publish/index_eng.html)

The Revenue Code is the principal tax law in Thailand that codifies procedures regarding tax assessment, the collection of revenue taxes, personal and corporate income tax, value added tax and tax liability, specific business taxes, and stamp duty.

Double Taxation Agreement (DTA) with Hong Kong[3,5]

As of May 2018, Thailand has entered into DTAs with 61 countries including Hong Kong (since 2005).

The table below illustrates the various tax rates applicable to the different sources of income as per mentioned in the Thailand/Hong Kong DTA:

Categories	Conditions to Satisfy	Applicable Rates of Withholding Taxes
Dividends	All dividends are applicable	10%
Interests	Interest paid to any financial institution and Interest paid with respect to indebtedness arising as a consequence of a sale on credit of any equipment, merchandise or services, except where the sale was between persons not dealing with each other at arm's length	10%
	All other conditions not mentioned above	15%
Royalties	Royalties paid for the use or the right to use any copyright of literary, artistic or scientific work	5%
	Royalties paid for the use of the right to use any patent, trademark, design or model, plan, secret formula, or process	10%
	All other conditions not mentioned above	15%

B. Value Added Tax (VAT)

Any person or entity who supplies goods and/or services in Thailand with an annual turnover exceeding THB 1.8 million is subject to the VAT. An importer is subject to VAT regardless of whether one is registered with relevant tax authority or not.

The standard VAT rate stipulated by law is 10%. Since 1999, the government has discretionarily reduced VAT rate to 7%, subject to regular review.

Business Activities Subject to 0% VAT

The following business activities are subject to 0% VAT on output but are still eligible for input VAT credits:

Business Activities	Tax Rate
Exports of goods	0%
Provisions of services that are used abroad	
Sales of goods or services to the United Nations (UN), UN specialised agencies, embassies and consulates	
Sales of goods or provision of services to government agencies or state enterprises under projects funded by a foreign loan or aid	
International air or sea transportation services	

Exemptions from VAT

Small entrepreneurs whose annual turnover is less than THB 1.8 million are exempted from VAT. Other business activities exempted from VAT include:

- Sales and import of unprocessed agricultural products and related goods such as fertilisers, animal feeds, pesticides, etc.;
- Domestic and international land transportation, healthcare services and educational services;
- Goods exempted from import duties under the Industrial Estate law imported into an Export Processing Zones (EPZs) and under Chapter 4 of the Customs Tariff Act; and
- Imported goods that are kept under the supervision of the Customs Department which will be re-exported and be entitled to a refund for import duties.

To see the entire list please visit the the website of the Revenue Department (www.rd.go.th/publish/6043.0.html).

VAT Filing and Payment

VAT returns must be filed on a monthly basis, together with tax payments submitted to the Area Revenue Branch Office within 15 days of the following month.

C. Transfer Pricing Provisions[6]

The Revenue Code Amendment Act introduced specific transfer pricing provisions into the income tax law in 2018.

Specific transfer pricing provisions are applied to accounting periods starting on or after 1 January 2019.

The arm's length principle is applied to the Thai income tax law and penalties for failure to comply with the transfer pricing disclosure requirement and transfer pricing rules are introduced.

Major points of the issued transfer pricing provisions include:

- Where it is believed that there has been misconduct related to transfer pricing, revenue officers have the power to uplift or reduce companies' revenue and expenses to the arm's length price (i.e. primary adjustment). If such misconduct resulted in a tax shortfall, a secondary adjustment which arises from imposing tax on a constructive transaction, usually in the form of deemed dividends, also would apply;
- If transfer pricing assessments result in a tax refund, taxpayers may claim refunds within 60 days from the date of receiving the tax assessment letter, or three years from the last day of the time limit prescribed by law for filing tax returns;
- Taxpayers that have annual turnover of THB 200 million or more and that do not meet the exemption conditions must submit a transfer pricing disclosure form – disclosing information on the related parties and related party transactions at the time of filing their annual tax returns;
- This group of companies must also prepare full transfer pricing documentation and keep the documentation for five years from the date of filing the disclosure form, which is subject to submission upon request;
- A special deadline is provided for the initial year that is subject to the full transfer pricing documentation requirement, under which companies have up to 180 days to submit full documentation following a request by Revenue officers, but can be extended to 120 days if the taxpayer has justifiable reasons for being unable to meet the 60 days deadline; and
- Failure to comply with the transfer pricing disclosure, or submitting incorrect information, will be subject to a penalty of not exceeding THB 200,000.

Since not all the necessary details are contained in the newly enacted provisions, the Ministry of Finance and the Revenue Department will issue further subordinate regulations to provide additional clarifications and implementation guidance.

D. Statutory Auditing Requirements and Accounting Standards[1,4]

Audit Requirements

All juristic business entities must prepare financial statements each year. The financial statements must be audited by an independent certified auditor, and thereafter submitted to the Revenue Department and the Commercial Registrar each accounting year.

Foreign Company

Financial statements of a foreign company, including branch office, representative office or regional office but excluding joint venture, must be submitted to the Company Registrar no later than 150 days after the end of the fiscal year. Approval of the shareholder meeting is not required.

Exception

The financial statements of a registered partnership under tax law with capital, assets, and/or income not exceeding certain values prescribed in the Ministerial Regulations are not required to be audited by an authorised Thai auditor.

Accounting Standards

Auditing practices conforming to international standards are, for the most part, recognised and practiced by authorised auditors in Thailand. The Federation of Accounting Professions (FAP) issued accounting standards for public and private entities.

Public Companies

Thai Financial Reporting Standards (TFRSs) and Thai Accounting Standards (TAS) are required. TAS are very similar to the International Financial Reporting Standards (IFRS), but TAS have not adopted the Financial Instruments Standards under the IFRS. Thai Accounting Standards include several national financial instruments standards that differ from IFRS Standards.

Private Companies

TFRS for small and medium-sized enterprises (TFRS for SMEs) follow IFRS for SMEs closely but IFRS for SMEs are still under discussion for full adoption in Thailand. The FAP distinguishes between two types of Non-Public Accountable Entities (NPAE) in setting the basis for application:

- Complex NPAE; and
- Non-Complex NPAE.

Complex NPAE are required to comply with TFRS for SMEs in full. Non-Complex NPAE are only required to comply with certain TFRS for SMEs.

II. Banking & Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)[7]

Bank Account Setup Requirements

Both locally and foreign incorporated companies can open business bank accounts in Thailand. Technically, there are no limitations on the type of business accounts foreign companies can open, but in practice, foreign incorporated companies can only choose from a limited range of accounts in Thai banks. The process, requirements and strictness for a company to open a bank account differ between different banks, and even between branches within the same bank.

General Requirements for Locally Incorporated Limited Companies

The documents described below are for reference only as requirements vary between commercial banks. It is advised to check with the desired commercial bank on the exact documents required before visiting the bank.

#	Documents Required for Opening a Bank Account for Locally Incorporated Limited Companies
1	Documents related to the juristic person such as Certificate of the Company Registration verifying names of directors, managing partners and authorised directors (dated not more than one month previously).
2	Identity documents and House Registration of authorised person(s) such as Citizen ID card or any other ID cards.
3	Certificate of Shareholder Registration (Bor Or Jor 3), certifying the company seal or any amended registration details (Bor Or Jor 4).
4	Letter of Authority from authorised person(s) on behalf of the juristic person (if other person is an authorised representative to withdraw funds).
5	Identity documents and House Registration of authorised representative to withdraw funds such as Citizen ID card or any other ID cards.
6	Minutes of the Board Meeting authorising the opening of the account and designating the signatories for payments with a company seal (if any).

General Requirements for Foreign Incorporated Limited Companies

Some banks request the documents of foreign incorporated companies to be certified by the Notary Public, and/or the Thai Embassy or Consulate in the country where the company is registered. For exact requirements, it is recommended to consult the corresponding commercial bank directly.

#	Documents Required for Opening a Bank Account for Foreign Incorporated Limited Companies
1	Minutes and Board Meeting authorising the opening of the account and designating the signatories for payments and closure of the account.
2	Certificate of Incorporation.
3	Articles of Association.
4	Memorandum of Association.
5	List of Directors.
6	List of shareholders.
7	Power of Attorney and Passport of grantee (required in case the signatory is not a director of the company).
8	Citizen ID card or Passport of the directors and authorised persons. If a shareholder holds more than 25% of company shares: • Individuals: Citizen ID card or Passport (for foreigners). • Juristic Persons: List of shareholders of the relevant juristic persons.

Foreign Direct Investment (FDI) Restrictions

Foreign Direct Investment (FDI) is generally welcomed and does not require government approval unless foreign investors apply for special incentives offered by the Board of Investment (BOI). However, the Foreign Business Act (FBA), the overarching law governing FDI in Thailand, restricts/prohibits foreign investors from engaging in certain business activities. For further details please refer to section 8 of this report.

Definition of "Foreign Investment"

A company is considered foreign if 1) it is not registered in Thailand; or 2) if 50% shares or more of a Thai registered company are held by a non-Thai entity.

Restricted Ownership of Real Estate

Foreign investment in Thai real estate is also restricted under the FBA. Generally foreign investment in land ownership is forbidden unless exemptions are granted by the government. Exemption may be granted by the Board of Investment to own land for business operations such as factory building for manufacturing operations.

Ownership of apartment units in a building is permitted under the condition that not more than 49% of all units in a condominium project are foreign-owned.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency[8]

Foreign Currency

Inbound

There is no limitation on the amount of foreign currency that can be brought into Thailand. However, the foreign currency must be converted to THB or deposited into a foreign currency account at a Thai bank within 360 days.

Outbound

Repatriation of investment funds and repayment of overseas loans in foreign currency are freely permitted, subject to submission of supporting documents to an authorised bank.

Declaration Requirements

Any person bringing into or taking out of Thailand an amount exceeding USD 20,000, or equivalent in other foreign currency is required to declare such funds at the Custom.

Furthermore, any transaction involving the sale, exchange, withdrawal or deposit of foreign currencies in an aggregate amount exceeding USD 50,000, or equivalent shall be reported to an authorised bank in a Foreign Exchange Transaction Form as prescribed by the Competent Officer.

Local Currency

Inbound

There is no restriction on the amount of Thai currency brought into Thailand.

Outbound

The maximum limit of Thai currency that can be brought to other countries without authorisation (apart from the ones mentioned below) is THB 50,000.

Exception and Declaration Requirements

Any person travelling to Vietnam, the People's Republic of China (only Yunnan Province), and other countries that have an adjacent border with Thailand, is allowed to take up to THB 2 million from Thailand.

Any amount exceeding THB 450,000 must be declared to Thai Customs Officer before leaving Thailand.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

Policy on Foreign Exchange Rate[9]

A managed float exchange rate regime is adopted by Thailand. The value of THB is determined mainly by market forces to allow the currency to fluctuate in line with economic fundamentals. Regular interventions by the Bank of Thailand prevent excessive volatility and are designed to achieve economic policy targets.

The Bank of Thailand prohibits THB-denominated lending to non-residents where there are no underlying trade or investment activities by the borrower in Thailand.

Three-year Exchange Rate Trend for HKD to THB[10]

Date	HKD/THB Rate
30/03/2016	4.5356
30/03/2017	4.4216
30/03/2018	3.9726
30/03/2019	4.0427

D. List of Banks from Foreign Investments[11,12]

Foreign banks are mainly licensed to undertake commercial banking business in Thailand in the form of 1) commercial banks; 2) foreign commercial bank's subsidiaries; 3) foreign commercial bank's branches and; 4) foreign bank representative offices.

A commercial bank license allows a bank to provide the most comprehensive range of banking services in deposits, credit, foreign exchange, payment, remittance, derivatives and capital market, etc. to both individuals and corporations. There are restrictions in the scope of business and the number of branches in various degrees for holders of other licenses. The following list presents the foreign banks with commercial banks' licenses, foreign commercial bank's subsidiary and foreign commercial banks' branch. For banks' detailed scope of business bank, please refer to their official websites.

In addition, there are another 50 foreign banks with a representative office in the country. A detailed list of foreign bank representative offices can be found in Appendix 1.

List of Banks from Foreign Investments

	Name of Foreign Bank Branches
Commercial Bank (full range of banking services)	CIMB Thai Bank Public Company Limited
	Industrial And Commercial Bank Of China (Thai) Public Company Limited (ICBC)
	Standard Chartered Bank (Thai) Public Company Limited
	United Overseas Bank (Thai) Public Company Limited (UOB)
Foreign Commercial Bank's Subsidiary	ANZ Bank (Thai) Public Company Limited
	Bank Of China (Thai) Public Company Limited (BOC)
	Mega International Commercial Bank Public Company Limited
	Sumitomo Mitsui Trust Bank (Thai) Public Company Limited
Foreign Commercial Bank's Branch	Bank Of America, National Association
	BNP Paribas
	Citibank, N.A.
	Deutsche Bank AG.
	Indian Oversea Bank
	JPMorgan Chase Bank, National Association
	Mizuho Bank, Ltd. Bangkok Branch
	Over Sea-Chinese Banking Corporation Limited (OCBC)
	RHB Bank Berhad
	Sumitomo Mitsui Banking Corporation
	The Hong Kong and Shanghai Banking Corporation Ltd. (HSBC)

Source:

[1] *A Business Guide to Thailand 2018, Thailand Board of Investment*

[2] *Thailand Tax Facts 2018 (Thai Practical Notes), Ernest & Young*

[3] *Thai Tax 2018/19 Booklet, PricewaterhouseCoopers*

[4] *A Guide to Doing Business in Thailand, RSM International*

[5] *The Revenue Department of Thailand*

[6] *Tax Insights from Transfer Pricing, PricewaterhouseCoopers*

[7] *Bangkok Bank official website*

[8] *Investment in Thailand 2018, KPMG*

[9] *Thailand - Foreign Exchange Controls, Export.gov, Aug 2019*

[10] *Bloomberg*

[11] *Financial Business under the Bank of Thailand's supervision and examination, Bank of Thailand*

[12] *Names, Addresses and Websites of Financial Institutions, Bank of Thailand*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Thailand has established labour laws providing guidance on matters such as maximum working hours, minimum wages, and welfare to protect employees.

Foreign workers are forbidden or restricted from engaging in certain jobs which are prone to keen competition with local workers or in certain sensitive industries.

Foreign workers are required to obtain a work permit for legal employment in Thailand, which is approved by the Thai government on a discretionary basis.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2]

The Labour Protection Act and the Labour Relations Act, among other related laws, govern the Thai labour employment.

These laws apply to all businesses with at least one employee. All employees (except domestic workers/household staff), whether full- or part-time, seasonal, casual, occasional or contract, are covered.

Employment contracts and service contracts are governed separately under Thai laws. Employees under employment contracts receive wages as they work, and are supervised by employers. Independent contractors however, are only entitled to receive payment when work is completed, and are primarily governed by the "Hire of Work" provisions under the Thai Civil and Commercial Code (CCC).

Minimum Legal Working Age

The minimum employment age is 15 (subject to restricted employment conditions if workers are below the age of 18).

Children over 15 but under 18 years of age may be allowed to work if approval from the Ministry of Labour and Social Welfare is acquired. They are not allowed to work at night (i.e. between 10 pm and 6 am). No one under 18 years is allowed to perform work prejudicial to their health, morals or safety.

Labour Contract

The Labour Protection Act governs the agreement between employer and employees. If both parties agree to the contract and if it is not against the public order or good morals, Thailand accepts the validity of the contract, either written or verbal.

Termination of Employment

Conditions for termination of employment are laid out in the Labour Protection Act, and a code governs unfair practices and unfair dismissals. If an employment contract does not specify any duration, either party can terminate the contract by giving advance notice before the following pay period for it to take effect, up to three months in advance.

Thai labour laws provide considerable freedom in managing labour. The government does not interfere with a company's retrenchment and labour relocation policies, provided that labour relocation is not ordered with the exclusive intent to create hardship on them. Refusal to transfer can be a legal cause for dismissal.

Employees are entitled to severance pay depending on the period of employment, as describe below.

Period of Employment	Severance Payment (Minimum)
120 days to 1 year	30 days of wage
1 year to 3 years	90 days of wage
3 years to 6 years	180 days of wage
6 years to 10 years	240 days of wage
10 years to 20 years	300 days of wage
20 years or more	400 days of wage

B. Minimum Wage Level[3]

Since April 2018, the minimum wage ranges from THB 308 (around USD 10) to THB 330 (around USD 11) per day. The wage can vary depending on the location where the service is performed.

The minimum wage rate is to be updated from time to time by the government.

C. Maximum Working Hours and Days

The maximum number of hours for non-hazardous work is eight hours per day, or 48 hours per week.

The maximum number of hours for hazardous work is seven hours per day, but not exceeding 42 hours per week.

Once employees have worked for five consecutive hours, they must be given an hour resting break.

Overtime

For work performed in excess of the maximum number of hours, fixed either by regulations or by specific agreement (whichever lower applies), employees must be compensated with overtime pay ranging from 1.5 to three times their normal wage rate. The maximum number of overtime is 36 hours per week. Executives and supervisors are not entitled to overtime pay.

D. Mandatory Welfare

The Social Security Act[4]

According to the Social Security Act, annual contributions to the Social Security Fund by the government, employees and employers are required. The fund provides compensation to insure workers for cases such as injuries, illnesses, disabilities, maternity, death, child welfare, pensions and unemployment.

The monthly contribution by employers and employees is caped at THB 750 (around USD 24) each, or 5% of the employee's monthly wage (whichever is lower).

Workmen's Compensation Act[5]

According to the Workmen's Compensation Act, any employer with at least one employee is required to make contributions to the Workmen's Compensation Fund to provide protection to employees against injuries, diseases, disabilities or death resulting from employment. The rate of contribution ranges from 0.2% to 1% of an employee's annual wage, depending on the type of business undertaken, i.e., the assessed risk of the business.

Skills Development Act[1]

According to the Skills Development Act, it is compulsory for companies with at least 100 employees to provide trainings to at least 50% of them. Otherwise the employer has to make a contribution to the Skill Development Fund of approximately THB 480 (around USD 15) per year for each untrained employees.

Other Benefits and Rights[2]

In addition to these provisions, workers in Thailand are entitled to various rights, as described below.

- Annual leave: employees who have worked continuously for one full year are entitled to at least 6 days of annual leaves per year;
- Sick leave: employees can take as many days of sick leave as necessary, but a maximum of 30 days per annum will be paid. The employer may ask for a doctor certificate from the employee for a sick leave of three consecutive days or more;
- Employee Welfare Fund: for companies with at least 10 employees that do not have a provident fund, an Employee Welfare Fund shall be established to compensate resigned, laid off or perished employees who passed away whilst in service. Both employers and employees will be required to contribute to this fund; and
- Female labour rights: female workers may not be employed to perform work which is strenuous and dangerous to their health or detrimental to their morals and safety. Except for work on shift, female labour shall not be required to work between 12 midnight and 6 am. Female employees are entitled to maternity leave with pay for 45 days and an additional 45 working days without pay when they worked for the employer for more than 180 days. Maternity leave is in addition to the 30 days paid sick leave to which all employees are entitled.

Apart from the above mentioned legal provisions, Thai employers are required by law to provide adequate drinking facilities, washrooms and toilets for employees and must have first aid and medical facilities available at the premises. The extent of such facilities depends on the nature of the business and the number of employees.

E. Labour Law Governing Authorities, Enforcements, and Restrictions

Governing Authorities[2]

The Ministry of Labour and Social Welfare is the official government body responsible for the oversight of labour administration and protection, social policy, labour skill development, and the promotion of employment in Thailand.

Labour Law Enforcements[2]

The Labour Inspectors (operating under the Labour Protection Act and the Labour Relations Act) are responsible for overseeing compliance with general working conditions, occupation safety and health, labour welfare, labour relations, negotiation and application of collective agreements and settlement[6] of labour disputes.

The Labour Court provides an escalated way to resolve any disputes arising between employers and employees.

Employment Restrictions

The Foreign Employment Act (FEA) imposes certain restrictions on foreign employment to protect the domestic labour market.

Restrictions on the Number of Foreign Employees[7]

- For Thai incorporated companies, the FEA sets a statutory ratio of local/foreign employees of 4:1 (i.e. for every non-Thai employee hired, a company needs to employ four Thais). Moreover, foreign employees are required to obtain a work permit to work in Thailand. For each work permit, the sponsored Thai company is required to have at least THB 2 million fully-paid up registered capital to cover up to a maximum of 10 foreign employees per company. The cap can be relaxed in certain situations subject to approval of the Ministry of Labour on a discretionary basis. Some examples of criteria considered for relaxation of foreign employment cap include:
  - The employer paid an income tax equal or greater than THB 3 million in the previous accounting year; or
  - The employer has 100 or more Thai employees.
- Foreign incorporated companies are permitted to employ one foreign employee for every THB 3 million invested.

Restricted Occupations

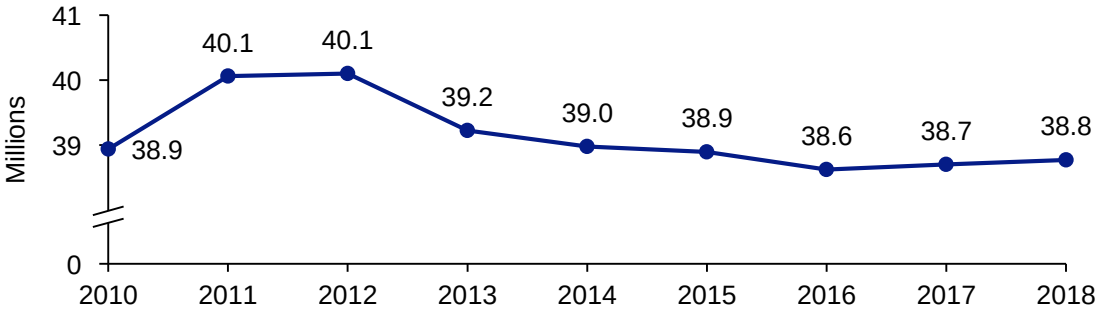
The FEA prohibits foreign workers from engaging in 39 occupations and professions, which include mostly manual, agricultural and industrial work (including shoemaking, hat making, cloth weaving by hand etc.) but also include professional fields like civil engineering, architectural work, legal services and accounting.

For an updated list of prohibited occupations, please visit the website of Ministry of Labour (www.mol.go.th/en/content/page/6347)

II. Local Labour Supply Market Condition

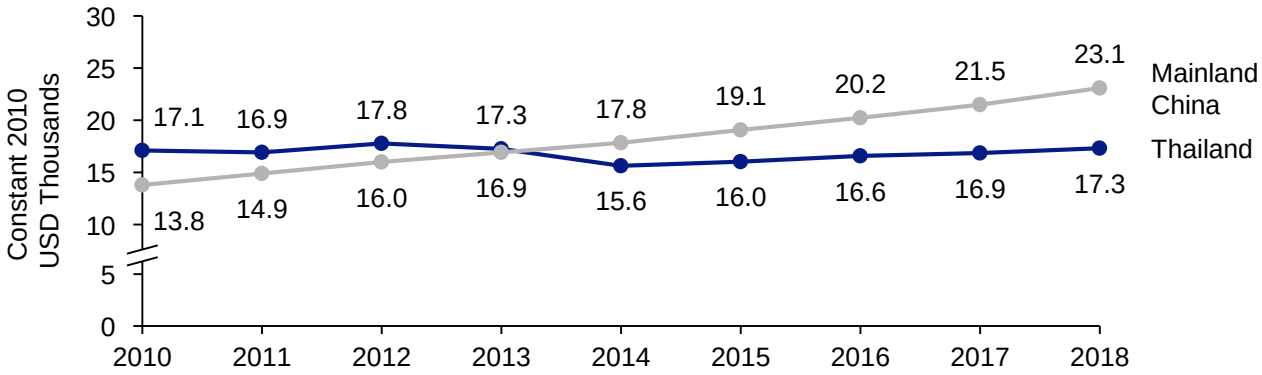
A. Supply Situation for Total Labour Force

Thailand Total Labour Force (2010 – 2018)[8]



The estimated total labour force was around 38.8 million in 2018. The supply of labour has been declining from the peak of 40 million in 2012 and has remained stagnant below 39 million for the past five years.

Thailand Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)[9]

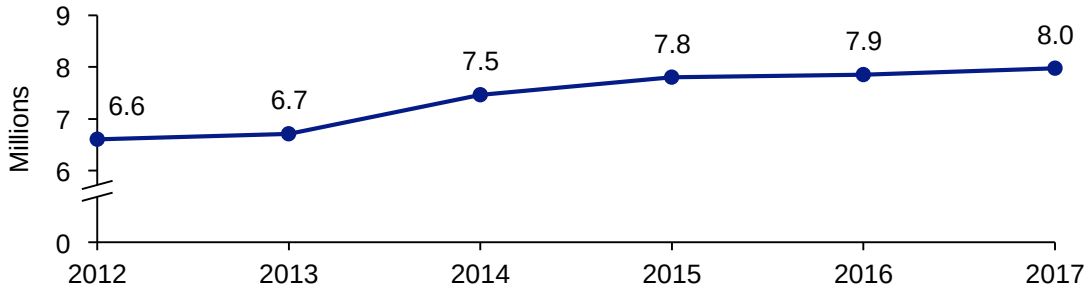


Thailand's labour productivity grew at a lower rate (around 0.2%) than Mainland China's (around 6.7%) between 2010-2018. Thailand's industry labour productivity was around 25% lower than Mainland China's in 2018. Among ASEAN countries, Thailand's productivity is lower than that of Brunei, Singapore and Malaysia.

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply on Educated Employees

Thailand Estimated Labour Force with Higher Education (2012 – 2017)[10]



The estimated labour force with higher education (defined as level of education beyond upper secondary school) was around 8.0 million in 2017, approximately 21% of the total labour force.

C. Government Support on Employee Training[2]

In 2002, the Thai government enacted the Skills Development Act which encourages employers to conduct skills development courses in order to upgrade the knowledge of the workforce. The table below lists examples of incentives provided under the Skill Development Act.

#	Incentives Granted Under Skills Development Act
1	Income tax exemption on training expenses, up to 200% of the incurred expenses.
2	Government assistance granted to develop training materials, trainers and supervisors.
3	Government consultation services on skill development activities.
4	Exemption on import duty and value added tax for tools and machinery brought into Thailand for training purposes.
5	Deduction on utility charges for electricity and pipe water bills twice the amount of the training expenses.

Additionally, there is a legal requirement for companies with at least 100 employees to provide trainings to at least 50% of them. Otherwise the employer has to make a contribution to the Skill Development Fund of approximately THB 480 (around USD 15) per year for each untrained employees.

D. Labour Unionisation and Related Government Regulations[2]

All labour associations must be registered with, and licensed by, the Central Registration Office of Employees' Association, the Ministry of Labour and Social Welfare or by provincial registrars designated by the Ministry of Labour and Social Welfare.

Protection of Rights of Unionisation

The Labour Relations Act (LRA) protects the rights of a member of labour associations from an employer's disciplinary actions (e.g issuing a warning letter, employee lockout or employment termination), provided that the concerned labour association is formed and registered according to the LRA. The employer must submit a petition to the Labour Court seeking an order approving the disciplinary actions against the employee. If approved, the employer may proceed as described above.

Labour Dispute Settlement

In case of employment disputes, only written demands by employees will be considered to have been received by the employers. Negotiations between employers and employees must be undertaken through their authorised representatives.

If the parties cannot reach an agreement, the Ministry of Labour and Social Welfare may provide directions to resolve the dispute. An application of the case must be presented in written form. An arbitrator may be appointed to reconcile the dispute.

E. Work Permits and Visas

Work Permits[1,2]

Foreign employees need a work permit to work in Thailand. An employer may file an application for a work permit on behalf of the foreign employee before he enters Thailand. A work permit will be valid for the period of time not exceeding four years (insofar as the foreigner's non-immigrant visa permits him/her to remain in Thailand and will be renewed at the same time as the approval of a visa extension).

- Approval criteria: Approval is considered by the Ministry of Labour on a case by case basis. Certain criteria such as employer's paid up capital, ratio of Thais to foreign employees, how beneficial the business is to the Thai economy etc. will be considered by the Ministry before approval.
- Termination of employment: In case of termination of the employment or resignation of employees, the employer has a duty to report the cancellation of the respective work permits within a period of seven days. Failure to comply could result in penalties being imposed.
- Some key points to consider when applying for a work permit:
    - If the job being applied for is not in Bangkok, the application should be filed at the relevant province's Department of Employment, or in the absence of such an office, at the province's city hall; and
    - If the job applied for is subject to other licenses in addition to the Foreign Employment Act, a photocopy of such license shall be attached.

For the detailed procedures, guidelines on application filing and required documents in work permit application, please visit the website of Ministry of Labour of Thailand (www.mol.go.th/en/anonymouse/home).

Visas[2,11]

Non-immigrant visa are issued by the Royal Thai Embassy or Consulate abroad.

- Visas are classified into different categories. The most common ones for foreign employment are non-immigrant Visa Category "B" (Business Visa), Non-Immigrant Visa category "B-A" (Business Approved Visa) and Non-Immigrant Visa Category "IB" (Investment and Business Visa);
- "Smart Visas" are granted to executives of the companies that invest in "S-Curve" industries. Holders of Smart Visa will be granted visa periods of up to four years and will not be required to obtain a work permit. For details of "S Curve" industries, please refer to section 8 of this report; and
- Most of the Thai embassies overseas now require a certification or letter of invitation from the sponsoring employer in Thailand as well as a work permit pre-approval letter (WP3) for application of Category B visa. Upon arrival, a non-immigrant visa holder needs to apply for visa extension beyond 90 days with the Immigration Department. Approval of the visa extension is considered on a case-by-case basis and the decision of the Immigration Department is final.

Travelling to Thailand[11]

Hong Kong residents are permitted to stay up to 30 days in Thailand without a visa under the Bilateral Agreement with Thailand if entering via an international airport or through a land border checkpoint from a neighbouring country, such as Laos, Myanmar and Cambodia.

In order to work in Thailand, foreign employees are required to go through the following procedures:

#	Key Steps for Foreigners Wishing to Work in Thailand
1	Enter Thailand with a valid category B non-immigrant visa.
2	Prepare and submit an application for a work permit with the Ministry of Labour. This normally takes between 3 to 7 working days to process.
3	Extend the category B non-immigrant visa beyond 90 days.

F. Religious and Cultural Concerns or Considerations

Religion[12,13]

Absolute religious freedom exists in Thailand with the King as patron of all major religions. Buddhism is the national religion which is practiced by approximately 95% of the population. Approximately 4.6% of the population is Muslim. Christianity[2] and various other religions make up the remainder.

Religion in Thailand pervades many aspects of Thai life and senior monks are highly revered; it is advised to observe the rules stipulated in individual wat (temple) in Thailand, especially for women, who may be restricted to enter certain areas of a wat, etc.

Culture[13]

The Thai royal family is highly respected in the country and it is crucial to show great respect to them in any occasion.

The prominence of family businesses among SMEs highlights the importance of personal relationships in Thailand. Relationships are key to a successful deal in the country; the level of closeness with Thai professionals may take precedence over monetary offerings.

Source:

[1] A Business Guide to Thailand 2018, Thailand Board of Investment

[2] A Guide to Doing Business in Thailand, RSM International

[3] New Minimum Daily Wage, Mazars, Apr 2018

[4] Investment in Thailand 2018, KPMG

[5] Labour Law, Thailand Ministry of Labour

[6] Labour inspection country profile: Thailand, International Labour Organisation (ILO)

[7] Work Permit and Visa Application Process in Thailand, Mazars

[8] Total labour force, The World Bank

[9] Industry (including construction), value added per worker (constant 2010 US$), The World Bank

[10] Thailand: Labor Market, PersolKelly Consulting, Apr 2019

[11] Summary of Countries and Territories entitled for Visa Exemption and Visa on Arrival to Thailand, Royal Thai Consulate-General, Hong Kong

[12] About Thailand: Religion, Tourism Authority of Thailand

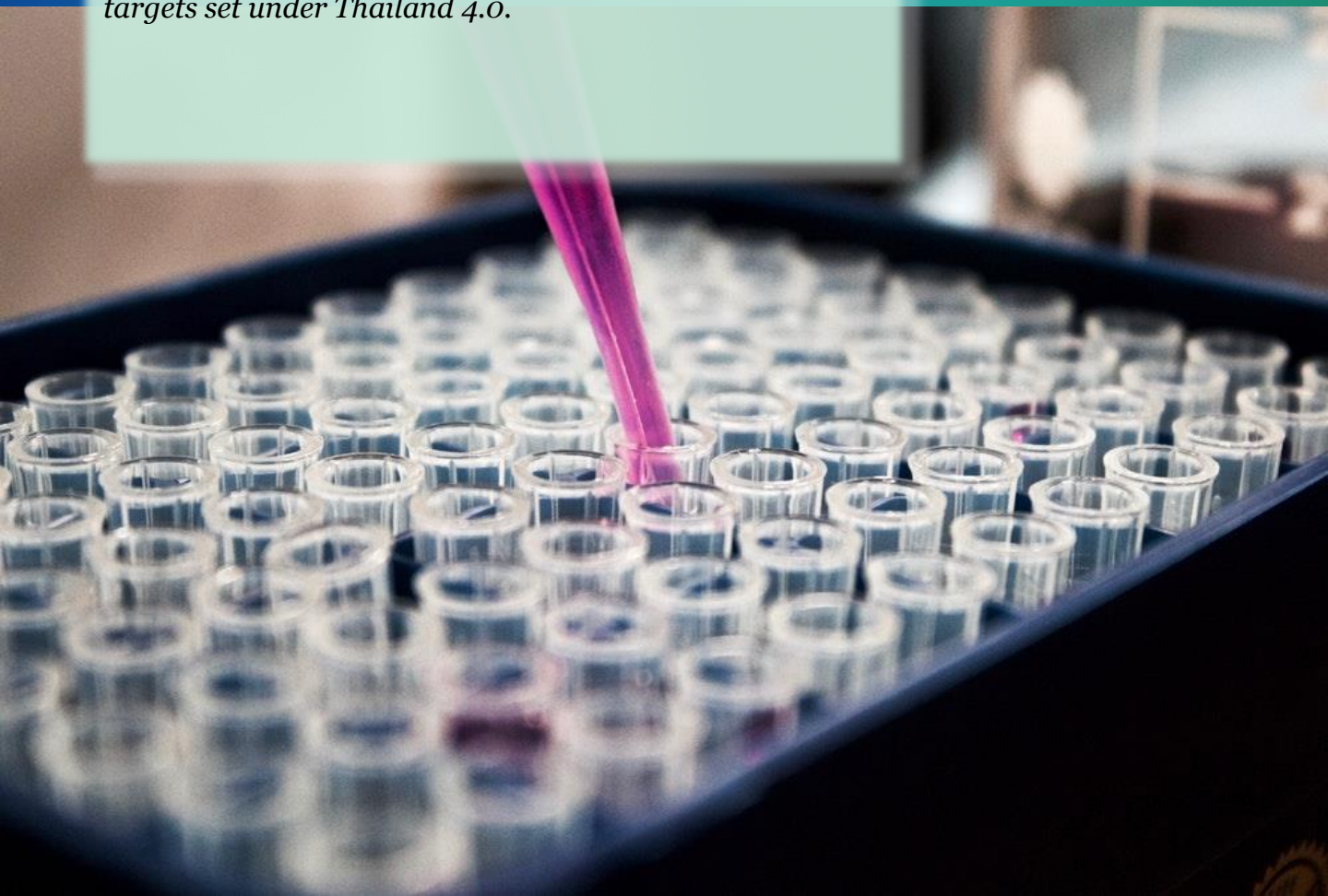
[13] Thailand - Cultural Etiquette, eDiplomat

5. Research and Development Environment

Executive Summary

Thailand's goal for the coming years is to escape from middle income trap and to become a high-level income country. To do so, the government established an economic development framework (Thailand 4.0) which elevates Science & Technology (S&T) and Research & Development (R&D) as a national priority. Therefore, government agencies are rolling out policies and funding enhancing S&T, universities are publishing an increasing number of scientific papers and the private sector is investing in R&D facilities.

However, the country has yet to overcome two major hurdles affecting the S&T ecosystem. Thailand's relative lack of a skilled workforce along with a poor intellectual property protection framework could slow down foreign investments and prevent Thailand from reaching the targets set under Thailand 4.0.



5. Research and Development Environment

I. The Science and Technology (S&T) in Thailand

In Thailand, the government has been implementing strategies and initiatives allowing the country to be more competitive compared with its Southeast Asian peers. In order to fuel the country's economic growth in a sustainable and durable way, the government has chosen to elevate S&T as a national priority.

A. Policies and Trends in S&T

Under the influence of the national government, Thailand has gone through three major economic development cycles. Each cycle was designed to upskill the Thai economy in a particular sector: Agriculture for Thailand 1.0, light industry for 2.0 followed by heavy industry for 3.0. The last cycle created greater inequalities in the country and trapped Thailand in the middle income economy class.

The nation is now aiming to rise towards a high income country (and escape from middle income trap) with a new development framework, Thailand 4.0.

Thailand's Journey Towards Becoming a High Income Country

Thailand 4.0[1,2,3]

In alignment with Thailand's 12th Social and Economic Development Plan (2017–2021), the country established the Thailand 4.0 strategy in order to become a high income country. This strategy, also called "Digital Thailand", is a framework for economic development driven by digital technologies and innovation helping to transform the country's current economy into a value-based one. The four main objectives are:

- Reaching economic prosperity: creating an economy built on knowledge, technology, innovation and creativity in order to overcome the middle income trap. The goals are to reach a GDP growth rate of around 5% and to have an income per capita of USD 15,000 by 2032;
- Establishing social well-being: driving the country towards an equalitarian society. The objectives are to reduce social inequalities and to build social security;
- Raising human values: transforming the population into an advanced and educated workforce. The target is to reach a Human Development Index (HDI) of 0.8 and to have five Thai universities ranked within the top 100 of world's higher education institution list; and
- Protecting the environment: balancing economic growth and sustainable growth.

To reach all the objectives, the government also implemented supporting policies such as the ICT-2020 plan (Information Communication Technologies) and the Digital Agenda 2018 (smart cities).

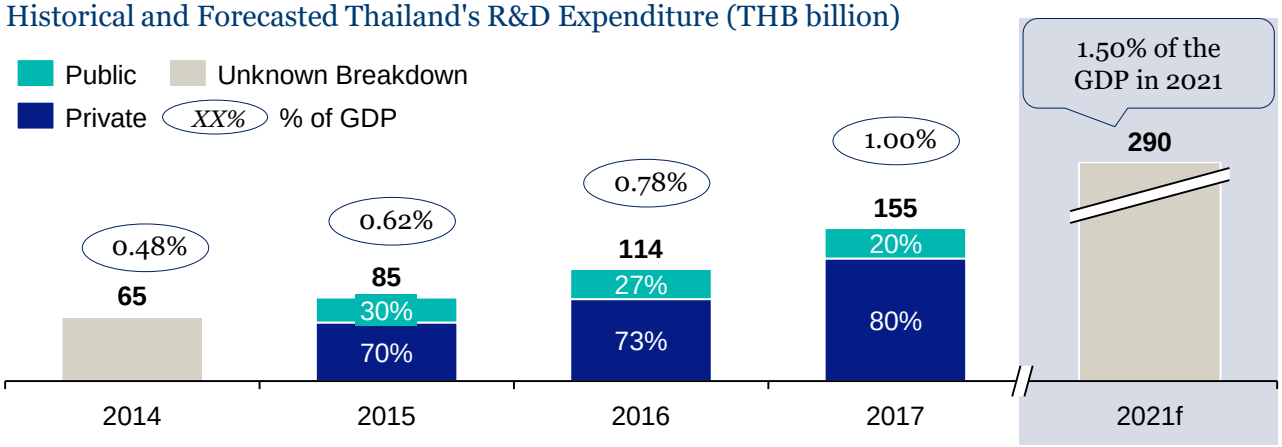
Outlook

Thailand's innovation capabilities are better than average worldwide and strong compared with other ASEAN countries. The country ranked 51st out of 140 countries in the "Innovation Capability" criteria of the World Economic Forum's 2018 Competitiveness Report. Thailand was third among the ASEAN countries.

Thailand's Research and Development (R&D) Investments[4]

In the wake of Thailand 4.0, R&D investments are rising with the government setting a clear target for 2021. According to the National Science Technology and Innovation Policy Office (STI), in 2017 (figures surveyed in 2018 and disclosed in March 2019), R&D investments in Thailand amounted to THB 155.1 billion, reaching the milestone of 1% of the country GDP. This figure was up around 36% from THB 113.5 billion in 2016. The secretary general of the STI, Kitipong Promwong, commented that in 2017, the private sector was the main driver of R&D investments, representing 80% of total investments.

Historical and Forecasted Thailand's R&D Expenditure (THB billion)



In order to strengthen Thailand's innovation capabilities, the government has set a clear but challenging target for R&D investments. The national objective is for R&D investments to reach 1.5% of total GDP by 2021. According to Fitch forecast, Thailand GDP will reach USD 608.1 billion in 2021[5] (THB 19,343 billion) indicating that if the country meets its target, R&D investment could settle at THB 290 billion in 2021. To meet this target, the country is implementing incentives such as tax deduction to foster investments from companies focused on robotics, healthcare, agriculture, biotechnology and creative economy.

In 2017, R&D investments reached THB 155.1 billion; 40% of this figure[6] came from five major industries. The breakdown of the R&D expenditure by industry is provided below.

Automotive Industry (THB 18.9 billion)
- Develop and improve electric vehicles production
- Support specific technologies such as hybrid electric vehicles (HEV)
- Construct car testing facilities

Food Industry (THB 16.2 billion)
- Investigate and research automated production process solution
- Improve processed and instant food products
- Carry out consumer behaviour studies and new packaging research

Petroleum Industry (THB 11.7 billion)
- Invest in petroleum production and transportation technologies
- R&D in energies for specific industries (e.g. for the automotive industry)
- Testing of alternative fuel technologies

Wholesale & Retail (THB 10.2 billion)
- Invest in new products and research personnel
- Improve production processes
- Focus on the future of retail/convenience stores and grocery stores

Financial Services (THB 6.0 billion)
- Improve services
- Develop FinTech to support modern financial services

B. S&T Related Organisations

In order to properly develop a S&T ecosystem, Thailand needs reliable authorities to set the overall strategic directions, implement policies and track S&T progress nationwide. There are currently two major Ministries (MOST and MDES) and two government agencies (NSTDA and STI) in charge of S&T related developments.

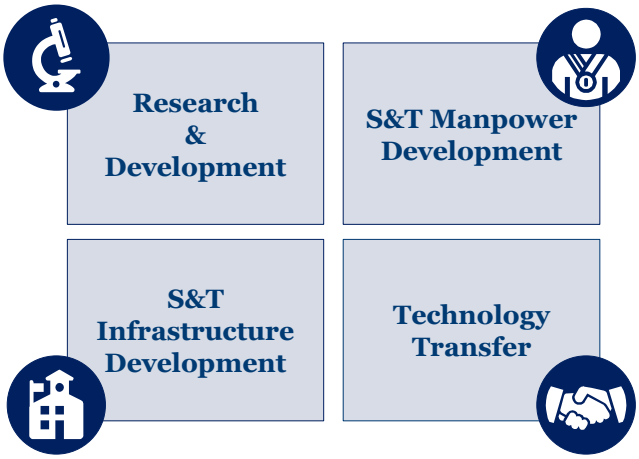
Ministry of Science and Technology (MOST)[6]

The Ministry of Science and Technology's main missions are:

- Draft, implement and track the progress of policies facilitating S&T development;
- Manage the network for the S&T related agencies; and
- Collaborate with various agencies and the private sector in order to investigate policies, plans or reports related to S&T.

The Ministry operates through a defined framework in order to develop every aspect of Thailand's R&D environment.

MOST Operating Framework for S&T



Ministry of Digital Economy and Society (MDES)[7]

The Ministry of Digital Economy and Society's vision is to encourage all sectors to embrace digital technologies in order to drive Thailand's economy and society towards the objective of Digital Thailand (Thailand 4.0).

National Science and Technology Development Agency (NSTDA)[8]

The NSTDA operates under the Ministry of Science and Technology. NSTDA is Thailand's leading research agency and is a key institute of the country's S&T strategy. In 2017, the NSTDA had a staff of 2000 people (of which 500 PhD) and an annual budget of THB 2 billion. The NSTDA conducts basic and applied research in five main domains: Agriculture & Food, Health & Medicine, Energy & Environment, Bioresources & Community, and Manufacturing & Services.

The NSTDA also operates four specialised national research centres:

- Genetic Engineering and Biotechnology Centre (BIOTEC), responsible for life-science related research;
- Metal and Material Technology Centre (MTEC), responsible for materials-related research;
- Electronics and Computer Technology Centre (NECTEC), responsible for IT-related research; and
- Nanotechnology Centre (NANOTEC), responsible for nanotech-related research.

National Science Technology and Innovation Policy Office (STI)[4]

The STI is a national entity created in 2008 that carries out missions along the ministry framework as follows: 1) Research and Development: formulate the national 20 years research and innovation strategy; 2) S&T Infrastructure Development: promote private sector investments; 3) S&T Manpower Development: facilitate talent mobility, create training programmes with universities and private sector; and 4) Technology Transfer**:** create a Science Diplomacy Programme.

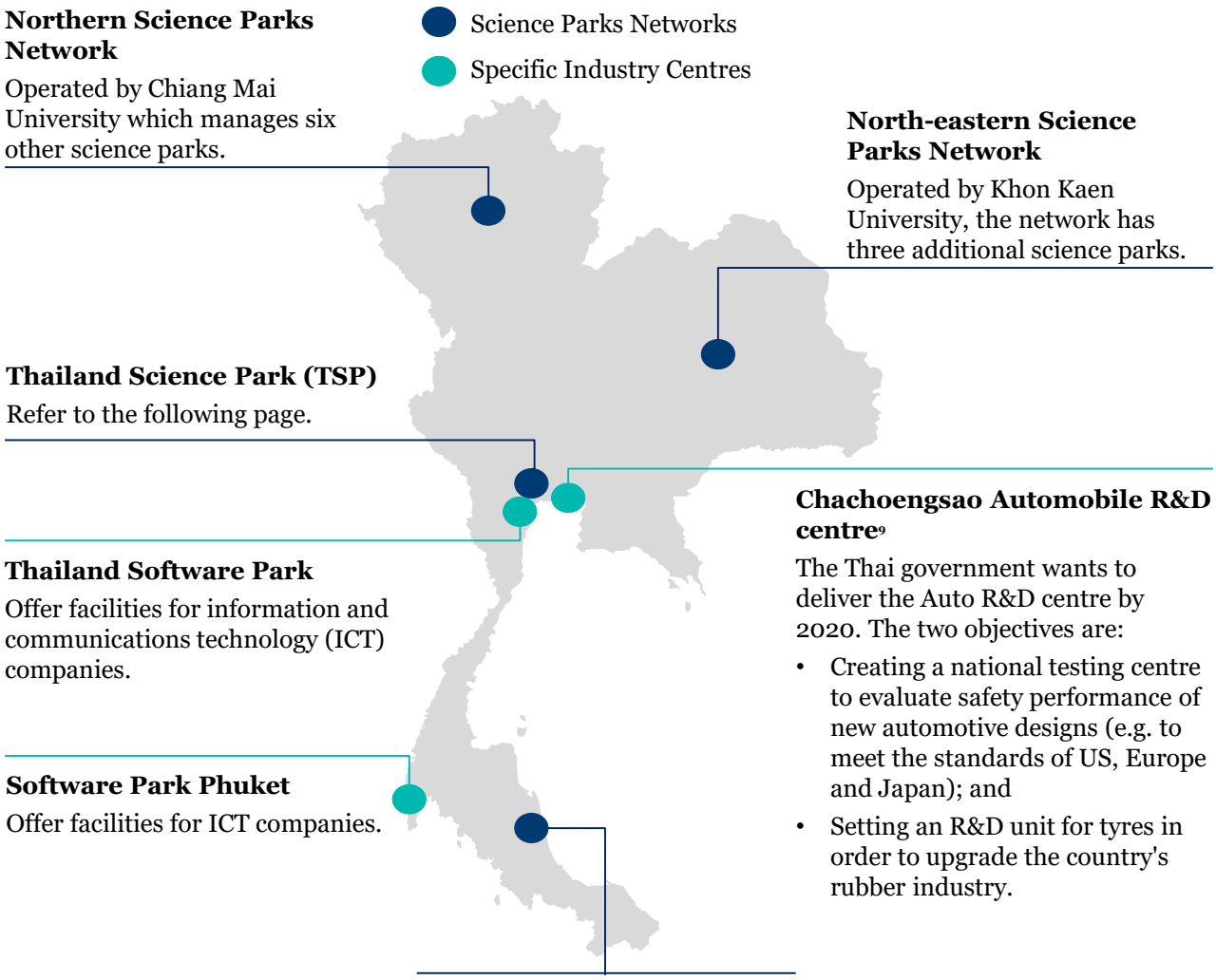
II. The Infrastructure of Science and Technology

Thailand has set R&D as a national priority to support the country's economic growth. In order to reach the targets set by the government, most of the national S&T policies are targeted at developing the current infrastructures. This development is mainly driven by three parties: the government, universities and the private sector.

A. Government R&D Institutes and/or Funding Agencies

As part of the national development of S&T infrastructures, the public sector will play a key role. The government currently owns or supports most of the country's Science Parks and also plans to create industry specific R&D centres in the near future (e.g Chachoengsao Automobile R&D centre in 2020).

Thailand National Science Park and R&D Institution Ecosystem[8]



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Thailand Science Park (TSP), the Leading R&D Hub in the Country[10]

The National Science and Technology Development Agency (NSTDA) created the Thailand Science Park (TSP) in 2002 as the first science park of the country. It is located in Pathumtani province (northern outskirts of Bangkok) near three leading universities: Asian Institute of Technology (AIT), Thammasat University (TU) and Sirindhan International Institute of Technology (SIIT). Overall, the park provides corporate tenants an exclusive access to highly skilled researchers including the 2,000 NSTA full-time researchers (out of which 500 are Ph.D scientists).

TSP is the largest fully integrated R&D hub in Thailand with more than 500 R&D related projects carried out on the campus each year. It accommodates more than 90 technology related companies, of which around 70% are Thai firms and the remaining are foreign companies, covering a wide range of industries.

Companies Located at TSP by Industry *(% of companies operating in the sector)*

Electronics, Robotics & Automation	Food & Agriculture	Materials Science & Chemicals	Science as a Service	Medical Devices & Pharma-ceuticals	Auto Parts and Others
(27%)	*(20%)*	*(19%)*	*(18%)*	*(10%)*	*(6%)*

TSP also hosts service providers for R&D-related business, such as the Industrial Technology Assistance Program (iTAP), the Technology Licensing Office (TLO), and the Business Incubation Centre (BIC).

The TSP has three objectives:

- Provide high quality R&D space for public and private sector;
- Incubate technology business start-ups; and
- Support linkage between private companies, NSTDA, and universities.

TSP also hosts six content focused research institutions:

FoodInnopolis
Food Innovation Hub

Auto Parts Innovation Cluster
Network supporting entrepreneurs in auto parts industry

NSTDA
(refer to S&T organisations paragraph)

BIOTEC a member of NSTDA
NECTEC a member of NSTDA
MTEC a member of NSTDA
NANOTEC a member of NSTDA

B. University-based R&D Institutes[11]

Apart from the government, universities play an important role in the R&D ecosystem. According to the 2019 QS Asia University Rankings, Thailand has 10 universities ranked in the top 300. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The top Thai institution comes in 44th place, with two other institutes ranked among the top 100. This implies that research carried out in the universities has a moderate impact in the international S&T scene.

Reflecting the push from the government in the R&D sector, universities and research institutions are increasingly publishing more research papers. Amongst the 10 most prestigious universities in the country, the average growth in paper submissions reached 22% over 2012-2016 with the top two institutions publishing more than 10,000 research papers over the same period. In addition to the growing number of publications, their relevance and impact also increased. Between 2012 and 2016, the number of Thai papers published in the top 10% international journals grew from around 15% to more than 20%. In terms of research paper topics, the top three areas are: Natural Sciences, Medical & Health Science, and Engineering & Technology, which are strongly in line with the sectors prioritised by the government in the Thailand 4.0 strategy.

Out of the 10 Thailand universities that are active in publishing research papers, four are leading institutions in their respective industries. Each one of them hosts three R&D centres that are developing new technologies to address Thailand's current economic issues.

University (ranking)	Research Focus	Name of R&D Centres in the University[8]
Chulalongkorn University (44th)	Science, Engineering and Energy	• The Institute of Biotechnology and Genetic Engineering • Centre of Excellence on Petrochemical and Material (PETROMAT) • The Energy Research Institute
Mahidol University (52nd)	Medical	• Faculty of Medical Technology • Institute of Molecular Biosciences • Faculty of Medicine at Siriraj Hospital
Kasetsart University (130th)	Agriculture, Food and Environment	• Kasetsart University Food Innovation Research and Services in Thailand (KU-FIRST) • Institute of Food Research and Product Development (IFRPD) • Centre of Excellence for Agricultural Biotechnology
King Mongkut's University of Technology Thonburi (153rd)	Technology and Engineering	• Institute of Field Robotics • Faculty of Engineering • School of Bioresources and Technology

C. Private Business Firms (Research Centres)[12,13]

The third major player in the R&D ecosystem is the private sector. In 2017, private companies contributed to around 80% of Thailand's R&D investment and the government is intending to roll out important incentives to push them to further invest in R&D.

Leading companies such as Charoen Pokphand in the food industry or Nissan in the automotive industry have R&D centres in Thailand. The research carried out in these centres can lead to major innovation, helping the country to grow its economic competitiveness in specific industries.

R&D Centre	Research Focus	Descriptions
Charoen Pokphand (CP) Foods R&D Centre	Food	Situated in the north of Bangkok in Ayutthaya, the CP Foods centre has an R&D facility intended to: • Develop healthy food and beverages, which represent 30% of the company's new products in 2019; • Focus on food biotechnology such as enzymes and microorganism applications aimed at boosting product quality; • Create sustainable packaging to help reduce environmental damage; and • Help CP Foods launch 'smart' products such as smart meals (e.g. vegetarian dish with high-fibre grain, tofu, vegetables and other natural ingredients).
Nissan R&D Centre	Automotive	Nissan opened its first ASEAN R&D centre in the Samut Prakan province in 2016. The THB 1 billion facility acts as the main research centre for the region. The centre focuses on: • Quality assurance (for product launches); • Upstream product-development; and • Evaluation test and trial for prototypes.

D. Infrastructure Availability for Foreign Investments

Thailand has set R&D as a national priority and is therefore incentivising foreign business to invest in the country. The Thailand Board of Investments (BOI) released an Investment Policy Framework with a list outlining the major incentives that could be beneficial to foreign firms. Some examples of favourable policies include: 100% foreign ownership, no local content requirements, no export requirements and no restriction on inflow of foreign currency. Other examples of facilitating measures include: land ownership rights, work permit and visa facilitation benefits. Foreign businesses are therefore encouraged to invest in Thailand. For more details on infrastructure availability, please refer to sections 7, 8 and 9 of this report.

III. Priority Areas in Thailand (major exports)[14]

Thailand's economy is mainly supported by its machinery, electronics and vehicles industries. In 2018, the country's top five exports were:

Top 5 Exports	% of Total Exports (in 2018)[15]
Machinery and Equipment	17.2%
Electronics	14.0%
Vehicles	12.2%
Rubber	6.2%
Plastics	5.8%

These industries (or products) have all been marked by the government as potential levers for economic growth. In order to increase its economic competitiveness the country will need to use R&D to upgrade its exports. Indeed, in 2016, only 22% of Thailand's manufactured exports were labelled hi-tech products (e.g. products with high R&D intensity such as in computers), compared with around 30% for Malaysia and Vietnam.

IV. Funding for S&T, R&D[8]

Funding is an important tool to leverage when developing an industry. In its effort to push forward R&D, the Thai government is offering a wide variety of funding through its main agencies: National Innovation Agency (NIA) and NSTDA. Currently, the funding schemes are targeted at small and medium-sized businesses with projects in early stage development stages or locally owned businesses.

The government is eager to meet its target of R&D investments reaching 1.5% of the country's GDP by 2021. To facilitate this, it has implemented various measures to incentivise the private sector to invest:

- Provide funding for SMEs and startups working in innovative businesses;
- Promote measures from the BOI providing additional benefits to R&D projects;
- Expand economic innovation zones/centres such as 'Food Innopolis'; and
- Set favourable funding conditions for private investors (see table below).

Favourable Funding Conditions for Private Investors by Incentive Programme (Part 1/2)

Agency	Programme	Descriptions	Requirements	Conditions
National Innovation Agency (NIA): offer financial support for firms with promising prototypes of technological products	Technology to Capital Programme	• Provides grants to support technology innovations in the testing/pilot phase	• Has to be an R&D project that is certified or financially supported by an education or research institute • The technology must have passed commercial production and market feasibility evaluations	• Grant up to 75% of the project expenditure (company must invest at least 25%), up to a maximum of THB 5 million • Maximum support for 3 years
	Innovation Interest Programme	• Targets innovative projects in the early stages of development. The goal is to support the product to go into production	• The project must be in a pre-revenue generating phase • The project has good market potential and the company has clear business and investment plans	• Support through interest-free loans from banks up to a maximum of THB 5 million • Maximum support for 3 years
	Innovation Coupon for SMEs	• Offers grants and loans to SMEs for finance projects related expenditures (e.g. feasibility studies; consultancy services from experts, research and education institutes; license fees, royalty fees and payments for temporary employees)	• Firm must be a small or medium-sized enterprise (registered capital of less than THB 200 million and less than 200 employees) • Thai nationals must hold no less than 51% of the firm's total shares • The company must be able to finish the project within 2 years	• The maximum loan amount is THB 5 million per project (interests are not paid by the receiver) • Expenditures should not exceed THB 1.5 million • Additional grant of THB 200,000 for feasibility studies to the Thai SMEs

Favourable Funding Conditions for Private Investors by Incentive Programme (Part 2/2)

Agency	Programme	Descriptions	Requirements	Conditions
National Science and Technology Development Agency (NSTDA): provide programmes to financially support domestic R&D projects (from Thai companies)	The Company Directed Technology Development Programme	• Provides low interest loans to support local R&D projects going into commercialisation	• Research must lead to commercialisation • Firm must be considered an SME (registered capital of less than THB 200 million) • Thai nationals must hold no less than 51% of the firm's total shares • Firm must be managed by Thai nationals	• Loan up to THB 30 million; (should not exceed 75% of the project's total budget) • Loan must be repaid within 7 years
	Industrial Technology Assistance Programme (iTAP)	• Reimburses 100% of experts' consultation fees. Programme also provides free expert matching services	• Firm must be considered an SME (registered capital of less than THB 200 million) • Thai nationals must hold no less than 51% of the firm's total shares • Firm must be managed by Thai nationals	• Maximum grant of THB 400,000 (should not exceed 50% of the project's total expenditures) • Large companies can benefit from expert matching services but not financial assistance

V. Human Resources for S&T[15,16]

S&T manpower development is one of the main missions for the Ministry of Science and Technology (MOST). Having a highly skilled workforce is extremely important in order to carry along the R&D projects that will allow the country to meet the goals set by the Thailand 4.0 strategy. According to the latest data available (from 2016), the country's ratio of researchers in R&D was 1,210 per one million people (the third highest ratio among ASEAN countries). On a worldwide basis, in the 2019 Global Innovation Index, the country ranked 48th out of 126 countries in the criteria "Researchers, FTE/million population."

However, it seems that Thailand's education system is not effective and does not allow the country to create a highly skilled[16] workforce. Based on the results of the 2015 Programme for International Student Assessment (PISA), around half of the Thai students performed below the basic proficiency level in science, reading and mathematics. The results indicated that despite attending school for nine years, the Thai students are struggling with basic literate or mathematical exercises. The country is also lagging behind its Southeast Asian peers and other Asian countries and cities (i.e. Singapore, Hong Kong, Macao, Vietnam, Korea and Japan). For these other countries, approximately 30% of students attained a level 4 or higher education in science and mathematics, versus only 5% for Thailand. As a consequence, the country is unable to educate S&T workers and will have a challenging time reaching the target of 60 research and development workers for every 10,000 persons by 2035. Nevertheless, Thailand can leverage a strong base of S&T graduates, as nearly 28% of tertiary students graduate in science and engineering.

VI. Support in Testing and Certification

The Thai government does not provide specific support in testing and certification to S&T companies. However**,** support in testing and certification is a usual service offered by Science Parks. Most of the advertising services including: testing and technical assistance, licensing, intellectual property rights. Therefore, joining a Science Park Network may help companies with the testing and certification processes.

VII. Intellectual Property Policy[17]

Intellectual property (IP) rights are an important factor to consider when entering a country. Some countries have difficulty implementing a strong framework to protect IP rights which can cause serious damages to the companies. Each year the Global Innovation Policy Centre (GIPC) publishes a worldwide ranking which analyses eight IP protection related topics: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, membership and ratification of international treaties.

According to the 2019 IP Index published by the GIPC, Thailand's IP protection is very low. Globally, the country is ranked 42nd out of 50 analysed countries. Regionally it is also underperforming when compared with other Asian countries. Overall Thailand scored 32% which is below the Asian average of 52% (as a reference the top five world economies have an average of 92% on the index). Despite improvements over the years, substantial weaknesses still persist in Thailand's IP protection:

- Inefficient framework for patent protection: gap exists in patentability and severe patent backlogs;
- IP rights related to life sciences are misaligned with international standards;
- Poor digital copyright regime: low implementation and a lack of effectiveness;
- Barriers to market access for patent holders;
- High counterfeiting rates; and
- High digital piracy rates (software piracy estimated at 64%).

Source:

[1] *Thailand Board of Investment, Royal Thai Embassy*

[2] *Ministry of Information and Communication Technology*

[3] *Ministry of Digital Economy and Society, 2018*

[4] *National Science Technology and Innovation Policy Office, 2019*

[5] *Thailand 10-Year Forecast, Fitch Solutions, 2019*

[6] *Ministry of Science and Technology*

[7] *Ministry of Digital Economy and Society*

[8] *Support measures for activities related to science and technology development, Thailand Board of Investment*

[9] *Auto testing centre for research and development, Bangkok Post, 2016*

[10] *Thailand Science Park Homepage*

[11] *Most prolific research countries in Asia 2012-2016, Elsevier*

[12] *CP Foods to develop healthy food products with new R&D centre in Thailand, Food Processing, 2019*

[13] *Nissan official website*

[14] *Trade Map, International Trade Centre*

[15] *Global Innovation Index 2019, INSEAD*

[16] *Skilled workforce and strong R&D keys to Thailand 4.0 success, The World Bank, 2017*

[17] *2019 IP Index, Global Innovation Policy Center, 2019*

6. Supply Chain Environment

Executive Summary

Thailand's industry and service sectors contribute to around 90% of its gross domestic product (GDP). The country is particularly strong in the fields of automotive, electronics and food processing. The government aims to further support the development of a stronger supply chain in these industries.

With the ease of customs and clearance process, and the well developed infrastructure for logistics support, the Thai government is devoted to elevating Thailand's position as a key logistics hub within Southeast Asia.

6. Supply Chain Environment

I. Industry Profiles in Thailand[1,2,3]

Breakdown of 2018's Top 10 Exports

Thailand's major sectors by gross domestic product (GDP) in 2017 were services (55.6%), industry (36.2%) and agriculture (8.2%).

In Thailand, the service sector includes tourism, banking and finance.

The industry sector includes vehicle and parts, electronic appliances, computers and parts, mining, petroleum refining, garment and clothing, as well as chemical and plastics.

Agricultural products include rice, corn, rubber, sugarcane, livestock, palm oil, and coconut.

Thailand experienced steady growth due to its industrial and agricultural exports. In 2018, Thailand's total global shipments amounted to USD 249.8 billion, of which more than 70% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Machinery (including data processing machines and air conditioning)	USD 42.9 billion	17.2%
2. Electronics	USD 35.0 billion	14.0%
3. Vehicles	USD 30.4 billion	12.2%
4. Rubber, Rubber Articles	USD 15.5 billion	6.2%
5. Plastics, Plastic Articles	USD 14.5 billion	5.8%
6. Precious Metals and Stones	USD 11.9 billion	4.8%
7. Mineral Fuels Including Oil	USD 10.6 billion	4.2%
8. Meat/Seafood Preparations	USD 6.6 billion	2.6%
9. Organic Chemicals	USD 6.1 billion	2.5%
10. Cereals	USD 5.7 billion	2.3%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp.

Thailand is particularly strong in the fields of automotive and electronics. Globally in 2018, it was the fifth largest producer of rubber tires, 11th largest automotive maker, and the eighth largest producer of computer devices.

Thailand also has one of the most advanced food processing industries in Southeast Asia. In 2017, Thailand was ranked first for cassava products (67% of world exports); first for canned tuna (44% of world exports); first for canned pineapple (41% of world exports); second for rice (23% of world exports) and for sugar (16% of world exports). The Thai seafood sector is the third largest in the world, after Mainland China and Norway.

II. The Key Supported Industries in Thailand

Within the Eastern Economic Corridor (EEC) Development Plan, Thailand identified 10 industries to prioritise. These industries are divided into two groups: First S-Curve Industries and New S-Curve Industries. For further details, please refer to section 8 of this report.

This section is primarily focused on the supply situation of the Automotive, Electronics, and the Food and Agriculture industries from the First S-Curve Industries.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations

Automotive

Thailand has a strong and extensive automotive supply chain. Some of the world's major automotive makers (such as Toyota and Nissan) and auto parts manufacturer (more than 710 auto part makers and 1,700 supporting companies) are present in the country. Thailand was ranked the 11th largest automotive producer globally in 2018 and is expected to reach an estimated production of 3.5 million motor vehicles in 2020.

These major players do not limit their presence to manufacturing and assembly lines, but are also involved in technical and research and development facilities. Technical advancement is an important element of the automotive industry. The EEC has set the development of electric vehicles and of the related value chain as a priority. The plan will focus on enhancing new industry players working on driving systems, surface integration design, prototyping and acting as an original equipment manufacturers (OEM) for batteries.

Electronics

Thailand is a leading electronics and electrical production base in Southeast Asia. Numerous multinational companies (MNCs) operate production sites for hard disk drives (HDD), integrated circuits, and automotive electronics assembly in the country.

Over the years, Thailand has become one of the leading producers of integrated circuits. With around 800 factories in operation, Bangkok hosts the majority of the country's electronics production sites. Many of the components (e.g. semiconductor devices, transistors, and diodes) are imported.

The EEC seeks to further develop the electronics value chain in Thailand by encouraging the production of more valued added products.

Food and Agriculture

Thailand is rich in natural resources, allowing it to source 80% of the food industry raw materials locally. There are about 10,000 food processing companies in Thailand.

Global trends show an increasing demand for heathier food, higher safety standards and product traceability. Thailand is expected to meet such demands considering to its well established production techniques able to deliver international standards quality.

The EEC is also pushing for the adoption of advanced agricultural technologies to foster future production.

III. Key Raw Materials Sourcing Platforms/Channels

The Department of International Trade Promotion (DITP) and the Ministry of Commerce (MOC) have established an official Thailand B2B E-Marketplace, Thaitrade.com, in 2011. The site is managed by the DITP with the aim of connecting businesses with the largest range of verified/authentic Thai products.

IV. Procurement Situation (local and overseas) of Raw Materials

A. Hurdles or Problems Encountered

All shipments arriving in and departing from Thailand are governed by rules and special regulations. Regardless of the operations, an Import or Export License, also called a Customs Card, must be obtained. For cases where the Import and Export Licenses are deemed insufficient, import permits may be required as well.

The Ministry of Commence has classified 26 categories of goods that require an import license (this list is frequently updated by the ministry). In addition certain products, including pharmaceuticals, processed foods, and medical devices, among others, are subject to controls from other laws and regulations for importation. For further information, please refer to the Thai Customs website (www.customs.go.th).

According to a 2019 report by the World Bank, Thailand ranked 27th out of 190 countries in Ease of Doing Business. It was ranked third among the ASEAN countries (Hong Kong ranked fourth worldwide in the same report).

B. Efficiency of Customs and Clearance Process

Thailand adopts the nomenclature of the Harmonised System (HS) for the designation and codification of goods and duties that are collected on both imports and certain exports. All imports are also subject to value added tax (VAT), and some are subject to excise tax (including electrical appliances, alcohol and gasoline).

All goods imported into Thailand must be reported to the Customs Department. With the implementation of the online e-Customs system, the import and export procedures have been streamlined. They are now paperless and easily accessible for all stakeholders involved in cross-border trade.

The custom and clearance process is divided into the five major steps outlined below.

Step 1:	Step 2:	Step 3:	Step 4:	Step 5:
The importer (either individual or business entity) must already possess a "digital certificate" before registering for the e-Customs system. The importer may choose to either register with the system directly or through an agent (which handles the registration process).	Two checks for this stage: first, identify if the goods require import permits, second, assert if goods are considered as "Red Line" or "Green Line". There are no definitive list of red-line goods, but red-line goods are items that require extra certification and verification upon arrival.	An Import Declaration can be submitted to the e-Customs system along with an arrival report with the information of the carrying vessel. The e-Customs system will then check and verify the submission, identifying any discrepancies and specifying whether the shipment is green line or red line.	Depending on whether the items are subject to import duties, payment for dutiable items can be made at the Customs Department of the port of entry or via the e-Payment section of the e-Customs system. The list of the dutiable items can be found on the Integrated Tariff Database.	Inspection will be carried out by the customs officials before the cargo is released. For "Green Line" goods, the inspection can be online screening, for "Red Line" goods, a physical examination of the cargo and supporting document is required.

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[4]

Thailand has a good transport infrastructure network in place for logistics support.

Airports

Thailand has 38 airports in total, eight of which are international airports: Suvarnabhumi Airport (BKK), Don Mueang International Airport (DMK), Chiang Mai International Airport (CNX), Phuket International Airport (HKT), Hat Yai International Airport (HDY), Chiang Rai International Airport (CEI), Samui International Airport (USM) and the military airport of U-Tapao (UTP).

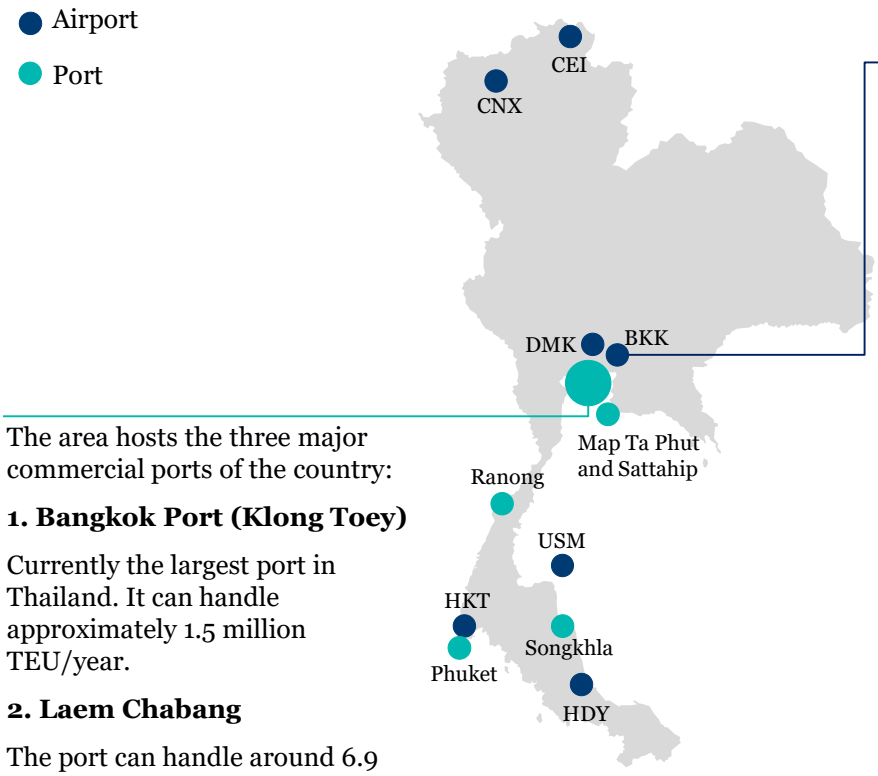
Thai Airways International Public Co., Ltd. is Thailand's national carrier. It flies to 66 cities in 36 countries throughout the world.

Seaports

Thailand has a coastline of 3,219 km with over 4,000 km of waterways.

Currently there are eight international deep-sea ports in operation, with four private ports permitted to handle container cargos. These ports include Bangkok, Laem Chabang, Sriracha, Map Ta Phut, Ranong, Phuket, Songkhla, and Sattahip.

Location of Major Airports and Seaports in Thailand



The area hosts the three major commercial ports of the country:

1. Bangkok Port (Klong Toey)

Currently the largest port in Thailand. It can handle approximately 1.5 million TEU/year.

2. Laem Chabang

The port can handle around 6.9 million TEU/year.

3. **Sriracha Harbour Deep Seaport**

Suvarnabhumi Airport

The Thai government has a policy to promote Suvarnabhumi Airport as a centre of Aviation, Passenger and Cargo Transportation.

Suvarnabhumi Airport, located in Bangkok and unofficially known as Bangkok Airport, has drafted a development plan to support the expected passenger number increase from 45 to 60 million passengers per year.

In addition, it hosts a Duty-Free Zone (Cargo Warehouse) designed to facilitate the handling of inbound, outbound cargo and transit cargo with minimum customs procedures.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Highways

Thailand has the most extensive road transportation network in Southeast Asia with more than 390,000 km, of which 98.5% is concrete or asphalt paved.

The Department of Highways has developed a 20-year Intercity Motorway Development Master Plan for 2017-2036 to connect 21 routes with a total length of about 7,000 km. The plan aims to connect Thailand's major cities, as well as to improve its connections with neighbouring countries.

Railways

The State Railway of Thailand (SRT) is responsible for building, operating and maintaining Thailand's railway tracks. Currently, the government plans to upgrade the railway network with high-speed trains (maximum speed of 250km/hour) to reduce travel time in satellite cities. The project covers 1,000 km comprising of four main lines: Bangkok - Chiang Mai; Bangkok - Nong Khai; Bangkok - Rayong; Bangkok - Padang Besar.

B. Key Logistics Hubs[5]

The Thai government devoted considerable efforts to transform Thailand into a key logistics hub. It enhanced the transport infrastructure network, introduced the e-Customs system to simplify customs procedures and offered tax incentives to attract investors. As a result, Thailand has become one of the key ASEAN transport and logistics hubs. The country currently plays an important role to meet the increased demand for cross-border logistics services and the increasingly sophisticated regional supply chain.

Thailand has become a popular option for foreign logistic companies, as many manufacturers prefer outsourcing transportation to third-party logistics companies (3PLs). These 3PLs can provide a wide range of freight forwarding and supply chain services. Several multinational logistics companies are also accustomed to subcontracting transportation and logistics activities to local 3PLs instead of setting up their own hubs.

C. Logistics Information Tractability and Transparency[6]

Thailand has a relatively strong logistics performance compared to other ASEAN countries. In the World Bank's 2018 Logistics Performance Index (LPI), Thailand ranked 32nd out of 160 countries for the overall LPI which is an improvement from the 2016's result (ranked 45th out of 160 countries). In addition, it was ranked second amongst ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Specifically for tracking and tracing, Thailand ranked 33rd out of 160 countries, an improvement from the 2016's result (ranked 50th out of 160 countries). Amongst the ASEAN countries, it ranked second in this category.

Source:

[1] *Trade Map, International Trade Centre*

[2] *Rubber Tires Exports by Country, World's Top Exports*

[3] *National Food Institute*

[4] *Seaports, Airports, Highways, Railways, Thailand Board of Investment*

[5] *Thailand Domestic Freight Transportation 2015, Ministry of Transport (MOT)*

[6] *Logistics Performance Index (LPI), The World Bank, 2018*

7. Infrastructure

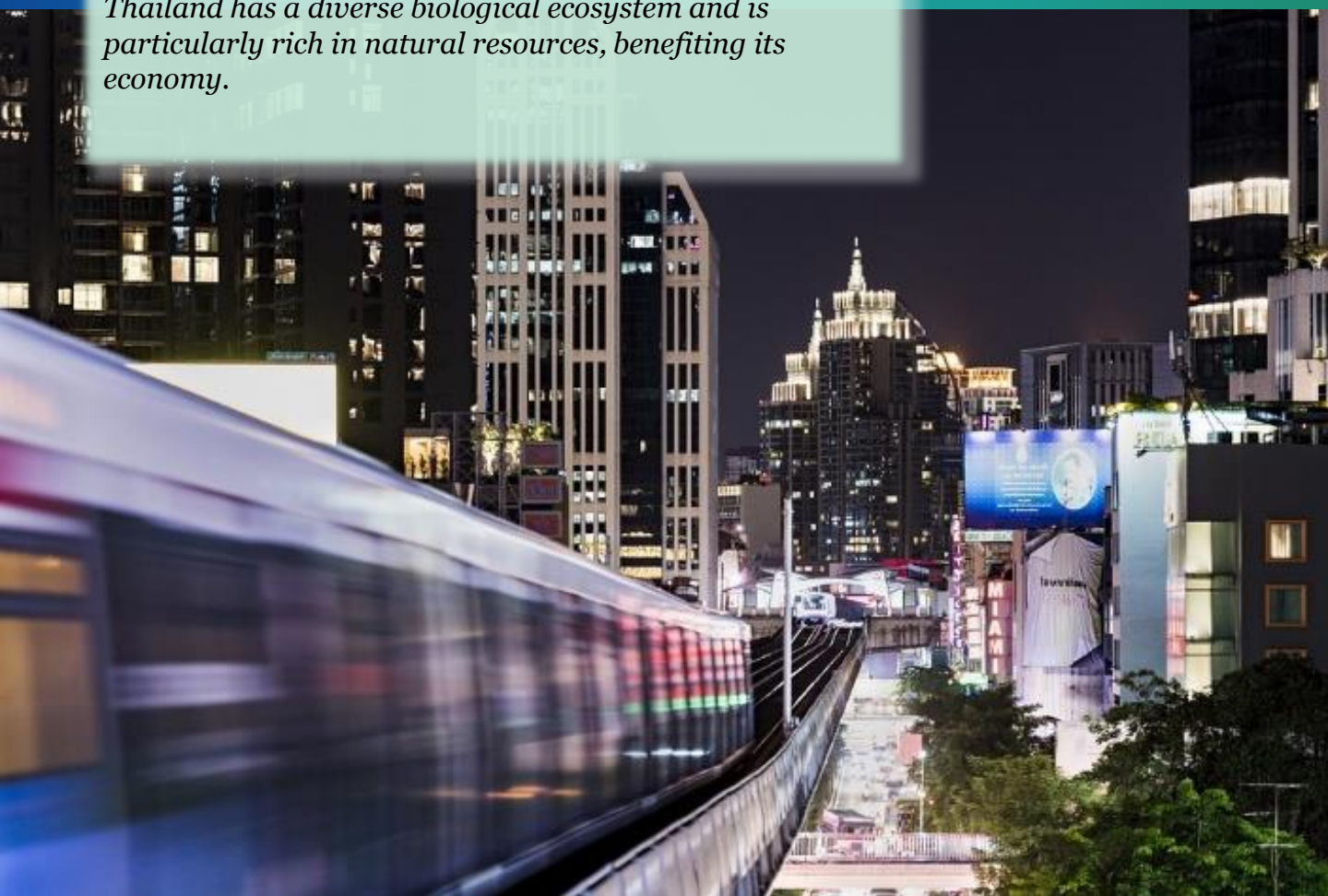
Executive Summary

Thailand aims to improve its infrastructure and transform the country into a strong ASEAN logistics hub.

There are currently around 74 industrial estates in the country and various incentives have been put in place to attract foreign investments. Most of these industrial estates are concentrated around Bangkok and the eastern seaboard of Thailand benefiting from the Eastern Economic Corridor (EEC) Development Plan.

The Thai government encourages both foreign investments and public-private partnerships in infrastructure projects. Over 50 large scale projects across transportation, urbanisation, education, healthcare and water are currently in the pipeline.

Thailand has a diverse biological ecosystem and is particularly rich in natural resources, benefiting its economy.



7. Infrastructure

I. List of Major Industrial Estates and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Estates[1]

For foreign investors looking to establish manufacturing facilities in Thailand, industrial estates can be an attractive option. In these estates, investors can benefit from numerous tax and non-tax incentives, and straightforward processes for starting a business (e.g licence applications for a factory construction).

In Thailand, industrial estates are managed by the Industrial Estate Authority of Thailand (IEAT) or private operators. There are 77 official industrial estates according to the IEAT spanned across 20 provinces. Of these, there are 74 industrial parks, two movie towns, and one science park (i.e. the Thailand Science Park). Some estates are solely owned by IEAT and some are owned and operated under a joint partnership between IEAT and the private sector.

Support and Incentives[2, 3, 4, 5]

When considering an establishment in Thailand's industrial estates, it is important to assess the availability of utilities, the transportation network around the estate, and the incentives provided by the government.

Utilities

Industrial estates are equipped with utilities including water, electricity, water flood defences, and centralised sewage services etc.

Transportation

Most of the industrial estates are located near Bangkok, and therefore benefit from a privileged access to established transportation links and hubs such as roads, railways, ports, and airports.

Government Incentives

Industrial estates benefit from the support of the government. This support is generally received in the form of incentives such as tax reliefs or other measures. The Board of Investment (BOI) has divided Thailand into three zones, with different levels of incentives assigned to each. Zone 1 (hosting 12 industrial estates) covers the capital area and its immediate surroundings, Zone 2 (hosting 44 estates) covers a ring of provinces further out, and Zone 3 (hosting 18 estates) covers all the remaining 58 provinces. Investors located in Zones 2 and 3 are granted extra incentives.

Investors also receive different tax and non-tax incentives depending on which type of area (within an industrial estate) they establish their business in: General Industrial Zones (GIZs) or IEAT Free Zone. GIZs are more common than IEAT Free Zones, which are reserved primarily for industries that manufacture products for export. Businesses in IEAT Free Zones generally receive more incentives than those in GIZs. Examples of tax and non-tax incentives granted to investors in these zones are detailed in section 9 of this report.

For further details regarding specific industrial estates please refer to "Cost of Doing Business in Thailand 2019" published by the Thailand Embassy (www.boi.go.th/upload/content/Cost%20of%20Doing%20Business%202019_Online_5c6a5d3a3c43b.pdf) .

Industrial Estates' Location and Regional Implications[6]

Number of Industrial Estates

Zone 1

Zone 2

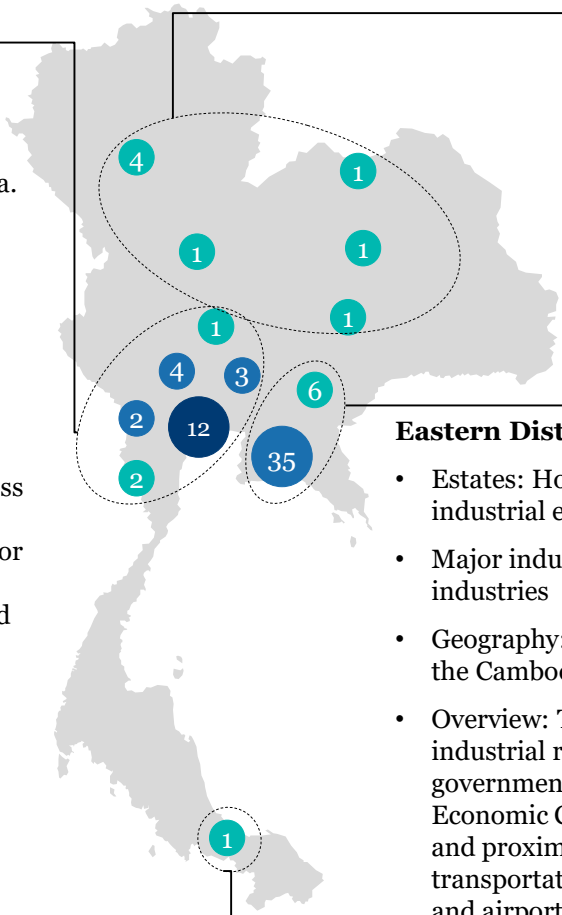
Zone 3

Northern, Northeastern and Northwestern District

- Estates: There are eight industrial estates in the area.
- Major industries: Agriculture, food processing, electronic manufacturers.
- Geography: Extends along the country's border with Myanmar and Laos.
- Overview: The region suffers from a lack of communications infrastructure, however a planned construction of highways connecting it to Vietnam and Mainland China may increase its attractiveness in the future.

Bangkok, Central and Western District

- Estates: There are 24 industrial estates in the area.
- Major industries: Electrical appliances and electronics, automobile parts, food processing
- Geography: Includes Bangkok and extends along the Chao Phraya River.
- Overview: Has a direct access to the eastern seaboard, which is Thailand's centre for export-oriented industries. Benefits from an established transportation network around Bangkok and from government initiatives to promote local and foreign investments.



Eastern District

- Estates: Hosts the greatest number of industrial estates (41).
- Major industries: Export-focused industries
- Geography: Extends from Bangkok to the Cambodian border.
- Overview: The area is Thailand's key industrial region. It benefits from government initiatives (e.g. the Eastern Economic Corridor Development Plan) and proximity with international transportation hubs (e.g. deep-seaport and airports). The area covered over 70% of all industrial estate land sales and rentals between 2013 and 2017. With the EEC programme, this region is expected to stay the most attractive industrial region both for local and foreign investors.

Southern District

- Estates: There is only one industrial estate in the area.
- Major industry: Rubber cultivation and processing.
- Geography: Located near the Malay border.
- Overview: Connections between Malaysia and Thailand are currently under development but security issues in the region are threatening the projects.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Foreign Direct Investment (FDI)[7]

According to the Thailand Board of Investment, the country received a total of THB 283 billion investments in 2018, of which 44% were FDI. In industrial estates, FDI mainly came from Japan.

Cost of Usage

Businesses and investors are typically charged with three main types of fees: 1) land renting price and land tax, 2) maintenance fee, and 3) water and other utilities fees.

The land price in industrial estates vary from one site to another depending on factors such as location, provision of utilities, transportation links, proximity and access to raw materials etc. Bangkok and the nearby provinces (e.g. Samut Prakarn and Pathumthani) benefit from a central location, well-developed water and air transportation networks, and from the proximity to key logistic hubs. Therefore, land prices in these regions are the highest in the country. Industrial estates located in the provinces targeted by the Eastern Economic Development Plan (e.g. Chachoengsao, Chonburi and Rayong) are also expensive locations.

Land and Building Tax Act

Under the Land and Building Tax Act which is effective since March 2019, new land tax rates apply. The Act stipulates that lands and buildings for agricultural, residential, commercial and industrial uses will be subject to different tax rates pursuant to their type, use and appraised value. The applicable tax rates concerning industrial use of land for the 2020 to 2021 tax years are shown in the table below.

Appraisal Value (THB million)	Applicable Tax Rates (of the Appraised Value)	Maximum Rates
≤ 50	0.3%	1.2%
> 50 - 200	0.4%	1.2%

If a company fails to pay the property tax, it may be subject to a penalty of 10% to 40% of the unpaid tax amount plus a monthly fine of 0.50% to 1% of the unpaid tax amount (until the unpaid tax is paid in full).

Outlook[8]

Declining exports, along with tightening environmental and health requirements caused the industrial estate market to drop between 2013 and 2017. The market has been looking more promising from 2018 onwards with growth in both supply (e.g. new industrial estate construction) and demand. Efforts to boost investment, especially through tax incentives and easing regulations are attracting an increasing number of foreign investors. Government spending on infrastructure development projects to integrate national transportation networks is expected to be another major growth driver. However, as these initiatives are mostly part of the EEC, only industrial estates located in eastern Thailand will greatly benefit from them.

B. Land or Building for the Major Industrial Estates

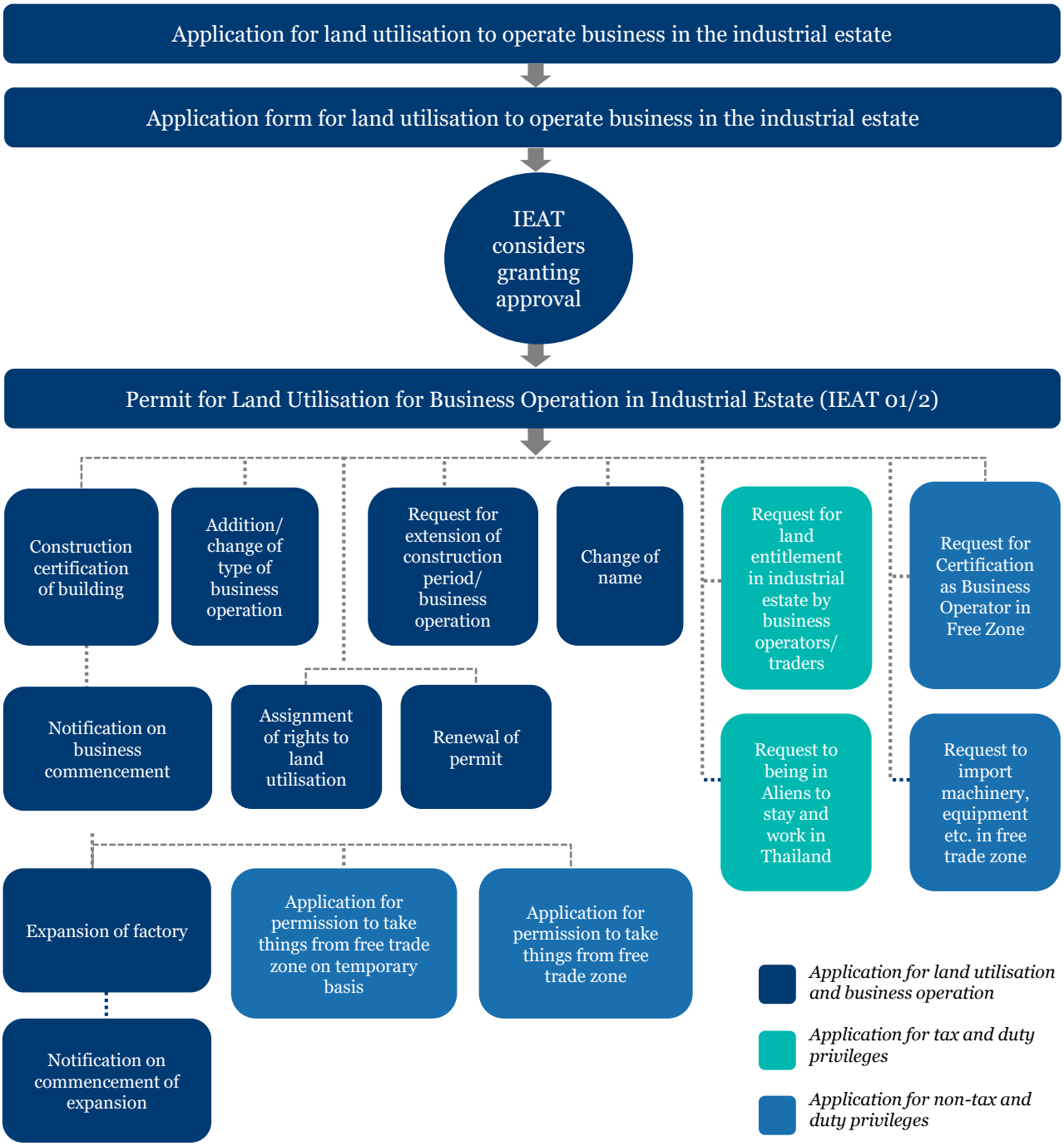
Availability for Foreign Ownership and Terms[9]

Generally, foreign ownership of land in the country is prohibited under the Thai Land Code. However, under Section 44 of the Industrial Estate Authority of Thailand Act of B.E. 2522 (1979), foreign investors and businesses are allowed to own land in industrial estates if they are granted a license by the IEAT. The application to obtain such a license is called Form IEAT 01/1. For general land selling and rental practices, please refer to Appendix 2.

Application Procedures for Business Operation and Privileges in Industrial Estates[10]

As land in industrial estates are already zoned for industrial use, businesses are not required to apply for land re-zoning. If construction plans are compliant with the required standards, application for a factory construction license should be a relatively straightforward process.

Detailed Application Procedures



II. Potential Infrastructure Shortfall[11,12,13,14]

Infrastructure is the backbone of Thailand's economy and is critical to unlocking the country's growth. In the 1980s and 90s, Thailand's infrastructure development was substantially lagging behind its economy. Over the years, the government has been focusing on boosting the country's manufacturing capabilities and improving connectivity between different economic and industrial bases. A series of long term infrastructure plans have been introduced and Public Private Partnerships (PPP), especially in areas such as water, power and telecommunications, have been encouraged.

Nonetheless substantial room for improvement remains as progresses are often disrupted by sociopolitical unrest, natural disasters and the country's resource limitations. In 2011, a severe flood caused major disruption to the country's agricultural and industrial sectors, inundating major industrial estates and causing a global shortage of hard disk drives amongst numerous other key components supporting global manufacturing supply chains. The infrastructure sector also suffered from the 2014 military coup.

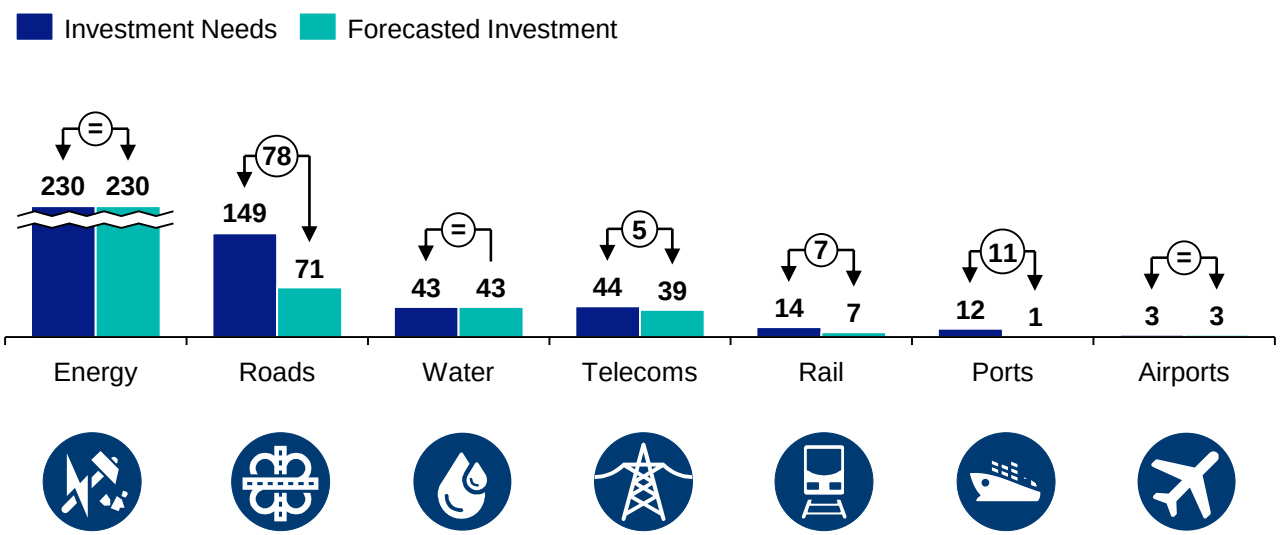
In the World Economic Forum's 2018 Competitiveness Report, the country ranked 60th out of 140 countries for the quality of infrastructure, well below Southeast Asian countries such as Singapore (1st) or Malaysia (32nd). The country ranked especially low on criteria such as: efficiency of seaport services (68th), efficiency of train services (91st) and exposure to unsafe drinking water (105th). These rankings are a direct result of limited investments in infrastructure projects from any of the Thai administrations in the past two decades.

III. Latest and Upcoming Major Local Infrastructure Projects and Spending

The Thai government has been investing heavily in the country's infrastructure to facilitate the Thailand 4.0 strategy. Over the next five to 10 years, infrastructure upgrades and development such as airport expansion, new railways and ports and broadband facilities are expected to be completed continually across the country.

According to Global Infrastructure Outlook delivered by G20 in 2017, from 2016 to 2040, around USD 394 billion will be needed to finance all infrastructure projects planned by the government (see chart below for breakdown by sector). Over the period it is forecasted that Thailand's public and private sector will invest USD 494 billion, therefore covering almost 80% of the country's needs.

Thailand's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



The following highlights the major infrastructure developments in Thailand. Please refer to Appendix 3 for a comprehensive list of projects.

Transportation[15]

The Thai government is aiming to reduce the cost of logistics and transportation to improve the competitiveness of the economy. In 2018, the government announced an infrastructure action plan worth USD 25.2 billion covering 36 projects including railways, roads, airports, and ports across the country. These include a USD 7.2 billion high-speed rail project that will link two of Bangkok's main airports with an airport in the eastern province of Rayong, and also a Thailand-China cross-border route that forms a major part of Mainland China's Belt & Road Initiative. The first phase is expected to be operational in 2021.

Utilities

Water[16]

Recognising the importance of water to both the agricultural and industrial sectors of Thailand's economy, the government set out a multi-year strategy to improve the country's water resource management. The Thai Ministry of Science & Technology, for example, has mandated Thailand's Hydro and Agro Informatics Institute to create a roadmap to realise integrated water resource management capacity to support Thailand's water resilience and water security efforts.

Power[17, 18, 19, 20]

As part of the Thailand 4.0 strategy, the Thai government aims to develop the renewable energy sector. Natural resources are also expected to be an important contributor to Thailand's power grid in the future, with the target of a 53% contribution to Thailand's power in 2037 under the 2019 Power Development Plan. The rise in importance of natural gas is due to the recent abandoning of coal projects in southern Thailand as a result of political scrutiny.

Telecommunications[21]

Thailand is aiming to transform itself into a digital economy through the government's third ICT Master Plan, the National Digital Economy Policy and Plan (2016-2020), and the ICT Policy Framework 2020. Infrastructure projects under these policies and plans include:

- A USD 571 million project for the construction of a national broadband infrastructure to provide affordable Internet to 70,000 villages (93% of total villages) nationwide; and
- The Asia Pacific Gateway (APG) project which seeks to extend the country's submarine cable lines connecting Thailand to Hong Kong and India, expanding the bandwidth and speed of data transmission. The aim is to attract more Internet traffic from the Greater Mekong sub-region, currently serving 270 million people. At the moment, Thailand only has seven submarine cable lines, owned and operated by the state enterprise CAT Telecom, as opposed to Singapore's 20 submarine cable lines and Malaysia's 12.

Eastern Economic Corridor Development Plan (EEC)

The Eastern Economic Corridor Development Plan (EEC) is a major government initiative in Thailand, aiming to accelerate infrastructure development and promote local and foreign investments in the three eastern provinces of Chachoengsao, Chonburi, and Rayong. The government expects to allocate USD 43 billion to the EEC over the next five years.

As of October 2017, there are 15 projects in the EEC pipeline. The government hopes to secure much of the funding for the EEC through PPPs and FDI. Offering attractive incentives for both foreign investments and foreign presences in the EEC will be essential in realising the EEC's development. The Eastern Economic Corridor Bill will amend or suspend more than 100 Thai laws and regulations within the EEC which restrict foreign investment and generally curb the ease of doing business.

For further details, please refer to section 9 of this report.

The Public Private Partnerships (PPP) Strategic Plan

Facing budget constraints while seeing the pressing importance of infrastructural enhancement, the Thai government is increasingly turning to the private sector. The Thai government published a new PPP Strategic Plan (2017-2021) in 2017, which outlines 23 sectors where public private partnerships in infrastructure projects are allowed, including transportation, telecommunications, utilities, education, and public services, among others. The plan covers 55 projects with a total investment of THB 1.62 trillion (around USD 51 billion). The new plan emphasises infrastructural development as a national priority and opens up new business opportunities for both Thai and foreign investors.

The PPP Fast Track process is an effort by the Thai government to shorten the time required for the approval and development of PPP infrastructure projects. In 2017, 11 projects worth a combined value of over THB 900 billion were included in the PPP Fast Track Project pipeline, including new Monorail and MRT lines, the Nakhon Pathom – Cha-Am, Bang Yai – Kanchanaburi, and Bang Pa-in – Nakhon Ratchasima Intercity Motorways, the Phuket Mass Transit System, and the Bangkok – Rayong High Speed Rail.

Private Sector Financing via Thailand Future Fund (TFF)

An alternative to PPP projects is fundraising via listed funds. The most recent example of engaging private sector financing in Thailand is the government's attempt to raise funds via the TFF. Traded on the Stock Exchange of Thailand, the TFF is a THB 44.7 billion infrastructure mutual fund that aims to raise capital from institutional and private retail investors for the country's infrastructure development. The fund invests in value-enhancing state agencies' infrastructure assets and projects to create long-term distribution growth potential, including expressways, railways, electricity generation and distribution, airports, and deep seaports. An initial public offering (IPO) was made from 12 to 19 October, with major local institutional investors showing great interest in TFF.

IV. Availability of Natural Resources[22, 23]

Natural Resource	Details
Natural Vegetation, Forests and Timber	• Around 30% of Thailand is forested with hardwood (around 16 million hectares). Forest plantations in Thailand can be classified into three main types: teak, rubber, and other special species. • Thailand was once a major hardwood exporter, specialising in teak. In 1989, the government designated 25% of the land area for protected forests, 15% of the land for timber production, and declared logging illegal. • Thailand is now a net importer of timber.
Agriculture	• The agricultural sector in Thailand accounts for roughly 10% of the GDP and involves around 50% of the total labour force. It is highly competitive, diversified, and specialised with successful international exports. • Thailand is the sixth largest agricultural producer in the world. • Common agricultural products and important agricultural exports include: rice, cassava, tobacco, corn, fruit, cocoa, sugar, cashew nuts, soybeans and coffee.
Fishing/ Aquaculture	• Thailand is the world's third largest seafood exporter and its fishing industry was estimated to be around USD 7 billion in 2016. • The main river system in Thailand, the Mekong system, is second only to the Amazon River in its biodiversity. Thailand also has access to ocean fisheries in the Andaman Sea, Gulf of Thailand and South China Sea. • Common types of seafood include: prawns, red tail catfish, arapaima, shellfish, giant snakehead, Siamese carp and barramundi.
Livestock	• Livestock farming, insect ranching and dairy farming are becoming significantly more important to the Thai economy. • Dairy farms in Thailand produce approximately 2,800 tonnes of milk per day.
Water Resources	• The volume of renewable internal freshwater resources per capita has reduced from about 7,700 m^3 per capita in 1962 to about 3,300 m^3 in 2014. This is largely a result of population growth and is a cause of increased water scarcity contributing to prolonged dry seasons in Thailand.
Minerals	• Thailand is one of the world's major producers of cement, feldspar, gypsum, and tin. The country's mineral resources are produced for both export and domestic use. Thailand's mines also include gold, iron ore, lead, manganese silver, tungsten and zinc. • Thailand is the world's second largest exporter of gypsum, ranking just after Canada.
Coal, Oil and Fossil Fuels	• Thailand is an oil and natural gas producer, however, the country increasingly relies on imports to sustain its rising fuel demand. • Domestic crude oil reserves are declining in Thailand, and the country imports a significant portion of its total oil consumption. It produces roughly one-third of the oil it consumes and is the second largest importer of oil in Southeast Asia.
Renewable Energy	• Thailand has set targets and policies for the development of its energy sector for 2035, with priority being given to indigenous renewable energy resources, including hydropower, wind power and solar power. • Hydropower is the biggest source of renewable energy in Thailand, and solar power is the second biggest source of renewable energy in the country. • Thailand is a major market for western wind power Original Equipment Manufacturers (OEMs) (e.g. Siemens Gamesa, Vestas and GE) in Asia.

Source:

[1] *Industrial Estates Parks & Zones, CBRE Thailand*

[2] *Cost of Doing Business in Thailand 2019, Thailand Board of Investment*

[3] *Where to Build a Factory in Thailand?, Siam Legal International*

[4] *The Report: Thailand 2011, Oxford Business Group*

[5] *Thailand IEAT Free Zone, Thai Lawyers Ltd.*

[6] *Thailand Industry Outlook 2018-20: Industrial Estate, Bank of Ayudhya*

[7] *Industrial Estate Authority of Thailand*

[8] *Thailand New Property Tax, LawPlus Ltd.*

[9] *Foreign Ownership of Industrial Land in Thailand, Siam Legal*

[10] *Business Operator's Handbook for Applying for Business Operation and Privileges in the Industrial Estate, Industrial Estate Authority of Thailand*

[11] *Thailand's Transport Infrastructure Development, Siam Shipping*

[12] *Minding the Infrastructural Gap, Reuters*

[13] *Thailand bets on infrastructure, Asiamoney, Sep 2018*

[14] *The high-speed rail projects giving Thailand's whole economy a boost, Railway Technology*

[15] *Thailand's Infrastructure Plans and Canadian Capabilities, CanCham Thailand*

[16] *Building a digital water management system for Thailand, Prevention Web*

[17] *Thailand's Renewable Energy Transitions: A Pathway to Realise Thailand 4.0*

[18] *Thai energy companies roll out expansions across Southeast Asia, Reuters*

[19] *Fitch: Coal opposition, declining gas reserves to boost Thai renewable energy growth, Institute for Energy Economics and Financial Analysis*

[20] *Thailand's PPT plans up to $11 bn investment in LNG and infrastructure, Reuters*

[21] *Thailand - Telecommunications, export.gov, Aug 2019*

[22] *Biodiversity in Thailand, The Royal Institute of Thailand*

[23] *What Are The Major Natural Resources Of Thailand?, World Atlas*

8. Types of Industries Encouraged by the Local Government

Executive Summary

Any foreign businesses wishing to invest or do business in Thailand must abide by the Foreign Business Act (FBA), enacted in 1999. It restricts foreign companies from participating in certain industries in Thailand.

However, there are many programmes and initiatives encouraging foreign investments that allow exemptions to the FBA. Examples of such programmes and initiatives include Board of Investment (BOI) projects, the Eastern Economic Corridor (EEC) Development Plan, each aiming to promote various industries in Thailand.

8. Types of Industries Encouraged by the Local Government

I. List of Government Programmes Encouraging Specific Industries

In Thailand, there are two main government programmes encouraging investment in specific industries: the Board of Investment (BOI) projects, and the Eastern Economic Corridor (EEC) Development Plan.

Investment Promotion Act and Board of Investment (BOI) Projects[1]

The Investment Promotion Act enacted in 1977 allows the BOI of Thailand to grant tax and other incentives to foreign and local investors engaging in BOI approved projects. Most foreign investments in Thailand are managed by the BOI. The eight industries generally eligible for BOI project approval include:


Agriculture and Agricultural Products


Mining, Ceramics and Basic Metals


Light Industry


Metals Products, Machinery and Transport Equipment


Electronics Industry and Electric Appliances


Chemicals, Paper and Plastics


Services and Public Utilities


Technology and Innovation Development

Eastern Economic Corridor (EEC) Development Plan[2]

The EEC Development Plan is the main government initiative under the Thailand 4.0 scheme, which focuses on the three provinces of Chacoengsao, Chonburi, and Rayong along the eastern seaboard. The EEC aims to enhance the region's physical and social infrastructure through promoting applications of advanced technologies and innovations in various industries. The EEC specifically targets 10 key industries divided into two groups:

- First S-Curve Industries comprise five existing industries in Thailand that the EEC aims to boost the competitiveness of:


Next-Generation Automotive


Intelligent Electronics


High Wealth and Medical Tourism


Agriculture and Biotechnology


Food Processing

- New S-Curve Industries comprise five advanced industries that the EEC targets to be a new driving force for the Thai economy:


Automation and Robotics


Aviation and Logistics


Biofuel and Biochemicals


Digital


Comprehensive Healthcare

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from

Foreign Business Act (FBA)[3]

The FBA enacted in 1999 governs all foreign businesses operating in Thailand.

A foreign business is defined as any company[3] that:

1) is established under foreign law; or
2) has 50% or more of its capital owned by foreigners; or
3) has 50% or more of the total capital value being invested by foreigners.

Under this Act, there are three categories of industries in Thailand that foreign businesses are restricted from engaging in.

Lists of Prohibited or Restricted Industries under the FBA (Part 1/2)

Category	Status	List of Prohibited or Restricted Industries
List One	• Completely prohibited	• Newspapers, radio, and television broadcasting; • Farming, animal husbandry, natural forestry, and fishery; • Extraction of Thai medicinal herbs; • Trading of antique objects or objects of historical value of Thailand; • Making or casting Buddha images and alms bowls; and • Land trading
List Two (to be cont'd)	• Restricted with conditions • Requires a license from the Minister in the Government Gazette • Requires at least 40% Thai shareholders and board members	Chapter One: Related to national safety or security • Production, distribution, maintenance of arms, ammunition, and other military equipment; and • Domestic land, water, or air transportation. Chapter Two: Related to arts, culture and customs • Trading of antiques, artistic objects, musical instruments, or handicrafts of Thailand; • Production of Thai silk and related businesses; and • Production of goldware, silverware, and other precious metalworks.

Lists of Prohibited or Restricted Industries under the FBA (Part 2/2)

Category	Status	List of prohibited or restricted industries
List Two (cont'd)	• Requires a license from the Minister in the Government Gazette • Requires at least 40% Thai shareholders and board members	<u>Chapter Three: Related to natural resources or the environment</u> • Production of sugar from sugar cane; • Salt farming and production of rock salt; • Mining, including stone quarrying; and • Timber processing for production of furniture and utensils.
List Three	• Restricted with conditions • Requires a license issued by Director General of the Department of Business Development • May be 100% foreign owned	• Rice milling and production of flour from rice and plants; • Breeding of aquatic creatures; • Forestry from a grown forest; • Production of plywood, veneer wood, chipboards or hardboards; • Production of lime; • Accounting services; • Legal services; • Architectural services; • Engineering services; • Construction, with certain exceptions; • Brokerage or agency, with certain exceptions; • Auctioneering, with certain exceptions; • Internal trade related to traditional agricultural products or produce not prohibited by other laws; • Retail (if total minimum capital is lower than THB 100 million or if minimum capital of each store is lower than THB 20 million); • Wholesale (if minimum capital of each store is lower than THB 100 million); • Advertising; • Hotel operations (except hotel management), and tourism; • Food and beverages sales; and • Other service businesses, except as prescribed in the Ministerial Regulation.

Applying for Exemptions and Licenses for Industries Restricted to Foreign Businesses

While the list of restricted industries for foreign businesses in the FBA is extensive, the Thai government has provided methods for foreign businesses to apply for exemptions. For certain industries, the government has also introduced initiatives to provide incentives to attract foreign investors.

Foreign Business License (FBL)

Foreign businesses that wish to engage in businesses indicated in List Two and List Three of the FBA need to obtain an FBL. The application will need to be filed with the appropriate authorities (Minister of the Government Gazette for List Two industries, Director General of the Department of Business Development for List Three[3] industries). An application has a higher chance of approval if the BOI decides the project will positively impact the Thai economy and promote Thai interests. However, as the application for an FBL is complex and time-consuming, foreign investors generally prefer to apply for BOI project approval. For more information regarding the FBL, please refer to Section 2 of this report.

Government Programmes and Incentives

Companies may gain approval for government programmes and initiatives such as the EEC, BOI-promoted projects, the Southern Economic Corridor (SEC), Special Economic Zones, and industrial estates etc. Most of these programmes and initiatives are promoted by the BOI to encourage foreign investment into Thailand. Approved projects will be able to participate in the restricted or prohibited industries, and may also be eligible for certain tax and non-tax incentives. For more information on the criteria and incentives of individual government programmes, please refer to Section 9 of this report.

The Petroleum Act

Companies engaged in oil and gas exploration and production (E&P) in Thailand are governed and regulated by the Department of Mineral Fuels (DMF), under the Ministry of Energy.

An E&P entity must be awarded a petroleum concession by the DMF. E&P companies are not regulated under the FBA and therefore can be wholly owned by a foreign individual or company without obtaining an FBL from the Ministry of Commerce.

Source:

[1] *Eligible Activities for Promotion by Business Categories, Thailand Board of Investment*

[2] *Targeted Industries, Eastern Economic Corridor (EEC) Office*

[3] *Foreign Business Act B.E. 2542 (1999)*

9. Key Government Incentives

Executive Summary

The main foreign investment initiatives in Thailand include Board of Investment (BOI) promoted projects, and the Eastern Economic Corridor (EEC) Development Plan. Each initiative grants companies various types of incentives.

Thailand also has 10 Special Economic Zones and many industrial estates around the country, encouraging foreign investors to develop industrial facilities in Thailand.

The Thailand Plus incentive package is another major upcoming incentive programme. The Thai government is looking to take advantage of the ongoing US-Mainland China trade war with the Thailand Plus package, which is specifically aimed at providing incentives for companies looking to relocate to Thailand.

9. Key Government Incentives

I. Eligibility on Incentive Programmes for Foreign Investments

Investment Promotion Act and Board of Investment (BOI)

The BOI is responsible for promoting foreign investments into Thailand. As such, the approval for most projects and incentives provided are determined by the BOI. Other government programmes grant additional tax and non-tax incentives on top of the standard benefits from the BOI.

Application Criteria[1]

Projects seeking BOI approval are considered on a case-by-case basis. The BOI sets out the following basic criteria.

Category	Criteria

General Qualifications	• Value added of the project must be >20% of revenues
	  ○ Except for projects in agriculture and agricultural products, and electronic products and parts, which must have value added of >10% of revenues.
	• Modern production processes must be used.
	• New machinery must be used
	  ○ In the case of used machinery, they may not be eligible for import duty exemption, and may have other restrictions based on the age of the machinery.

Environmental Protection	• Adequate and efficient guidelines and measures to protect the environment and minimise environmental impact. • Submit environmental impact assessment reports that comply with related environmental laws and regulations. • Projects located in Rayong province must comply with the Office of the Board of Investment Announcement No. Por 1/2554 dated 2 May 2011.

Capital Investment	• Minimum capital investment for each project is THB 1 million (*Note*)
	  ○ For knowledge-based services, minimum capital investment is based on minimum annual salaries expense.
	• For new projects, debt-to-equity ratio must not exceed 3:1
	  ○ Expansion projects considered on case-by-case basis.
	• If investment value *(Note)*>THB 750 million, a feasibility study must be submitted.

Note: Investment value does not include the cost of land and working capital.

Approval Timeframe[2]

Investment value (THB) (*Note*)	Evaluating committee	Timeframe (working days)
≤ 200 million	Office of the Board of Investment	40
200 – 2,000 million	Subcommittee	60
> 2,000 million	Subcommittee, then the BOI board of directors	90

Note: Investment value does not include the cost of land and working capital

Incentives

The incentives granted by the BOI are based on group classifications by industry. Group A includes high-tech industries and activities that help to enhance Thailand's competitiveness, while Group B includes supporting industries that do not use high-technology, but are still important for the development of high-technology in the overall economy. Group A industries will generally receive both tax and non-tax incentives, while Group B industries generally receive non-tax[3] incentives.

BOI-approved projects may be eligible for the following tax and non-tax incentives:

Tax Incentives	Non-tax Incentives
• 50% reduction of corporate income tax (CIT).	• Permission to have 100% foreign ownership for certain businesses.
• Exemption of CIT on the net profit and dividends derived from the promoted activity.	• Permission to bring into Thailand skilled workers and experts to work in investment-promoted activities.
• Exemption/reduction of import duties on machinery.	
• Reduction of import duties for raw or essential materials.	• Permission to own land.
• Double deduction for the costs of transportation, electricity and water supply.	• Permission to take out or remit money abroad in foreign currency.
• Additional 25% deduction of the cost of installation or construction of facilities.	• Permission for foreign nationals to enter Thailand for the purpose of studying investment opportunities.
• Exemption of import duty on raw or essential materials imported for use in production for export.	

The BOI may also grant additional incentives to projects on a case-by-case basis.

Projects may also receive additional tax incentives if the project involves enhancement of competitiveness or industrial area development. Companies engaging in the biotech, nanotech, advanced materials, and digital industries may also be eligible for exemptions of import duties on materials imported for R&D purposes.

Eastern Economic Corridor (EEC) Development Plan

Application Criteria

The EEC Committee considers the following criteria when selecting investors[4] and businesses:

- Investors that are interested in conducting businesses in one of the ten targeted industries;
- Investors that have received approval for a project or been promoted or supported by the BOI;
- Investors that are part of a project which uses modern and advanced technology capable of enhancing the targeted industries in Thailand; and
- Investors that intend to forge a partnership with government agencies to promote the use of advanced technologies at an industrial level.

Interested investors can access the application online on the BOI website.

Incentives

To attract foreign investors and promote the EEC, the BOI has introduced the following tax and non-tax incentives on top of the standard BOI-projects[5] incentives:

- Exemption from CIT for up to 13 years;
- Exemption from import duties on machinery, and raw or essential materials used in production and/or R&D;
- Grants for investment, R&D, innovation development, and human resources development in the 10 key industries;
- Permission to own land for projects promoted by the BOI;
- 50-year land lease agreement for state land, renewable for a further 49 years upon approval;
- A reduced personal income tax rate of 17% (vs. usual rate which can go up to 35%) for certain executives, specialists, and researchers;
- A five-year work visa for investors, specialists, and scientists; and
- A one-stop service centre to assist foreign investors engaging in the EEC.

II. Scope of Special Economic Zone Schemes and Geographical Location

Special Economic Zones (SEZs)

The Thai government initiated the SEZs programme in 2015 across 10 different provinces through two phases. The SEZs are all located in the border areas near Myanmar, Laos, Cambodia, and Malaysia. This encourages cooperation with the neighbouring countries, and allows foreign and local investors greater access to labour and materials from those countries.

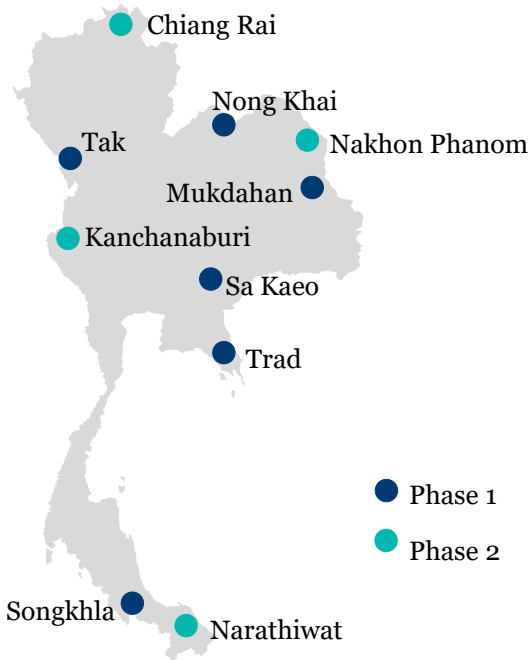
Geography and Supported Industries[6]

Phase 1 development started in 2015 in the following provinces: Tak, Nong Khai, Mukdahan, Sa Kaeo, Trad, and Songkhla.

Phase 2 development started in 2016 in the following provinces: Narathiwat, Chiang Rai, Nakhon Phanom, and Kanchanaburi.

Each SEZ supports a certain number of industries (out of 13 designated by the BOI).

Special Economic Zones in Thailand



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Industries supported in Phase 1 SEZs

	Tak	Nong Khai	Mukdahan	Sa Kaeo	Trad	Songkhla
Agriculture	✓	✓	✓	✓	✓	✓
Ceramics	✓					
Garment and Textiles	✓	✓		✓		✓
Furniture	✓			✓		✓
Jewellery and Gems	✓			✓		
Medical Equipment	✓			✓		
Automotive	✓			✓		
Electronics	✓		✓	✓		
Plastics	✓			✓		
Pharmaceuticals	✓			✓		
Logistics	✓	✓	✓	✓	✓	✓
Industrial Estate	✓	✓	✓	✓	✓	✓
Tourism	✓	✓	✓	✓	✓	✓

Industries supported in Phase 2 SEZs

	Chiang Rai	Nakhon Phanom	Kanchanaburi	Narathiwat
Agriculture	✓	✓	✓	
Ceramics		✓	✓	
Garment and Textiles	✓	✓	✓	
Furniture	✓	✓	✓	
Jewellery and Gems	✓	✓	✓	
Medical Equipment	✓	✓	✓	• Rubber • Processed Wood • Processed Agriculture • Fabric
Automotive		✓	✓	
Electronics		✓	✓	
Plastics	✓	✓	✓	
Pharmaceuticals	✓	✓	✓	
Logistics	✓	✓	✓	
Industrial Estate	✓	✓	✓	
Tourism	✓	✓	✓	

Incentives

Businesses operating in the SEZs may be 100% foreign owned without the need to apply for a Foreign Business License. This reduces the time and cost necessary for foreign companies to carry out business in Thailand. Businesses located in SEZs are eligible to certain tax and non-tax incentives including:

- Eight years CIT exemption;
- Additional 50% reduction in CIT for five years;
- Exemption of import duty on raw or essential materials used in production of goods for export;
- Exemption/reduction of import duties on machinery;
- Double deduction for the costs of transportation, electricity and water supply;
- 25% deduction on facilities' installation/construction cost;
- Permission to bring into Thailand skilled workers and experts, along with their spouses and dependents; and
- Permission to employ foreign unskilled workers in the promoted project.

III. Other Government Support Funding Schemes, Including Both Local and Foreign Investments[8,9,10,11]

Thailand Plus Incentive Package[10]

On 6 September 2019, the Thai government announced the Thailand Plus incentive package. This package aims to attract foreign businesses looking to relocate production facilities because of the ongoing US-Mainland China trade war. It specifically targets companies in Mainland China and Hong Kong, Japan, and South Korea, aiming to further strengthen Thailand's incentive programmes for foreign investments compared to its peers in Southeast Asia.

The main requirement stated by the BOI is that investment projects must have an investment value of THB 1 billion by 2021 to be eligible for the Thailand Plus incentive package. Thailand Plus has a specific emphasis on providing incentives and support for the advanced technology and automation industries, but also aims to promote the export-oriented and tourism industries in Thailand.

The main incentives in the Thailand Plus package include the following:

- An additional 50% reduction on CIT for five years;
- Deductions on training expenses related to advanced technology, to increase upskilling of the labour force in Thailand; and
- Special deductions on hiring highly skilled labour in the fields of science and technology.

Along with the Thailand Plus package, the BOI will also provide additional support to encourage further science, technology, engineering, and mathematics (STEM) training in Thailand, including:

- Double deductions for investments in automation systems, aiming to accelerate the transformation of Thailand's industry to a hi-tech one as part of Thailand 4.0; and
- An investment facilitation committee, to coordinate the approval and operation of large investment projects.

The Thai government will also create special investment zones for the targeted countries, reduce constraints on doing business to further facilitate foreign investments, and create a "smart visa" to increase the pool of highly skilled foreign talent looking to work in Thailand. With the new incentives from the Thailand Plus incentive package and additional support from the BOI, Thailand aims to provide the most competitive incentive programmes in the ASEAN to attract foreign businesses looking to expand or relocate production facilities.

Southern Economic Corridor (SEC)

In Aug 2018, the Thai government approved the SEC programme. The programme will initially be targeted at the southern provinces of Ranong, Surat Thani, Nakhon Si Thammarat and Chumphon, with other southern provinces to be added in the future. Among others, the planned developments include transportation projects in Ranong and Chumphon, providing connections between Thailand and other countries and EEC's projects (on the eastern seaboard of Thailand). In addition, it also targets to enhance the agricultural processing industry in Surat Thani and Nakhon Si Thammaratand. The development of infrastructure in these regions will also boost tourism, particularly around Chumphon.

Industrial Estates

The Industrial Estate Authority of Thailand (IEAT) was founded in 1972 to promote industrial development through management of industrial estates. There are 74 industrial estates in Thailand, mostly located near[7] Bangkok. Around 13 of these industrial estates are owned and managed by the IEAT, while others are joint ventures between the IEAT and private developers.

The IEAT divides industrial estates into two types according to the nature of the industries: the General Industrial Zones (GIZs) and the IEAT Free Zones. Companies that locate their projects in a GIZ or in an IEAT Free Zone may be granted investment incentives without needing to apply for BOI promotion.

General Industrial Zones (GIZs)

GIZs are areas designated for industrial and service operations or other related activities. Investors in a GIZ are eligible for the following non-tax incentives:

- Permission to own land in an industrial estate;
- Permission to bring into Thailand skilled workers and experts, along with their spouses and dependents;
- Permission to remit money abroad; and
- Eligible to receive additional privileges from the BOI when applying for investment promotion.

IEAT Free Zones

IEAT Free Zones are areas designated for industrial and commercial operations or other related activities that benefit the Thai economy. Investors in IEAT Free Zones are eligible for the following tax and non-tax incentives:

- Any non-tax incentives available to investors in a GIZ;
- Exemption of import duties, value added tax (VAT), and excise tax on raw materials and machinery;
- Exemption of export duties, VAT, and excise tax on raw materials, by-products, and products; and
- Exemption or refunds of taxes and duties on raw materials and machinery.

Source:

[1] *Investment Promotion Criteria, Thailand Board of Investment, 2015*

[2] *Procedures for Utilisation of Promotional Privileges of BOI Promoted Projects, Thailand Board of Investment*

[3] *Incentives under the Investment Promotion Act, Thailand Board of Investment*

[4] *Request Approval Process, Eastern Economic Corridor (EEC) Office*

[5] *Investment Benefits on EEC, Eastern Economic Corridor (EEC) Office*

[6] *A Guide to Investment in the Special Economic Zones (SEZ), Thailand Board of Investment, March 2018*

[7] *Industrial Estates in Thailand, Industrial Estate Authority in Thailand*

[8] *Industrial Estate Zone Types, Industrial Estate Authority in Thailand*

[9] *Investment Privileges from I-EA-T, Industrial Estate Authority in Thailand*

[10] *New perks for firms relocating amid trade war, Bangkok Post, Sep 2019*

[11] *Thailand announces new promotion package to attract investment, Thailand Board of Investment, Sep 2019*

10. Environmental Requirements

Executive Summary

There are two major environmental laws in Thailand, the Enhancement and Conservation of the National Environmental Quality Act (NEQA 1992) and the Factory Act (FA 1992), both of which were enacted in 1992. Any foreign businesses wishing to invest or do business in Thailand must abide by these two Laws.

Business with factories operating in Thailand may encounter environmental hurdles or problems, such as historical pollution, license requirements, and environmental pollution.

There are environmental organisations and agencies available in Thailand that can provide relevant environmental supporting services to those companies requiring assistance.

10. Environmental Requirements

I. Environmental Laws and Regulations in Thailand

In Thailand, the National Environment Board (NEB) is the main body for environmental policies and standards setting. The Ministry of Natural Resource and Environment (MNRE) is the cabinet ministry concerned with the preservation, conservation, rehabilitation of natural resources and environment, management, and sustainable use of resources and implementation of other government services.

Two environmental protection laws were established in 1992, the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (NEQA 1992) and the Factory Act B.E. 2535 (FA 1992). These two Acts defined the management on environmental impact assessment, pollution control and associated penalties of environmental related issues, with the Factory Act providing further environment-related guidance on factory operations.

A. The Main Environmental Protection Administrations in Thailand

The National Environment Board (NEB)[1]

The NEB is responsible for making environmental policies and setting environmental standards in Thailand, and is chaired by the Prime Minister.

According to the Enhancement and Conservation of the National Environmental Quality Act B.E. 2535 (NEQA 1992), the main duties of the NEB are as follows:

- Submit a policy and plan for enhancement and conservation of national environmental quality to the cabinet for approval;
- Prescribe environmental quality standards;
- Propose for regulation amendments or improvements in relation to the enhancement and conservation of environmental quality to the Cabinet; and
- Supervise, oversee, and expedite the enactment of royal decrees and issuance of ministerial regulations, rules, local ordinances, notifications, bylaws, and orders which are necessary to ensure a systematic operation of the laws relating to enhancement and conservation of environmental quality to the fullest extent possible.

Ministry of Natural Resource and Environment (MNRE)[2,3,4,5]

The cabinet ministry in the Government of Thailand responsible for environmental protection is the MNRE, which is made up of nine departments:

The following three departments are engaged in environmental protection:

Office of Natural Resources and Environmental Policy and Planning	• Provide information around policies and regulations over conservation and management of natural resources and environment.
Department of Environmental Quality Promotion	• Promote public awareness and participation in environmental conservation, and maintenance of natural resources and biodiversity; • Provide environmental information services; and • Carry out analytical research, development, and technology transfer to ensure environmental quality control.

	Pollution Control Department	• Prevent and control pollution throughout the country through enforcement of NEQA 1992.

The other six departments under the MNRE are involved in specific sectors of environmental protection:

	Department of Mineral Resources
	Department of Marine and Coastal Resources
	Department of Water Resources
	Department of Groundwater Resources
	Royal Forest Department
	Department of National Parks, Wildlife and Plant Conservation

B. The Main Environmental Legislation in Thailand[6]

The two major pieces of legislation governing environmental protection in Thailand are the Enhancement and Conservation of National Environmental Quality Act B.E. 2535 (NEQA 1992), which was amended in 2018 and the Factory Act B.E. 2535 (FA 1992), which was amended in 2019 . In addition, there are other laws covering specialised environmental requirements.

Enhancement and Conservation of National Environmental Quality Act (NEQA 1992)

Environmental Impact Assessment (EIA)

Depending on the size and type of a proposed project or activity, an EIA report may need to be prepared, which forecasts and evaluates the environmental implications of construction projects and establishes appropriate mitigation measures to ensure efficient use of natural resources for economic development. It must be prepared by a consulting firm registered with the Office of Natural Resources and Environmental Policy and Planning (ONEP) and be submitted to the ONEP for consideration.

The National Environmental Board (NEB) has the authority to prescribe the type and size of projects or activities requiring an EIA report. An EIA Report is required to include details of the project, its environmental impact, and any suggestions to prevent and remedy any damage to the environment.

Pollution Control

Measures which the NEB can take against the possessor of a pollution source include requiring installation or construction of an on-site facility for air pollution control and wastewater treatment, with the submission of a monthly report to the various officials containing key operational data of the facility. Pollution control officials have the power of entry to inspect and to issue orders to correct, change, improve or repair the facilities or equipment. Failure to comply can result in a suspension of operations, the revocation of licenses or a recommendation to close a factory.

Penalties

Any company/person that violates or fails to comply with requirements and measures set out under the Act may be punishable by a fine and/or imprisonment. In cases where the offender to be punished is a juristic person, the directors, managers, or persons in charge of the business operations causing the pollution are jointly liable and can be punished with the same penalties.

Factory Act

Industrial Pollution Control

The Factory Act governs all provisions relating to factory construction, operation, expansion, safety requirements and industrial pollution control. Large-scale industrial factories using machinery of more than five horsepower, or employing seven or more workers must have a factory license issued by the Department of Industrial Works from the Ministry of Industry, which closely monitors and controls the factory operations.

Penalties

The Minister of Industry has broad power to establish standards and methods to control the production and release of waste, pollution, and anything else resulting from factory operations that impact the environment. A factory operator who violates or fails to comply with the Act is liable to punishment in the form of a fine or imprisonment and, if the factory is a serious danger to the public, an order to cease operations can also be made.

Other Regulations Against Pollutions (air, water and wastes, etc.)

Thailand has also issued environmental laws such as the Hazardous Substance Act, B.E. 2535 (HAS 1992) , which was amended in 2019, the Ministerial Regulation Soil and Groundwater Contamination Control in Factory Area B.E. 2559 (2016), etc. Emissions and disposal of air and noise pollution, water pollution, soil pollution, wastes and hazardous materials are clearly regulated by the relevant laws, regulations, and standards, and there are corresponding penalties for violation of laws and regulations.

A detailed list of environmental laws and regulations in Thailand can be found in Appendix 4.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China Have Issued with Thailand

The Chinese Ministry of Foreign Affairs has issued a joint statement between the People's Republic of China and the Kingdom of Thailand regarding a Comprehensive Strategic Partnership, strengthening cooperation between Mainland China and Thailand. The statement encourages cooperation in environment-related fields.

Apart from that, there are a series of statements and plans to further enhance the environmental cooperation between Mainland China and the ASEAN.

Main Environmental-Related Joint Announcements and Statements[7,8,9]

Statements	Impact	Clause
Joint Statement of the People's Republic of China and the Kingdom of Thailand on Establishing a Comprehensive Strategic Partnership	Encourage cooperation in energy efficiency, and the fields of clean energy such as solar energy, wind energy, and biomass energy.	Clauses 8 (6) & (7)
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in awareness of environmental.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Thailand[10]

Thailand has enacted laws and announced numerous environmental regulations, specifying which environmental permits are required.

Factory Establishment Permit

A factory establishment permit shall be required with an Environmental Impact Assessment (EIA) for specified activities or projects. Environmental Safety Assessments (ESA) or Initial Environmental Examinations (IEE) will also be required in some conditions.

Wastewater Permit

Wastewater permits may also be required in some conditions, with varying application criteria for different regions.

II. Environmental Situations in Thailand

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period		Operation Period
Historical Pollution Issues	**License Requirements**		**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	EIA/ESA	Wastewater Permit *(subject to project characteristics)*	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be impacted by the environmental risks caused by historical pollution if such issues are not identified or the responsibilities are not clarified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help with systematically identifying the environmental risks and responsibilities before corporate investment**s**, acquisitions and mergers, or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify potential significant environmental risks in a report.

EDD Case

A global manufacturing company planned to purchase a textile facility located in Samut Prakarn, Thailand. They appointed SLP Environmental to conduct Environmental Due Diligence as part of the transaction due diligence process.

The primary objectives of the study was to: 1) determine the contamination status of soil and groundwater at the property; 2) clarify responsibilities among land owners and users; and 3) comply with Article 4 of the “Management of Soil and Groundwater Contamination Control within the Factory Area” Regulation (2016). During the Environmental Due Diligence process, no deal breaker risk was identified. As a result, the transaction was completed successfully.

For a list of organisations/agencies providing EDD services in Thailand, please refer to Section 10.III.A.

Pre-construction Period: Environmental Impact Assessment (EIA)/Environmental Safety Assessment (ESA)

The local environmental laws have stipulated the projects of industries which are required to conduct an EIA/ESA based on the local environmental laws, and they are not allowed to operate without an EIA/ESA.

Resolutions

EIA/ESA

According to NEQA 1992, EIA/ESA reports must be prepared by a licensed consulting firm registered with ONEP. The ESA is a combination of environmental and safety requirements. The environmental part of the ESA is the same as for the EIA.

EIA/ESA Processes

- Supporting agency selection: Hiring a qualified third party to conduct an EIA/ESA, which must be registered with ONEP;
- EIA/ESA report compilation: Typically lasts one to two months depending on the size and scope of activities/projects;
- Submission: Submitting the EIA/ESA report to ONEP and the permitting agency;
- Review: ONEP examines EIA/ESA and related documents (15 days), reviews and makes preliminary comments (15 days), before finally submitting to the Expert Review Committee (ERC) for approval (45 days);
- Approval: The permitting agency grants the license including any conditions from the ERC.

Types of projects/activities requiring an EIA/ESA in the key industries can be found in Appendix 5 and Appendix 6.

EIA/ESA Case

In May 2018, a Chinese-owned electronics manufacturing factory in Thailand did not obtain the EIA license after its expansion. The factory discharged untreated waste gas during the production process, which contaminated the surrounding environment and received complaints from the nearby residents.

The government subsequently issued accusations against the factory including a lack of EIA license and violation of waste discharge related regulations, etc. The factory was requested to stop all productions and shut down by the government.

For a list of organisations/agencies providing EIA/ESA supporting services in Thailand, please refer to Section 10.III.B.

Pre-construction Period: Wastewater Permit

All factories involved in disposing wastewater require a wastewater permit in accordance with the environmental law, and will not be allowed to operate if the necessary permit is not obtained.

Resolutions

Wastewater Permit

- The company can either apply themselves or hire a third party to help with obtaining the license;
- Related department: The Department of Business Development Ministry of Commerce;
- Typically takes around 50 days.

Operation Period: Environmental Pollution Problems

During the operation period, company may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emission: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The Pollution Control Department is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

Environmental Pollution Case

Gidec Company is a power plant converting heat from burning waste into electricity.

Violation of Related Laws

The emissions from the incinerator of the plant were higher than the standards allowed by the Ministry of Natural Resource and Environment (MNRE). The amount of cadmium, carbon dioxide and hydrogen chloride emissions exceeded the allowable amount.

Penalties

Due to the violation of related regulations, the plant was asked to stop all production until their waste management procedures were up to the standards set by the MNRE.

Resolutions

The power plant subsequently fixed their filter in the air treatment system and ensured that the gas released are in accordance with the standards set. The MNRE also decided that in order for any factory to renew their permit or requesting for a permit, they will need to provide sufficient evidence that the emissions from the factory are within the suggested range.

Waste Management Case

Several companies from the food and beverage industry appointed Ai-co to help with disposal of non-hazardous wastes, such as liquid waste, pulp or ash from biomass fuel burning, and biological sludge from the wastewater treatment system.

In addition, Ai-co provided industrial waste transportation service, with all vehicles installing safety equipment and emergency equipment. The company has a hazardous waste transport license which was approved by the Department of Industrial Works.

For a list of organisations/agencies providing environmental monitoring and related services in Thailand, please refer to Section 10.III.C, D, and E.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Thailand

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environment-related licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Waste Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operations of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environmental related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards Between Thailand and Mainland China

Please refer to the below legend for the understanding of all the comparison tables in this section.

Values in brackets are special limitations of effluent discharged into public sewage treatment system, and values not in brackets are the limitations of effluent discharged into the environment directly.

"↓" indicates the requirement of Mainland China is stricter than Thailand.

"↑" indicates the requirement of Thailand is stricter than Mainland China.

"= " indicates the requirement of Mainland China is the same as Thailand.

"-" indicates there is no requirement in the standards.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non industrial areas in Thailand at the moment, i.e. residential areas. If there are plans to build or operate factories in such areas, it is recommended to confirm with the local environmental department for specific regional requirements.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Thailand[a]	Mainland China[b]	
Electronics	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	pH		5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓ (↓)
		Suspended solids		50 (200)	50 (250)	= (↑)
		COD		120 (750)	80 (300)	↓ (↓)
		Ammonia nitrogen	Special electronic materials	-	10/20[c] (25/45[c])	N/A
			Electrical units		5 (25)	N/A
			Printed circuit boards		20 (45)	N/A
			Semiconductor devices		10 (40)	N/A
			Display devices and photoelectron components		5 (25)	N/A
			Electron terminals products		5 (25)	N/A
		TKN		100 (100)	-	N/A
		Total nitrogen	Special electronic materials	-	20/30[c] (40/60[c])	N/A
			Electrical units		15 (40)	N/A
			Printed circuit boards		30 (60)	N/A
			Semiconductor devices		15 (60)	N/A

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Thailand[a]	Mainland China[b]	
Electronics	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	Total nitrogen	Display devices and photoelectron components	-	15 (40)	N/A
			Electron terminals products		15 (40)	N/A
		Total phosphorus	Special electronic materials	-	0.5/1.0[h] (6.0)	N/A
			Electrical units		0.5 (6.0)	N/A
			Printed circuit boards		1.0 (6.0)	N/A
			Semiconductor devices		1.0 (6.0)	N/A
			Display devices and photoelectron components		0.5 (6.0)	N/A
			Electron terminals products		0.5 (6.0)	N/A
		Sulphide	Special electronic materials	1.0 (1.0)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0 (1.0)	= (=)
			Semiconductor devices		1.0 (1.0)	= (=)
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	2.0 (2.0)	0.5 (0.5)	↓ (↓)
			Electrical units		0.5 (0.5)	↓ (↓)
			Printed circuit boards		0.5 (1.0)	↓ (↓)
			Semiconductor devices		0.5 (1.0)	↓ (↓)
			Display devices and photoelectron components		0.5 (0.5)	↓ (↓)
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Thailand[a]	Mainland China[b]	
Electronics	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	Zinc	Special electronic materials	5.0 (5.0)	1.5 (1.5)	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5 (1.5)	↓ (↓)
			Display devices and photoelectron components		1.5 (1.5)	↓ (↓)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.03 (0.03)	0.05 (0.05)	↑ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05 (0.05)	↑ (↑)
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0 (1.0)	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5 (0.5)	N/A
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.25 (0.25)	0.2 (0.2)	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Thailand[a]	Mainland China[b]	
Electronics	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	Hexavalent chromium	Semiconductor devices	0.25 (0.25)	0.1 (0.1)	↓ (↓)
			Display devices and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Arsenic	Display devices and photoelectron components	0.25 (0.25)	0.3 (0.3)	↑ (↑)
			Electron terminals products		0.3 (0.3)	↑ (↑)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	↓ (↓)
			Display devices and photoelectron components		0.2 (0.2)	↓ (↓)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.2 (0.2)	0.2 (0.2)	= (=)
			Electrical units		0.1 (0.1)	↓ (↓)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2 (0.2)	= (=)
			Display devices and photoelectron components		0.2 (0.2)	= (=)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	1.0 (1.0)	0.5 (0.5)	↓ (↓)
			Electrical units		0.5 (0.5)	↓ (↓)
			Printed circuit boards		0.5 (0.5)	↓ (↓)
			Semiconductor devices		0.5 (0.5)	↓ (↓)

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Thailand[a]	Mainland China[b]	
Electronics	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	Nickel	Display device and photoelectron components	1.0 (1.0)	0.5 (0.5)	↓ (↓)
			Electron terminals products		-	N/A
		Cyanide	Special electronic materials	0.2 (0.2)	0.2 (0.4)	= (↑)
			Electrical units		0.2 (0.4)	= (↑)
			Printed circuit boards		0.2 (0.4)	= (↑)
			Semiconductor devices		0.2 (0.4)	= (↑)
			Display devices and photoelectron components		0.2 (0.4)	= (↑)
			Electron terminals products		-	N/A
	Air pollutants (mg/m^3)	TVOC		-	150	N/A
		NMHC		-	100	N/A
	Noise Emission (dB(A))	Noise limits for boundary of industrial enterprise		-	Daytime 65 Night 55	N/A
		24-hour A-weighted Equivalent Continuous Sound Level		70	-	N/A
		Maximum sound pressure level		115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.				

Note:

a. *Thailand Standards: Control Standards on Discharging of Waste Water from Factory[11], General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates[12], Industrial Emission Standard[13] , Noise and Vibration standard[18].*

b. *Mainland China Standards: Emission standard of pollutants for electrical industry[14] and Emission standard for industrial enterprises noise at boundary[24].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Garment & Clothing

Water pollutants and air pollutants were the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Thailand[a]	Mainland China[b]	
Garment & Clothing	Water pollutants (mg/L) (Except pH, on a scale of 0-14, and colour in ADMI)	pH	5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓ (↓)
		Suspended solids	50 (200)	50 (100)	= (↓)
		COD	120 (750)	80 (500)	↓ (↓)
		BOD_5	20 (500)	20 (150)	= (↓)
		Colour[c]	300 ADMI	50 (80)	↓ (↓)
		Ammonia nitrogen	-	10 (20)	N/A
		TKN	100 (100)	-	N/A
		Total nitrogen	-	15 (30)	N/A
		Total phosphorus	-	0.5 (1.5)	N/A
		Chlorine dioxide	-	0.5 (0.5)	N/A
		Free Chlorine	1.0 (1.0)	-	N/A
		AOX	-	12 (12)	N/A
		Sulfide	1.0 (1.0)	0.5 (0.5)	↓ (↓)
		Aniline	-	Not detectable	N/A
		Hexavalent chromium	0.25 (0.25)	Not detectable	↓ (↓)
	Air Pollutants (mg/m^3)	NMHC	-	120	N/A
	Noise Emissions (dB(A))	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		24-hour A-weighted Equivalent Continuous Sound Level	70	-	N/A
		Maximum sound pressure level	115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. Thailand Standards: Control Standards on Discharging of Wastewater from Factory[11], and General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates[12], Industrial Emission Standard[13], Noise and vibration standard[18].

b. Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[15], Integrated Air Emission Standard[17], and Emission standard for industrial enterprises noise at boundary[24].

c. "Colour" is the indicator in Thailand standard, while it refers to "Chroma" in Mainland China standard.

Watches & Jewellery

Water pollutants from washing process and air pollutants from polishing process were the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Thailand[a]	Mainland China[b]	
Watches & Jewellery	Water pollutants (mg/L) (Except pH, on a scale of 0-14)	pH	5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓ (↓)
		Suspended solids	50 (200)	150 (400)	↑ (↑)
		COD	120 (750)	150 (500)	↑ (↓)
		BOD_5	20 (500)	30 (300)	↑ (↓)
		Ammonia nitrogen	-	25 (-)	N/A
		TKN	100 (100)	-	N/A
		Cyanide	0.2 (0.2)	0.5 (1.0)	↑ (↑)
		Hexavalent chromium	0.25 (0.25)	0.5 (0.5)	↑ (↑)
		Petroleum	-	10 (20)	N/A
	Air pollutants (mg/m^3)	NMHC	-	120	N/A
	Noise Emissions (dB(A))	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		24-hour A-weighted Equivalent Continuous Sound Level	70	-	N/A
		Maximum sound pressure level	115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Thailand Standards: Control Standards on Discharging of Wastewater from Factory[11], General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates [12], Industrial Emission Standard[13], and Noise and vibration standard[18].*

b. *Mainland China Standards: Integrated wastewater discharge standard[16] , Integrated emission standard of air pollutants[17] and Emission standard for industrial enterprises noise at boundary[24].*

Toys & Games

Water pollutants from the washing process, air pollutants resulting from production and storage of polymers, and the precursors process are the major types of pollution in the toys & games industry. The following table compares the effluent and emission standards between Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Thailand[a]	Mainland China[b]	
Toys & Games	Water Pollutants (mg/L) (Except pH, on a scale of 0-14)	pH	5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓ (↓)
		Suspended solids	50 (200)	150 (400)	↑ (↑)
		COD	120 (750)	150 (500)	↑ (↓)
		BOD_5	20 (500)	30 (300)	↑ (↓)
		Ammonia nitrogen	-	25 (-)	N/A
		TKN	100 (100)	-	N/A
		Sulfide	1.0 (1.0)	1.0 (1.0)	= (=)
		Formaldehyde	1.0 (1.0)	2.0 (5.0)	↑ (↑)
		Phenols	1.0 (1.0)	-	N/A
		Volatile Phenols	-	0.5 (2.0)	N/A
		Cyanide	0.2 (0.2)	0.5 (1.0)	↑ (↑)
	Air Pollutants (mg/m^3)	NMHC	-	120	N/A
	Noise Emissions (dB(A))	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		24-hour A-weighted Equivalent Continuous Sound Level	70	-	N/A
		Maximum sound pressure level	115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Thailand Standards: Control Standards on Discharging of Wastewater from Factory[11], General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates [12], Industrial Emission Standard[13], and Noise and vibration standard[18].*

b. *Mainland China Standards: Integrated wastewater discharge standard[16] , Integrated emission standard of air pollutants[17] and Emission standard for industrial enterprises noise at boundary[24].*

Hi-tech

Water from the chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Thailand[a]	Mainland China[b]	
Hi-tech	Water Pollutants (mg/L) (Except pH, on a scale of 0-14)	pH	5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓(↓)
		Suspended solids	50 (200)	150 (400)	↑(↑)
		COD	120 (750)	150 (500)	↑ (↓)
		BOD_5	20 (500)	30 (300)	↑ (↓)
		Ammonia nitrogen	-	25(-)	N/A
		TKN	100 (100)	-	N/A
		Sulfide	1.0 (1.0)	1.0 (1.0)	= (=)
		Copper	2.0 (2.0)	1.0 (1.0)	↓ (↓)
		Zinc	5.0 (5.0)	5.0 (5.0)	= (=)
		Formaldehyde	1.0 (1.0)	2.0 (5.0)	↑ (↑)
		Phenols	1.0 (1.0)	-	N/A
		Volatile Phenols	-	0.5 (2.0)	N/A
		Cyanide	0.2 (0.2)	0.5 (1.0)	↑ (↑)
	Air Pollutants (mg/m^3)	NMHC	-	120	N/A
	Noise Emission (dB(A))	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		24 hour A-weighted Equivalent Continuous Sound Level	70	-	N/A
		Maximum sound pressure level	115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Thailand Standards: Control Standards on Discharging of Wastewater from Factory[11], and General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates[12], Industrial Emission Standard[13], and Noise and vibration standard[18].*

b. *Mainland China Standards: Integrated wastewater discharge standard[16] , Integrated emission standard of air pollutants[17] and Emission standard for industrial enterprises noise at boundary[24].*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. There are special standards in Mainland China focusing on targeted industries such as Discharge Standard of Water Pollutants for Sugar Industry, Discharge Standard of Water Pollutants for Meat Packing Industry, etc. In Thailand, the Food & Beverage industry should be in compliance with the general environmental standards.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as Emission Standards of Pollutants for Inorganic Chemical Industry, Emission Standard of Pollutants for Nitric Acid Industry, Emission Standard of Pollutants for Sulfuric Acid Industry, etc. In Thailand, the chemicals & plastics industry should be in compliance with the general environmental standards.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Thailand and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Thailand[a]	Mainland China[b]	
General Industries	Water Pollutants (mg/L) (Except pH, on a scale of 0-14)	pH	5.5-9.0 (5.5-9.0)	6.0-9.0 (6.0-9.0)	↓ (↓)
		Suspended solids	50 (200)	150 (400)	↑ (↑)
		COD	120 (750)	150 (500)	↑ (↓)
		BOD_5	20 (500)	30 (300)	↑ (↓)
		Ammonia nitrogen	-	25 (-)	N/A
		TKN	100 (100)	-	N/A
		Sulfide	1.0 (1.0)	1.0 (1.0)	= (=)
		Hexavalent chromium	0.25 (0.25)	0.5 (0.5)	↑ (↑)
		Petroleum	-	10 (20)	N/A
		Phosphate	-	1.0 (-)	N/A
	Air Pollutants (mg/m^3)	NMHC	-	120	N/A
	Noise Emission (dB(A))	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		24 hour A-weighted Equivalent Continuous Sound Level	70	-	N/A
		Maximum sound pressure level	115	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Thailand Standards: Control Standards on Discharging of Wastewater from Factory[11], and General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates[12], Industrial Emission Standard[13], and Noise and vibration standard[18].*

b. *Mainland China Standards: Integrated wastewater discharge standard[16], Integrated emission standard of air pollutants[17] and Emission standard for industrial enterprises noise at boundary[24].*

III. The Main Local Supporting Organisations/Agencies in Thailand

Thailand has a well-established regulation system to manage environment protection behaviour of investment and enterprises. NGOs and social groups in Thailand are also concerned about environmental problems and have great influence locally.

To ensure environmental compliance and to maintain a good relationship with the public, the investor must pay particular attention to the environment survey, license application and meet the local discharge standards in the design-build and operation periods.

The following tables list out the main local supporting organisations and agencies providing relevant environment-related support services.

A. Environmental Due Diligence Services in Thailand

Agency/Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Governance Assessment Practices; • Environmental and Social Risk Management; • Sustainability Assurance; • Carbon Inventory and Reduction Strategy; • Environmental and Social Risk Management; • Supply Chain Management; and • Sustainability Risk Assessment, etc.	+66 (0) 2844 1000
SLP Environmental	• Due Diligence, Transaction and Funder Services; • Impact Assessment and Planning; • Regulatory Compliance & Risk Management; and • Contaminated Site Assessment and Management, etc.	+66 (0) 2168 7016
WSP	• Environmental Due Diligence; • Contaminated Land and Soil Remediation; and • Environmental and Social Impact Assessment and Planning, etc.	+66 (0) 2343 8866

B. EIA Supporting Services in Thailand

Agency/Organisation	Service Coverage	Contact
Consultants of Technology Company Limited	• Water Supply Engineering; • Air Pollution Study/Monitoring; • Environmental Impact Study/Evaluation; • Environmental Auditing; • Environmental Management Plan; and • Management System Implementation ISO 14000, etc.	+66 (0) 29343 233-47
Envimove-tha	• EIA/HIA/IEE/ESA	+66 (0) 2156 9397
Wasaphate Company Limited	• EIA/IEE/Monitor/ESA	+66 (0) 2171 9241

For more information, please refer to th.kompass.com/a/ecology-and-environmental-consultants-nes/72870/

C. Environmental Monitoring Services in Thailand

Agency/Organisation	Service Coverage	Contact
EnviX Asia	• Soil & Groundwater monitoring and survey; • EHS Compliance; • Products Compliance; and • Global Environmental Regulatory Update, etc.	+66 (0) 2077 5058 +66 (0) 61-409 1200
Consultants of Technology Company Limited	• Water Supply Engineering; • Air Pollution Study/Monitoring; • Environmental Impact Study/Evaluation; and • Environmental Auditing, etc.	+66 (0) 2934 3233-47

D. Hazardous Wastes Disposal Services in Thailand

Agency/ Organisation	Service Coverage	Contact
Professional Waste Technology	• Treatment and disposal of industrial wastes; • Classification, elimination and landfill management of both non-toxic and toxic waste from factory; and • Waste recycling, etc.	+66 (0) 2942 9480-8
Genco	• Collecting, storing and transporting industrial wastes; • Treatment and disposal of industrial wastes; and • Gathering and transporting wastes from factories industrial wastes disposal plant by using specific types of vehicles, etc.	+66 (0) 2745 6926-7
Ai-CO	• Disposal of non-hazardous wastes such as liquid waste from food and beverage industry; and • Provision of hazardous wastes transportation.	+66 (0) 856 676 655
Better World Green	• Industrial wastes management; • Providing transportation and container services designed according to the nature of wastes; and • Landfill management of both non-toxic and toxic wastes, etc.	+66 (0) 2012 7888
EN Technology	• Treatment and disposal of both hazardous and non-hazardous wastes; • Transportation of industrial wastes; and • Waste recycling, etc.	+66 (0) 2743 5550-2 ext. 5120
One More Link	• Treatment and disposal of industrial wastes and chemical wastes; • Recycling of non-hazardous wastes; and • Transportation of industrial wastes, etc.	+66 (0) 6387 12666

The organisations/agencies above hold the licenses below:
- - 101 (license as a central waste treatment plant);
- - 105 (license to classify, eliminate and landfill manage both non-toxic and toxic wastes from factory);
- - 106 (license to recycle wastes from factory).

E. Environmental Equipment Services in Thailand

Agency/Organisation	Service Coverage	Contact
OPSIS	• Set up of the air quality systems in accordance to the subscriber's requirements and specifications, with monitoring data delivered 24 hours a day, 365 days a year	+66 (0) 2433 8331
VENTURY	• Electrostatic air cleanser; • Compact Dust Collector; and • Air condition, etc.	+66 (0) 2651 0951
CONTROLOGIC (The distributor)	• Water analytical products; and • Explosion protection products, etc.	+66 (0) 2021 2878

Source:

[1] *Enhancement and Conservation of National Environmental Quality Act B.E. 2535, 1992*

[2] *Ministry of Natural Resources and Environment*

[3] *Thailand Office of Natural Resources and Environmental Policy and Planning (ONEP), teachenvirolaw, 2019*

[4] *Department of environmental quality promotion, Bangkokpost, 2019*

[5] *The Pollution Control Department (PCD) Thailand, Environnet 2016*

[6] *Guide to doing business in Thailand, MayerBrown, 2019*

[7] *Joint Statement of the People's Republic of China and the Kingdom of Thailand on Establishing a Comprehensive Strategic Partnership, 2012*

[8] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[9] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[10] *Pollution Control Policies & Good Practice for Industry in Thailand, Pollution Control Department, 2015*

[11] *Re Prescription of Control Standards on Discharging of Waste Water from Factory B.E. 2560, 2017*

[12] *Notification of Ministry of Industry No.78/2554 Re: General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates, B.E.2554, 2011*

[13] *Notification of the Ministry of Natural Resources and Environment B.E.2549, 2006, issued under the Enhancement and Conservation of National Environmental Quality Act B.E.2535, 1992*

[14] *Emission standard of pollutants for electrical industry, 2nd edition*

[15] *Discharge standards of water pollutants for dyeing and finishing of textile industry, GB 4287-2012*

[16] *Integrated wastewater discharge standard, GB 8978-1996*

[17] *Integrated emission standard of air pollutants, GB 16297-1996*

[18] *Notification of the National Environmental Board No.29, B.E.2550, 2007: The Ambient Noise Standard*

[19] *Factory Act, B.E. 2535, 1992*

[20] *Hazardous Substance Act, B.E. 2535, 1992*

[21] *Public Health Act, B.E.2535, 1992*

[22] *Ministerial Regulation on Soil and Groundwater Contamination Control in Factory Area, B.E. 2559, 2016*

[23] *Notification of the National Environmental Board, No. 8, B.E. 2537, 1994, issued under the Enhancement and Conservation of National Environmental Quality Act B.E.2535, 1992*

[24] *Emission standard for industrial enterprises noise at boundary, 2008*

[25] *Thailand Board of Investment Guide on Environmental Regulations, Thailand Board of Investment, 2014*

Appendix

Appendix 1

List of Foreign Bank Representative Office (Part 1/2)

Names of Foreign Bank Representative Office
1. Bank Of Baroda
2. Bank Of Taiwan
3. Cathay United Bank
4. Commerzbank Aktiengesellschaft
5. Credit Industriel Et Commercial (CIC)
6. Credit Suisse
7. CTBC Bank Company Limited
8. DBS Bank Limited
9. DEG - Deutsche Investitions - Und Entwicklungsgesellschaft MBH
10. First Commercial Bank
11. ING Bank N.V.
12. Japan Bank For International Cooperation
13. Japan Finance Corporation
14. Joint Development Bank Limited
15. Kanbawza Bank Limited
16. Korea Development Bank
17. Natixis
18. North Pacific Bank, Limited
19. Resona Bank, Limited
20. Shinkin Central Bank
21. State Street Bank And Trust Company
22. The Ashikaga Bank, Limited
23. The Bank Of Fukuoka, Limited
24. The Bank Of Kyoto, Limited
25. The Bank Of New York Mellon
26. The Bank Of Yokohama, Limited
27. The Chiba Bank, Limited
28. The Chugoku Bank Limited
29. The Export-Import Bank Of The Republic Of China

Appendix 1

List of Foreign Bank Representative Office (Part 2/2)

Names of Foreign Bank Representative Office
30. The Fukui Bank, Limited
31. The Gifu Shinkin Bank
32. The Gunma Bank, Limited
33. The Hachijuni Bank, Limited
34. The Hamamatsu Shinkin Bank
35. The Hekikaishinkin Bank
36. The Hiroshima Bank Limited
37. The Hokkoku Bank, Limited
38. The Hokuriku Bank Limited
39. The Hokuto Bank, Limited
40. The Hyakugo Bank, Limited
41. The Juroku Bank, Limited
42. The Ogaki Kyoritsu Bank Limited
43. The Okazaki Shinkin Bank
44. The San-in Godo Bank, Limited
45. The Seto Shinkin Bank
46. The Shanghai Commercial & Savings Bank, Limited
47. The Shiga Bank Limited
48. The Shimizu Bank, Limited
49. The Shoko Chukin Bank, Limited
50. Wells Fargo Bank, National Association

Appendix 2

General Selling Practice for Industrial Estates in Thailand

Quotation Currency	• Sales are quoted in Thai Baht.
Payment	The normal practice is to divide the transaction into three payments of: • 10% on date of signing the Memorandum of Understanding (MOU) or Offer Letter (subject to the company receiving IEAT permission to buy land and/or BOI-approval). In the unlikely event that the company does not receive approval, the deposit is refunded; • 20% on the date of signing the contract; and • the remaining balance on the date of transfer of ownership.
Deposit	• A deposit equivalent to three months' gross rental is normally payable on signature of the lease agreement.
Taxation	Company owned properties are subject to three major taxes: transfer fee; specific business tax; and withholding tax.
Other Expenses	Individual owned properties: three critical taxes: • Transfer fee; • Either specific business tax or stamp duty; and • Income tax (withholding tax).

General Rental Terms for Industrial Estates in Thailand

Lease Term	• Leases are normally for three-year terms. Any lease with a term longer than three years must be registered at the Land Department. There is a registration fee of 1% of the total amount payable under the lease, which must be paid on registration of the lease. This is normally paid by the tenant.
Leases	• In Thailand, leases for industrial property are normally in English. However, if a lease must be registered at the Land Department, then there will need to be a Thai version of the lease.
Rental	• Rental for industrial property is quoted in Thai Baht on a square meter basis per month. Rents are normally paid monthly in advance. The normal practice is a security deposit equivalent to three months' rental and one month's rent in advance upon the signing of the lease agreement. • Typically, the rental is exclusive of management fee, government taxes and rates, lease agreements and service agreement.
Deposit	• A deposit equivalent to three months' gross rental is normally payable on signature of the lease agreement.
Other Expenses	• Additional charges vary from landlord to landlord but these could include: (1) Industrial Estates and Park Management Fees: If the building is situated on an industrial estate or park, then there will be a management fee payable to the estate manager for the upkeep of roads and infrastructure. (2) Property Insurance: This is negotiable but is usually the tenant's responsibility. (3) Repairs: Normally the landlord will be responsible for the day-to-day upkeep of the property. (4) Household Tax: This is a local property tax and amounts to 12.5% of the rental payable.

Appendix 3

Thailand's Selected Infrastructural Development Pipelines (Part 1/4)

Project	Value (USD m)	Government Sponsor
Transport – Airport		
Maintenance, Repair & Overhaul (MRO) Facility Development at U-Tapao Airport	320	Ministry of Transport
Transport - Port		
Laem Chabang Port (Phase 3)	3,652	Ministry of Transport
Pak Bara Seaport, Satun Province	657	Ministry of Transport
2nd Songkhla Deep Seaport	530	Ministry of Transport
Management of Public Liquid Cargo Berth	416	Ministry of Industry, Industrial Estate Authority of Thailand
Map Ta Phut Industrial Port (Phase 3)	320	Ministry of Industry
Management of 2nd Public Port	96	Ministry of Industry
Development of Cruise Terminal, Samui District, Surat Thani Province	N/A	Ministry of Transport
Transport – Rail (passenger)		
Bangkok – Rayong High-speed Rail	4,882	State Railway of Thailand - Ministry of Transport
MRT Purple Line	4,106	Ministry of Transport
MRT Orange Line – West Section	3,979	Ministry of Transport
MRT Orange Line – East Section	3,644	Ministry of Transport
Monorail Grey Line	1,471	Ministry of Interior
MRT Green Line	1,217	Bangkok Metropolitan Administration
Light Rail Double Track Transit System	893	Ministry of Interior
Phuket Mass Transit System	N/A	Ministry of Transport
Bangkok – Hua Hin High-speed Rail	N/A	Ministry of Transport
Transport – Rail (freight/commodity)		
Enhance Private Sector Participation in Freight Transportation by Rail	N/A	Ministry of Transport

Appendix 3

Thailand's Selected Infrastructural Development Pipelines (Part 2/4)

Project	Value (USD m)	Government Sponsor
Transportation - Road		
Bang Pa In- Nakhon Ratchasima Intercity Motorway	2,709	Ministry of Transport
The Nakhon Pathom – Cha Am Intercity Motorway	2,530	Ministry of Transport
Bang Yai - Kanchnaburi Intercity Motorway	1,781	Ministry of Transport
Western Bangkok Outer Ring Road	1,377	Ministry of Transport
Bang Pa In - Nakhon Sawan Intercity Motorway	1,281	Ministry of Transport
Hat Yai – Thailand/Malaysia Border Intercity Motorway	1,198	Ministry of Transport
Extension of the Uttraphimuk Elevated Tollway	941	Ministry of Transport
Kathu – Patong Expressway, Phuket Province	454	Ministry of Transport
Transport - Logistics		
Regional Freight Logistics Station	588	Ministry of Transport
Chiang Khong Freight Logistics Distribution Centre	87	Ministry of Transport
Common Ticketing System Management and Maintenance Project	43	Ministry of Transport
Nakhon Phanom Cross-Border Logistic Centre	39	Ministry of Transport
Cargo Warehouse & Ground Support Equipment (GSE) Maintenance Complex at Suvarnabhumi Airport	N/A	Ministry of Transport
Urban Revitalisation/Social		
Urban Renewal of Din Daeng Community (Phase 3 and Phase 4)	1,277	Ministry of Social Development and Human Security
Housing and Commercial Development on Available Plots of Land in the Chiang Mai Housing Community (Nong Hoi)	178	Ministry of Social Development and Human Security
Housing Development around the Railway Network (TOD) within the Bangkok and Vicinity (Phase 2)	<1	Ministry of Social Development and Human Security
Housing Development for Government Officials and Commercial Development on Available Plots of Land	<1	Ministry of Social Development and Human Security
Geo-Spatial Industrial Park	N/A	Ministry of Science and Technology, Geo-Informatics and Space Technology Development Agency

Appendix 3

Thailand's Selected Infrastructural Development Pipelines (Part 3/4)

Project	Value (USD m)	Government Sponsor
Healthcare		
Health and Elderly Care for The Lower Northern Region, Naresuan University Hospital	125	Ministry of Education
Specialised Medical Centre, Hat Yai, Songkla, Thailand	54	Ministry of Public Health
Specialised Medical Centre, Department of Medical Services	24	Ministry of Public Health
Specialised Medical Centre and Car Park Building, Ratchaburi Hospital	24	Ministry of Public Health
Quarantine Centre for Patient with Contagious and/or Infectious Diseases	23	Ministry of Public Health
Nakhom Pathom Hospital, Medical Service Building and Car Park	13	Ministry of Public Health
Hi-Tech Radiology Diagnostic Service, Suratthani Hospital	4	Ministry of Public Health
Hemodialysis Service for Patient with Chronic Kidney Failure, Ratchaburi Hospital	1	Ministry of Public Health
Education		
Innovation Park for science and Technology Graduate Studies	384	Ministry of Education
King Naresuan The Great Park	96	Ministry of Education
The International Vocational Training Centre	N/A	Ministry of Education

Appendix 3

Thailand's Selected Infrastructural Development Pipelines (Part 4/4)

Project	Value (USD m)	Government Sponsor
Water & Waste		
Khlong Toei Wastewater Treatment Facility	599	Ministry of Interior
Thonburi Wastewater Treatment Facility	443	Ministry of Interior
Nong Bon Swamp Wastewater Treatment Facility	344	Ministry of Interior
Construction of Samut Sakhon City Municipality Wastewater Treatment Facility, Samut Sakhon Province	209	Ministry of Natural Resources and Environment
Bang Bua Thong Municipality Wastewater Treatment Facility, Nonthaburi Province	149	Ministry of Natural Resources and Environment
Krathumbaen Municipality Wastewater Treatment Facility, Samut Sakhon Province	103	Ministry of Natural Resources and Environment
Rom Klao Community Wastewater Treatment Facility	51	Ministry of Interior
Rangsit City Municipality Wastewater Treatment Facility, Pathumthani Province	14	Ministry of Natural Resources and Environment

Appendix 4

The Main Environmental Laws/Regulations in Thailand

Ministry of Natural Resource and Environment	Ministry of Industry	Ministry of Public Health	Ministry of Labour
Enhancement and Conservation of the National Environmental Quality Act (NEQA 1992)[1]	Factory Act (FA 1992)[19]	Public Health Act (PHA 1992)[21]	Occupational Safety, Health and Environment Act (OSHE 2011)[22]
	Hazardous Substance Act (HAS 1992)[20]		
	Soil and Groundwater Contamination Control in Factory Area (2016)[23]		

The Main Environmental Standards in Thailand

Ambient Standards[a] (enforced by NEQA 1992, Section 32)	1	Surface Water Quality Standard
	2	Marine Water Quality Standard
	3	Ground Water Quality Standard
	4	National Ambient Air Quality Standards
	5	The Ambient Noise Standard
	6	VOCs standards
Effluent Standards (enforced by NEQA 1992, Section 55)	7	Control Standards on Discharging of Waste Water from Factory[b]
	8	General Rules for Discharging Wastewater into Public Sewage System in Industrial Estates[b]
	9	Industrial Emission Standard[b]
	10	The Emission Standard for a Glass Factory
	11	The Emission Standard for a Petroleum Refinery Plant
	12	The Emission Standard for a Cement Manufacturer
	13	Standard of Noise from Plant Operation[b]
	14	Vibration Standard for Protect Impact on Building

Note:
a. Ambient standards and effluent standards for specific industries can be found at www.ieat.go.th/handbook.
b. Corresponding effluent/emission standards are the main standards utilised in chapter 10 section ii) c.

Appendix 5

Types of Projects/Activities with EIA Requirements for the Key Industries in the BOI's Guide on Environmental Regulations

Industries	Types of Projects/Activities	Size	Criterion, Procedure, Regulation
Food & Beverage	16.1 Liquor and alcohol production	≥40,000 L/month (calculated at 28 degrees)	Submit when applying for permission for construction or operation.
	16.2 Wine production	≥600,000 L/month	
	16.3 Beer production	≥600,000 L/month	
Logistics & Transportation	Mass transportation system by rail	All sizes	Submit when applying for project approval or permission.

Appendix 6

Types of Factories with ESA Requirements for the Key Industries in the BOI's Guide on Environmental Regulations

Industries	Types of Factories	Conditions
Food & Beverage	Distilleries or liquor blending houses (16).	All sites.
Garment & Clothing	Fermenting, carbonising, untangling, combing, pressing, spinning, drying, stranding, winding, texturising, bleaching, or dyeing fibre (22(1)).	Work relating to bleaching or dyeing of yarn or fibre, and generating wastewater of at least 500 m^3 per day.
	Weaving or preparing warp-threads for weaving (22(2));	Work relating to bleaching or dyeing of yarn, fibre, or printing textiles, and generating wastewater of at least 500m^3 per day.
	Bleaching and dyeing or finishing of yarn or textiles (22(3));	
	Printing textiles (22(4)).	
	Weaving fabric, lace or apparel with yarn or fibre, or bleaching and dyeing or finishing of fabric, lace or apparel woven with yarn or fibre;	Work relating to bleaching, dyeing, or finishing of lace or apparel woven with yarn or fibre, and generating wastewater of at least 500m^3 per day.
	Making oilcloth or leatherette that is not purely made from plastic (27(2)).	All sites.
	Fermenting, eviscerating, roasting, pulverising or grinding, tanning, polishing, and finishing, embossing, or paint-coating of animal hides (29).	Work relating to fermenting and polishing and generating wastewater of at least 50m^3 per day.
	Combing, cleaning, bleaching, dyeing, polishing, or dressing of fur (30);	Generating wastewater of at least 50m^3 per day.
	Laundering, dry-cleaning, cleaning, ironing, pressing, or dyeing of apparel, carpet, or fur (98).	
Chemicals & Plastics Toys & Games	Insulation products (related to plastic products) (53(6)).	All products.

Note:
The Thailand Board of Investment Guide on Environmental Regulations published by the Board of Investment lists the types factories with EIA/ESA requirements, but does not specify any EIA/ESA requirements in the electronics industry.

Glossary – Section 1 to 9 Operational Requirements

3PLs	Third-party Logistics Companies
AIT	Asian Institute of Technology
ASEAN	Association of Southeast Asian Nations
BIC	Business Incubation Centre
BIOTEC	National Genetic Engineering and Biotechnology Centre
BOI	Thailand Board of Investment
CCC	Thai Civil and Commercial Code
CIT	Corporate Income Tax
DBD	Department of Business Development
DITP	Department of International Trade Promotion
DTA	Double Taxation Agreement
EEC	Eastern Economic Corridor
EIEB	The Environmental Impact Evaluation Bureau
EPZ	Export Processing Zones
EV	Electric vehicles
FAP	Federation of Accounting Professions
FBA	Foreign Business Act
FBL	Foreign Business License
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
HDD	Hard Disk Drive

HDI	Human Development Index
HEV	Hybrid Electric Vehicles
HS	Harmonised System
ICT	Information and Communications Technology
IFRPD	Institute of Food Research and Product Development
IFRS	International Financial Reporting Standards
IP	Intellectual Property
IOT	Internet of Things
iTAP	Industrial Technology Assistance Programme
KU-FIRST	Kasetsart University Food Innovation Research and Services in Thailand
LPI	Logistics Performance Index
LRA	Labour Relations Act
MDES	Ministry of Digital Economy and Society
MICT	Ministry of Information and Communication Technology
MNCs	Multinational Companies
MOC	Ministry of Commerce
MOST	Ministry of Science and Technology
MTEC	National Metal and Material Technology Centre
NANOTEC	National Nanotechnology Centre
NCPO	National Council for Peace and Order
NECTEC	National Electronics and Computer Technology Centre
NIA	National Innovation Agency
NPAE	Non-Public Accountable Entities
NSTDA	National Science and Technology Development Agency

OEM	Original Equipment Manufacturer
PAT	Port Authority of Thailand
PETROMAT	Centre of Excellence on Petrochemical and Materials
PISA	Programme for International Student Assessment
SEA	Southeast Asia
SET	Stock Exchange of Thailand
SME	Small and Medium-sized Enterprises
SRT	State Railway of Thailand
STEM	Science, Technology, Engineering, and Math
STI	National Science, Technology and Innovation Policy Office
S&T	Science and Technology
TAS	Thai Accounting Standards
TFRS	Thai Financial Reporting Standards
THB	Thai Baht
TLO	Technology Licensing Office
TSP	Thailand Science Park
UN	United Nations
USD	United States Dollar
VAT	Value Added Tax

Glossary – Section 10 Environmental Requirements

ADMI	American Dye Manufacturer's Institute
AOX	Absorbable Organic Halogen
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
BOI	Thailand Board of Investment
EIA	Environmental Impact Assessment
EIEB	The Environmental Impact Evaluation Bureau
ESA	Environmental Safety Assessment
FA 1992	Factory Act
HAS 1992	Hazardous Substance Act
IEE	Initial Environmental Examination
MNRE	The Ministry of Natural Resource and Environment
MOI	Ministry of Industry
MOL	Ministry of Labour
MOPH	Ministry of Public Health
NEB	National Environment Board
NEQA 1992	Enhancement and Conservation of the National Environmental Quality Act
NMHC	Non-methane Hydrocarbon
ONEP	Office of Natural Resources and Environmental Policy and Planning
OSHE 2011	Occupational Safety, Health and Environment Act
PHA 1992	Public Health Act
TKN	Total Kjeldahl Nitrogen
TVOC	Total Volatile Organic Compounds

3.12 Guide to Vietnam

Opportunities and Limitations in Manufacturing

MUTEKI BRINC ADEIRA

Contents

Published in November 2019

1. Overview of Vietnam

Executive Summary

Vietnam has witnessed strong development over the last 30 years as a result of political and economic reforms under the Doi Moi Policy initiated in 1986. The country is now one of the most promising economies in Southeast Asia and has reached major agreements with international partners to foster trades.

Vietnam is engaged in five bilateral trade agreements with other countries in Asia Pacific, Latin America and Eastern Europe. These agreements eliminate tariffs and incentivise investments for a number of industries. As part of the Association of Southeast Asian Nations (ASEAN), Vietnam benefits from six other multilateral trade agreements with Mainland China, South Korea, Japan, India, Australia and New Zealand.

Vietnam is also a very attractive country for foreign investors as it benefits from a long-lasting political stability.

1. Overview of Vietnam

I. Country Profile[1,2,3,4,5,6,7]

Vietnam is one of the most promising countries in Southeast Asia in terms of economic development. Since the country opened itself to foreign investments and international trade in 1986 (with the Doi Moi policy), it has gone through fast economic growth and shifted from one of the world's poorest nations to a lower middle income country within 30 years. After a strong gross domestic product (GDP) growth of 7.1% in 2018, the country is predicted to grow at a more moderate rate of 6.5% in 2019. The Vietnamese government is eager to maintain this healthy growth rate, and therefore has developed a Socio-Economic Development Plan (SEDP) for 2016-2020. The SEDP and the country's future economic development will mainly focus on macroeconomic stability driven by structural reforms, environmental sustainability and social integration.

GDP *(in USD)*
261.0 bn (2019f)
242.6 bn (2018)

GDP Per Capita *(in USD)*
2,679 (2019f)
2,511 (2018)

Economic Structure
(in terms of GDP composition, 2017)
Agriculture: 15.3%
Industry: 33.3%
Services: 51.3%

External Trade *(% of GDP)*
Import: 92.1% (2018)
Export: 95.4% (2018)

Population
97.43 million (2019)
World ranking: 15/191

Median Age
30.9 (2018)
World ranking: 113/228 (from oldest to youngest)

Language
Vietnamese (official)
English

English Literacy
Moderate proficiency (2018)
World ranking: 41/88

Government Structure
Socialist republic with a single party leadership

Land Area
310,070 sq. km

II. Country Profile on Trade

A. International Trade Agreements and Restrictions

International trade agreements provide various benefits for the participating countries. It allows two or more companies or countries to trade goods with eliminated or decreased tariffs, therefore enhancing economic growth on both sides. This can be very attractive for Mainland China and Hong Kong companies that intend to expand their manufacturing footprint. Vietnam is a full member of ASEAN since 1995, giving the country preferential access to Southeast Asian markets. Since 2007, Vietnam has also been a member of the World Trade Organization (WTO), enabling the country to better participate in international trades fueling domestic economic reforms.

Currently, Vietnam has 13 signed and effective trade agreements, including five bilateral and eight collective trade agreements. In addition, the ASEAN–Hong Kong Free Trade Agreement (FTA) came into effect in June 2019 (see section below). Furthermore, there are four trade agreements being negotiated (with Israel, European Union (EU), European Free Trade Association, Regional Comprehensive Partnership) and another six proposed. One of the proposed agreements comprises the ASEAN and the EU which contains restructuring import quotas, tariffs for services, regulatory issues, intellectual property and sustainable development.

Signed and Effective Bilateral Trade Agreements (Part 1/2)[8]

	Affected Industry	Agreement (effective date)
	• Agriculture and Food • Metals • Textile • Electronics	**Japan-Vietnam Economic Partnership Agreement (2009)** • Overall trade liberalisation agreement between the two countries affecting trade in goods and services. • Facilitation of Japanese investments in Vietnam, enhancement of the business environment and intellectual property, travel facilitation between the two countries for individuals. • Tariffs exemption and preferential tariffs for agroforestry-aquatic products, industrial products (e.g. steel, chemicals), apparels and electronic appliances.
	• Textile • Food and Beverage • Metals • Electronics	**Vietnam-Chile Free Trade Agreement (2012)** • Vietnam abandons 87.8% of tariffs for 15 years, affecting products such as chemicals, construction steel, wood, textile, machinery, food and beverages (e.g. meat, fruits, alcohol). • Chile will eliminate nearly all tariffs (99.6%) up to 2029 on goods originating from Vietnam such as textile, maritime products, beverages (e.g. coffee and tea) and electronics (e.g. components and computers).
	• All	**Laos-Vietnam Free Trade Agreement (2015)** • Eliminate tariffs on more than 95% od goods traded between the two countries. • More than 9,000 products will benefit from zero tariffs.

Signed and Effective Bilateral Trade Agreements (Part 2/2)[8]

	Affected Industry	Agreement (effective date)
	• Food • Mining • Construction	**South Korea-Vietnam Free Trade Agreement (2015)** • Tariff exemptions affecting products not covered in the ASEAN-Korea Free Trade Agreement (elimination of 90% to 95% of tariffs); • Korean industrial products benefit from the concessions. • Products benefit from the agreement include fishery-agricultural and food products, industrial and mechanical goods, textile and garment.
	• Agriculture and Food • Textile • Electronics	**Eurasian Economic Union-Vietnam Free Trade Agreement (2016)** • Opens up a new market of 181 million people (including Russia, Armenia, Belarus, Kazakhstan and Kyrgyzstan). • Both parties should eliminate more than 90% of all tariffs over a 10-year period covering agricultural-forestry-fishery products, textile, footwear, machinery and electronic equipment. • Tariffs on specific products such as metals (e.g. iron, steel), petroleum, cars or alcohol will not be eliminated or reduced before 2027.

Signed and Effective Regional Trade Agreements as a Member of the ASEAN

As a member of the ASEAN, Vietnam benefits from agreements signed between the association and other countries. Therefore, the country has effective FTAs with: Mainland China (2005), South Korea (2007), Japan (2008), India (2010), Australia and New Zealand (2010).

In addition to the bilateral and multilateral agreements, there are few other key FTAs for Vietnam which have been recently signed or are being finalised with important trading blocs.

The Comprehensive and Progressive Trans-Pacific Partnership (CPTPP)[9]

The Trans-Pacific Partnership (TPP) was originally an American initiative, but later the USA withdrew from the agreement. After that, the remaining 11 countries decided to sign a new FTA called CPTPP, or TPP11. This agreement is set between Canada and 10 countries in Latin America and Asia-Pacific: Chile, Peru, Mexico, Australia, New-Zealand, Singapore, Brunei, Malaysia, Vietnam and Japan. The CPTPP fully entered into force in January 2019, creating a trading network of 495 million consumers representing an estimated 13.5% of the global GDP with reduced tariffs for agriculture, metals, wood and fishery products.

A Major FTA Pending Ratification: EU-Vietnam FTA[10]

The FTA between the EU and Vietnam was signed on 30 June 2019 and is awaiting final ratification by each party's legislative bodies. The agreement is expected to remove 99% of custom duties on exports from both sides and provide EU companies with greater investment possibilities in Vietnam. The latter should benefit from the agreement as the EU is its second largest export market.

The Association of Southeast Asian Nations (ASEAN)

The ASEAN was founded in 1967 and currently has 10 members. The five founding members are Indonesia, Singapore, Malaysia, the Philippines, and Thailand. The remaining five countries joined in subsequent years: Brunei in 1984, Vietnam in 1995, Laos in 1997, Myanmar in 1997, and Cambodia in 1999.

ASEAN Members


Indonesia


Singapore


Malaysia


Philippines


Thailand


Brunei


Vietnam


Laos


Myanmar


Cambodia

The Association's Three Major Goals:

- Acceleration of economic growth, social progress, and cultural development in the region;
- Promotion of regional peace and stability in Southeast Asia; and
- Foster cooperation and mutual assistance in economic, social, cultural, technical, scientific and educational fields.

The ASEAN Free Trade Area (AFTA)

In 1992, ASEAN countries decided to strengthen this comprehensive cooperation by implementing the AFTA. The main objective of the AFTA is to increase the region's economic competitive advantage through trade liberalisation and the elimination of tariffs and non-tariff barriers among the ASEAN members.

The Common Effective Preferential Tariff (CEPT) Agreement for AFTA reduces the tariff rates on a wide range of products within the region to 0-5%. In addition, restrictions on quantity traded and other non-tariff barriers are eliminated.

The CEPT covers all manufactured products, including capital goods and processed agricultural products, and those falling outside the definition of agricultural products. Agricultural products are excluded from the CEPT Scheme (further details on www.asean.org).

There are only three situations where a product can be excluded from the CEPT Scheme:

- General Exceptions: a member may exclude a product considered necessary for the protection of its national security, the protection of public moral, the protection of human, animal or plant life and health, and the protection of articles of artistic, historic or archaeological value;
- Temporary Exclusions: a member which is temporarily not ready to include certain sensitive products (i.e. rice) in the CEPT Scheme may exclude such products on a temporary basis; and
- Unprocessed agricultural goods.

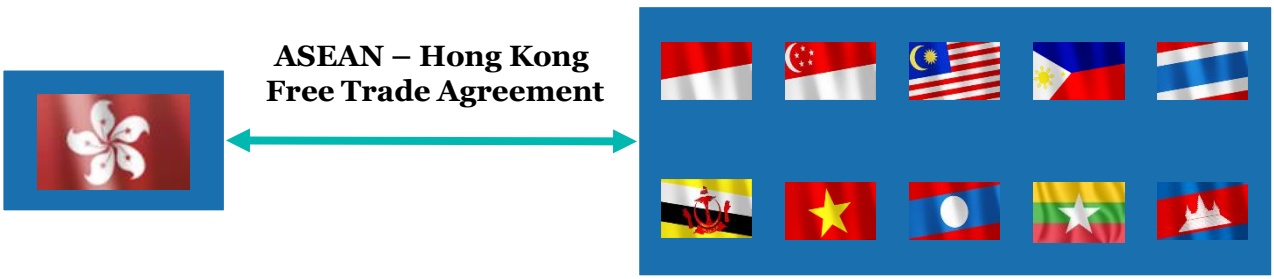
International Trade Agreement between Hong Kong and the ASEAN[11]

Overview

Trade within the region has been booming since the removal of tariffs between the ASEAN member states in 2015.

Hong Kong and the ASEAN announced the conclusion of negotiations on their Free Trade Agreements in September 2017 and forged agreements on 12 November 2017. Member states agreed to progressively cut down or eliminate custom duties on goods originating from Hong Kong. The agreements are comprehensive in scope and cover trade of goods, trade of services, investments, economic and technical cooperation, dispute settlement, and other relevant areas.

The ASEAN was Hong Kong's second largest merchandise trade partner in 2018 with a total value of HKD 1.1 trillion (around 12% of the total trade value).



Entry

Free Trade Agreement: 11 June 2019

Investment Agreement: 17 June 2019

Both for the parts relating to Hong Kong and Laos, Myanmar, Singapore, Thailand, and Vietnam. The dates of entry for the remaining five countries have not been announced yet.

Affected Major Industries

The tariff reduction commitments cover different kinds of major Hong Kong export commodities, such as (non-exhaustive):

- Jewellery
- Watches and Clocks
- Apparel and Clothing Accessories
- Toys

Other Affected Industries

- Food and Beverages
- Chemicals
- Pharmaceutical
- Metals
- Plastics & Rubber
- Footwear
- Machinery and Mechanical Appliances

B. Government Structure[12]

Vietnam is a socialist republic led by a single party: the Communist Party of Vietnam (VCP). In 2016, during the 14th National Assembly of Vietnam, 498 members were elected by a popular vote to serve a five-year mandate (until 2021). Officially, Vietnam is collectively ruled by the President, the Prime Minister, the Communist Party chief and the chair of the National Assembly. However, after the death of former President Tran Dai Quang in September 2018, the VCP's Secretary General, Nguyen Phu Trong, took over the function of President, combining two major positions in Vietnam's political ecosystem for the first time (since Ho Chi Minh in the 1960s). In Vietnam, each body or function has a specific role:

- The President acts as the face of the country for international matters;
- The Government, which is appointed by the President and the National Assembly, is led by the Prime Minister and has the executive power. Together, they are in charge of the management of the state and the economy; and
- The National Assembly has the legislative power and determines domestic and foreign policies, socio-economic tasks, national defence and security issues. The National Assembly is the only body which has the power to amend the Constitution and pass laws. However, the implementation and administration of the laws is decentralised (i.e. managed at province level).

The Vietnamese judiciary system is independent from the government. The highest centralised judiciary body of the country is the Supreme People's Court and smaller courts exist at provincial and district levels.

C. Political Uncertainties and Historical Coup Records[13,14,15]

Vietnam is generally considered as a politically stable country as it has not gone through any political coup since 1963. Vietnam ranked 74th out of 195 countries in the World Bank's Political Stability Index (with an above average value of 0.31 in 2017). However, some recent events can create political uncertainties.

- The health of the country leader Nguyen Phu Trong has aroused speculation. He fell ill in mid-April 2019 and did not make any public appearances for more than a month. On 15 May 2019, the Vietnam News Agency released a picture of him chairing a meeting in Hanoi and declared that the leader appeared in public alongside senior party leaders. The lack of official communication from April to May about the status of the 75-year-old leader led to various speculations on whether Phu Trong had fully recovered from illness. This event could shake Vietnam's political environment as the President is supposed to govern the country until 2021.
- The President's health condition also raises the issue of succession. Nguyen Phu Trong is currently the most powerful man in Vietnam as he holds a dual position as the Head of the State and the Party leader. As of May 2019, there is no potential candidate who fits the requirements to take over his roles, which could potentially lead to a succession crisis in the country.
- Since 2014, the rise of anti-Chinese nationalism sentiment has been affecting the political relationship between Vietnam and Mainland China. The last anti-Chinese demonstrations in Vietnam took place in June 2018 when workers protested against the government's plan to set up three new special economic zones with 99-years land concession. Workers feared that this new policy could bring in foreign investments mainly dominated by Chinese companies. The protests are jeopardising Vietnam's relationship with Mainland China. Political tensions between the two governments are on the rise and Vietnam may potentially be exposed to Chinese economic retaliation.

Source:

[1] *The World Bank, 2019*

[2] *Fitch Solutions, Vietnam Country Risk Report, 2019*

[3] *The World Factbook, CIA*

[4] *Imports of Goods and Services (% of GDP), Exports of Goods and Services (% of GDP), Worldbank*

[5] *Vietnam population, Worldometers, 2019*

[6] *EF English Proficiency Index, EF Education First*

[7] *Geography Statistics Of Vietnam, Worldatlas*

[8] *The Ministry of Finance of the Socialist Republic of Vietnam, International Cooperation; WTO Regional Trade Agreements database; Fitch Solutions*

[9] *What is the CPTPP?, Government of Canada*

[10] *Doing Business in Vietnam, PwC, 2018*

[11] *The Government of Hong Kong Special Administrative Region – Trade and Industry Department, Press Release, 2019*

[12] *Doing Business In Vietnam, Grant Thornton, 2018*

[13] *World Bank Political Stability And Absence Of Violence/Terrorism*

[14] *Vietnam leader Nguyen Phu Trong reappears in state media after illness, Reuters, 2019*

[15] *Anti-China protests in Vietnam set to aggravate tensions with Beijing, South China Morning Post, 2018*

2. Legal Environment and Competition Law

Executive Summary

Vietnam welcomes and attracts foreign investors. Only very few sectors are restricted for foreigners.

Mainland China and Hong Kong companies can choose to set up different types of business entities. It is possible to establish a 100% foreign-owned enterprise such as a Limited Liability or a Joint-Stock Company amongst others. However, the establishment process can still be complex as different authorities are involved.

Imports and exports are still highly regulated by the government despite becoming an open and market-oriented economy. Foreign operators are required to register with the corresponding authorities and get an investment certificate. Depending on the goods, other permits from the government may also be required.

2. Legal Environment and Competition Law

SĐổi Mới is the name given to the economic reforms initiated in Vietnam in 1986 with the goal of creating a "socialist-oriented market economy". Since then, Vietnam has been welcoming foreign investments, providing an attractive legal environment to enhance economic growth and development of the country. Additionally in 2014, a new investment law (No. 67/2014/QH13) was enacted which reduces the list of restricted investment areas for foreign companies from 51 to 7 sectors.[1]

Vietnam's investment law only distinguishes between Vietnamese and foreign companies and does not outline special regulations for Mainland China or Hong Kong companies.

Two Lists with Restricted or Limited Businesses Access to Foreign Investors[2,3]

List 1

Businesses that are restricted by the Law of Investment to foreigners.

Examples:

- Drugs and narcotics;
- Hazardous chemicals and minerals;
- Specimens of wild flora and fauna.

List 2

Several businesses that Vietnam sets conditions that investment projects must satisfy the purposes of national defence and security, social order and safety, social ethics and community health. These conditions are applicable to both foreign and local investors. Vietnam also reserves its sovereign right to limit foreign investment in certain sectors by setting conditions.

Examples:

- Foreign ownership limitation;
- Form of investment and requirements of Vietnamese partners;
- Operational contents;
- Other conditions stipulated in the international treaties to which Vietnam is a party.

The government has the ability to further restrict other sectors from foreign investment, such as advertising services, broadcasting, postal services, publishing and distribution of cultural goods or telecommunication services (non-exhaustive). For further details, please refer to section 8 of this report.

I. Types of Legal Business Entity Available for Foreign Investment[4,5,6,7,8]

As in most countries, there are several different main structures to expand a business or the manufacturing footprint as an investor from Mainland China or Hong Kong to Vietnam. The country has introduced a range of open policies and clearer guidance that support foreigners in establishing a commercial presence. As opposed to many other countries, Vietnam offers the possibility of setting up a 100% Foreign Owned Enterprise (FOE).[4]

Some Main Forms of Doing Business or Expanding the Manufacturing Footprint to Vietnam Include:

Establishing a separate entity (100% Foreign-owned Company)	1. Limited Liability Company (LLC) 2. Joint-Stock Company (JSC)
Establishing a partnership	3. Joint Venture (JV) 4. Public Private Partnership (PPP)
Establishing a non-separate (regional) office	5. Representative office (RO) 6. Branch office (BO)

Limited Liability Company (LLC) (100% Foreign-owned Enterprise)

Definition and Shareholding-Percent by Foreign Investors

This is the most commonly seen form for foreign investors due to the reduced liability and capital requirements. An LLC is a separate legal entity established by capital contribution which is treated as equity (or charter capital) from its members (i.e. owners). An LLC is not allowed to issue shares, in addition, the number of members is limited to 50. The members are liable for the financial obligations of the company.

An LLC established by Mainland China or Hong Kong investors may take the form of either:

- A 100% foreign-owned enterprise (where all members are foreign investors); or
- A foreign-invested joint venture enterprise between foreign investors and at least one domestic investor.

Minimum Required Capital

Generally, there is no minimum capital requirement for Mainland China and Hong Kong companies to set up an LLC. However, authorities would usually expect an investor to initially commit a reasonable amount of charter capital based on the size of the business. The capital has to be invested within 90 days after the registration certification is issued.

Timeline

Setting up an LLC in Vietnam takes about two to four months on average.

Joint-Stock Company (JSC) (100% Foreign-owned Enterprise)

Definition and Shareholding-Percent by Foreign Investors

Unlike an LLC, a JSC can issue securities and bonds, giving investors the opportunity to go public. A JSC needs at least three shareholders, however, there is no limitation on the maximum number of shareholders. In addition, the shareholders can be natural persons or institutions, Vietnamese as well as foreigners.

A JSC can take two different forms:

- 100% foreign-owned; or
- A joint venture between foreign and domestic investors.

Minimum Required Capital

Generally, there is no minimum capital requirement for Mainland China and Hong Kong investors to set up a JSC. The charter capital is composed of the shares belonging to the founding shareholders in proportion to the capital they have contributed. The shares have to be paid within 90 days after the enterprise registration certificate is issued.

Timeline

Setting up a JSC as an FOE in Vietnam takes about two to four months on average.

Joint Venture (JV)

Definition and Shareholding-Percent by Foreign Investors

A JV is a group of persons (natural and/or juristic) entering into an agreement in order to carry on a business together. A JV is not a unique corporate structuring option; partners usually establish an LLC for standard JVs or a JSC if there is a desire to list on the stock exchange in Vietnam. Mainland China and Hong Kong investors can choose to enter into a JV as the majority shareholder (owning more than 50% of the shares) or also as a minority shareholder (owning less than 50% of the shares). However, the statutory guidelines demand a foreign contribution of a minimum of 30% for JVs as well as a maximum percentage in specific conditional sectors.

Minimum Required Capital

Generally, there is no minimum capital requirement for Mainland China and Hong Kong investors to set up a JV, however, the Ministry of Planning and Investment (MPI) can request businesses to satisfy industry specific capital requirements.

Timeline

Setting up a JV in Vietnam takes about two to four months on average.

Private Public Partnership (PPP)[4,5]

Definition and Shareholding-Percent by Foreign Investors

A PPP is an investment form based on a contract between a foreign or domestic enterprise and the government to perform regulated infrastructure work or public services such as power plants, transportation or water supply systems. There are five types of PPPs: Build-Transfer-Operate, Build Transfer, Build-Operate-Transfer, Build-Own-Operate and Build, Transfer and Lease.

The PPP can be established in two different forms:

- Limited liability company; or
- Joint-stock company.

The Vietnamese government strongly pursues PPPs to develop and improve the country's infrastructure.

Representative Office (RO)

An RO has an easy registration procedure and offers a low-cost solution for Mainland China and Hong Kong companies to enter the Vietnamese market. Therefore, ROs are often chosen by first-time entrants who may potentially want to establish a larger presence in future. However, ROs are not allowed to conduct revenue generating activities, such as the execution of contracts, receipt of income, sale or purchase of goods or provision of services. An RO is only permitted to engage in the following activities:

- Act as a liaison office;
- Conduct market research; and
- Promote its head office's business and investment opportunities.

Minimum Required Capital

There is no minimum capital requirements defined by the MPI, however, companies have to show that their capital contribution is sufficient to cover the activities of their operations. This usually translates into a minimum initial capital of USD10,000 to fund the operations.

Timeline

Setting up a RO takes about six to eight weeks on average.

Branch Office (BO)

Definition and Shareholding-Percent by Foreign Investors

A BO is not a very common form of foreign investment as it can only conduct services in a few sectors such as finance and banking. Like the RO, the BO is not an independent legal entity. In addition, the BO's parent company must have conducted business activities in its home country for at least five years. However, unlike the RO, the BO can engage in commercial activities in Vietnam. A BO is permitted to engage in the following activities:

- Rent offices;
- Lease or purchase equipment and facilities required for operations;
- Recruit local and foreign employees;
- Remit profits abroad;
- Purchase and sell goods and commercial activities per licensing;
- Set up Accounting, Marketing and Human Resources departments to represent the parent company.

Setting up a BO requires a license and a manager who is a Vietnam resident. Foreigners are also allowed to appoint a manager from their country of origin, however, this employee must have a Vietnam work permit.

The registration of a BO needs to be approved by the Department of Industry and Trade.

Timeline

The establishment process typically takes about three weeks.

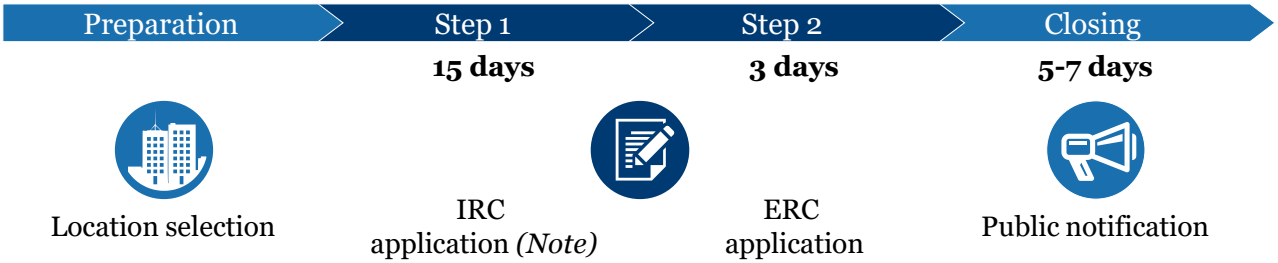
Setting Up a Business in Vietnam

Vietnam is very attractive to foreign investors, however, the legal process to expand a manufacturing footprint or to set up a business can still be complex. There are different establishment procedures for different entities. For some entity types, companies need to get a pre-investment approval from the Vietnamese authorities. Therefore, it is recommended to get in contact with the MPI (www.mpi.gov.vn/en) before starting the entire investment process. There is no special procedure for investors from Mainland China or Hong Kong.

Establishment Process for: LLC, JSC, and JV

Under the new Law on Investment and Law on Enterprises, foreign investors have to go through two steps in order to register their investment with the appropriate licensing authorities:

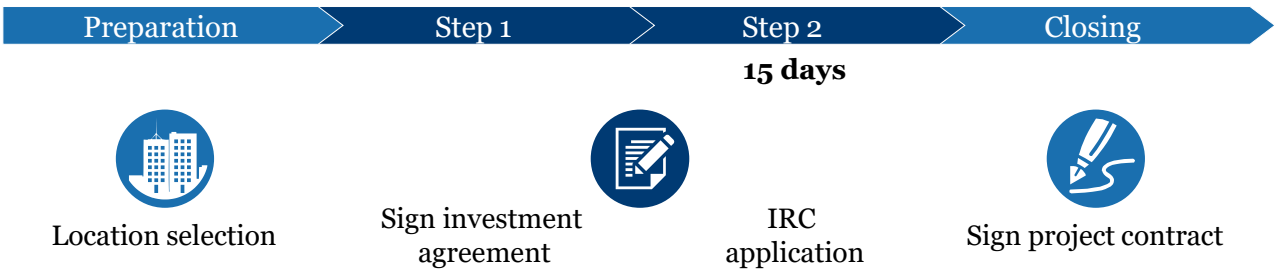
Step 1: obtaining Investment Registration Certificate (IRC)
Step 2: obtaining Enterprise Registration Certificate (ERC)



Note:
IRC is required only for investments by foreign investors or deemed-to-be foreign investors.

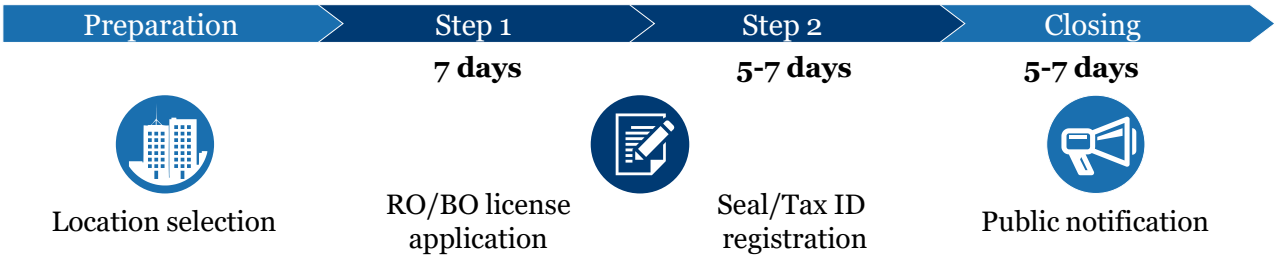
Establishment Process for: PPP

Before companies can apply for the IRC, an investment agreement has to be signed with an authorised state authority. After the IRC is issued, a project contract has to be signed with the relevant state body in order to set up the project company in the form of an LLC or a JSC.



Establishment Process for: RO and BO

For these types of entities, once the licenses have been issues, further steps have to be conducted, such as seal carving and the tax ID registration.



Overview of Advantages and Disadvantages of Different Business Entities

Business Entity Type	Common Purposes	Advantages	Disadvantages
Limited Liability Company	• Separate legal entity	• Liability limited to capital contribution • No restriction on the scope of business	• Cannot issue shares • Maximum 50 shareholders
Joint-Stock Company	• Separate legal entity	• Liability limited to capital contribution • No restriction on the scope of business • Can issue shares and go public	• Three or more shareholders required • Supervisory board required for most joint-stock companies
Joint Venture	• Partnership of companies or individuals for specific business purposes	• Unconditional sectors not subject to specific capital requirements	• Minimum contribution guidelines for domestic investors for industry specific cases • Two to four months to set up
Public Private Partnership	• Entails partnership between foreign or domestic enterprises and government for infrastructure projects	• Government aggressively pursuing PPPs to develop infrastructure	• Several PPP models (complexity) • Investors unsure of returns
Representative Office	• Non-separate legal entity • Market research • Liaison with overseas parent companies	• Easy registration procedure	• Cannot conduct profit making activities • Parent company bears liability
Branch Office	• Non-separate legal entity • Commercial activities within parent company's scope	• Can remit profits abroad	• Limited to certain industry sectors • Parent company bears liability

II. Overview on Other Business Laws and Regulations

A. Legal and Administrative Framework on Competition Law[8,9,10]

The National Assembly of Vietnam passed the new Law on Competition (LOC) in June 2018, which entered into force on 1 July 2019. The new law replaces the 2004 version and outlines various changes. It is crucial for both existing and potential new investors to understand the new regulatory environment.

The LOC outlines general regulations and does not specify particular rules for Mainland China or Hong Kong businesses aspiring to expand their manufacturing footprint to Vietnam.

The new LOC includes Vietnamese and foreign companies and individuals in case their actions have or potentially have a competition restriction impact on the domestic market. The new LOC prohibits:

1. Anti-competitive agreements;
2. Abuse of dominant market position/monopoly position; and
3. Economic concentration.

Under the new law, the Vietnam Competition Authority and the Vietnam Competition Council have been merged to form the National Competition Committee (NCC). A Competition Investigation Agency has also been established under the NCC, and is responsible for monitoring and investigating any breaches of the competition law. The Ministry of Industry and Trade oversee the new departments.

Anti-Competitive Agreements

In the 2004 version, agreements were only prohibited if the market share of the combined parties exceeded 30%. The new LOC is stricter in terms of anti-competitive agreements and prohibits certain actions if the players are in the same market. It now also comprises a distinction between horizontal and vertical agreements (e.g. retailer and distributor) between business operators:

- Directly or indirectly fixing prices;
- Sharing customers or markets or supply sources; and
- Controlling the quantity of goods produced, sold, or bought as well as services provided.

The new LOC also prohibits actions that have a negative impact on market competitiveness, such as:

- Restraining investments, technical, and technology capabilities; and
- Forcing other companies to sign contracts related to the buying or selling of goods and services or bind them into commitments not related to the content of the contract.

The new LOC provides exemptions in certain cases, for example if the customers are seen to benefit from the agreements or if it increases the competitiveness of Vietnamese companies in the international market.

Abuse of Dominant Market Position/Monopoly Position

The new LOC considers a company to be in a dominant market position if it has more than 30% market share and if it has significant market power. Whether or not it has significant market power will be assessed by the following factors:

- The financial strength of the firm;
- Technology advantages and technical infrastructure;
- Ownership and the right to pose and access infrastructure or use items of intellectual property rights;
- Correlation of market share among firms in the market; and
- Other factors specific to their sectors.

Economic Concentration

In the 2004 version, economic concentration activities (e.g. mergers, acquisitions or joint ventures) were prohibited if the combined market share was above 50%. The new LOC removes the condition around market shares and it can directly prohibit economic concentration activities of companies.

The NCC's decision on economic concentration is based on the following factors:

- Combined market share;
- Level of concentration before and after the economic concentration;
- The relationship of the firms in the chain of production, distribution, or supply of goods/services or whose business lines acts as an input or is complementary in nature;
- Competitive advantages due to the economic concentration;
- The probability of the participating firms to significantly increase the prices or rate of profit after economic concentration; and
- The capability of the firms to remove or prevent other firms from entering the market.

Also, in the previous version, economic concentration activities that could lead to market shares exceeding 30% had to be reported to the relevant authorities. Under the new LOC it is required to report economic concentration activities to the NCC, if the following thresholds are met:

- Either party's total asset exceeds VND 1,000 billion (around USD 43 million) in the preceding fiscal year;
- Either party's total turnover exceeds VND 1,000 billion (around USD 43 million) in the preceding fiscal year;
- The value of the transaction exceeds VND 500 billion (around USD 21.5 million). Only applies to economic concentrations in Vietnam; and
- The combined market share of the combining entities in the relevant market is 30% or more.

Note: These thresholds were released in a draft decree in October 2018 and have yet to be finalised.

The penalty for violations of economic concentration activities is 5% of the total revenues of the firm (in the 2004 version, the penalty was twice as high).

B. Intellectual Property Protection Law on Trademarks[3,7,11,12]

A trademark is defined as a symbol, logo, word or sound which indicates that a certain good or service belongs to the owner of the trademark. Vietnam's overarching intellectual property (IP) protection is comparatively low compared to other countries (ranked 43rd out of 50). However, its protection relating to trademarks is just slightly below the regional average. In 2005, Vietnam's National Assembly passed the law on Intellectual Property Rights (IPR), which forms the basis for IP protection (including trademarks) in the country. The law was further amended and supplemented in 2009, as Vietnam has been committed to imposing stronger IP laws after joining the World Trade Organization (WTO) in 2007. The National Office of Intellectual Property of Vietnam (NOIP) which acts under the Ministry of Science and Technology is responsible for exercising the IPR and providing related services.

A trademark is protected once it has either been registered with the NOIP or accepted for protection by the NOIP after being filed through the Madrid System (through another member country of the Madrid Agreement or the Madrid Protocol), designating Vietnam as a contracting party. The protection is valid for 10 years and can be renewed for consecutive 10-year terms). The registration duration is usually between 14 to 18 months.

C. Import/Export Regulations and Licenses[13,14]

Import and export business in Vietnam is still highly regulated by the government in spite of becoming a more open economy. Mainland China and Hong Kong companies can engage in the import and export business without owning a company in Vietnam, however, the investor has to register with the Department of Planning and Investment (DPI). In addition, an Investment Certificate must be obtained, as well as other permits from the government depending on the goods.

If engaging in the import business, it is recommended to register the business on the National Business Registration Portal (dangkykinhdoanh.gov.vn/en) and to register the customs declaration on the Vietnam National Single Window Portal (vnsw.gov.vn/en). These are online portals that provide access to business registration information and issue business registration certificates.

Certain goods are prohibited from being imported or exported. Goods banned for export include petroleum oil, weapons or natural relics. Prohibited import goods include cigars, tobacco, newspapers, journals, aircraft or second-hand consumer goods such as textiles and garments, electronics or refrigerators. The government's decree also defines a list of import and export items which are subject to the issuance of special permits. For more details, please refer to Annex I in Decree No.187/2013/ND-CP published by the government's Investment & Trade Promotion Centre.

D. Jurisdiction System on Business Related Matters[15]

Vietnam is primarily a civil law jurisdiction and has a two-tier court system comprising the courts of first instances and the courts of appeal. Lawsuits can be brought before courts whereby a party sues another for the enforcement or protection of a right, or the prevention or redress of a wrong.

The Vietnam court system consists of the following courts:

- The Supreme People's Court;
- The Local People's Court (comprising the Provincial People's Courts and the District People's Courts);
- Military Courts; and
- Other law-prescribed courts.

The District People's Courts have jurisdiction to resolve first instance level cases, however, disputes involving parties or properties in foreign countries or which must be judicially entrusted to Vietnamese consulates overseas or to foreign courts shall not fall under the jurisdiction of the District People's Court (Article 33.3 of the Civil Procedure Code).

The Supreme People's Court is the highest court in Vietnam and is accountable to the National Assembly. The appellate courts of the Supreme People's Court have jurisdiction to review first instance judgements that have not come into force yet. First instance judgements involve, amongst others, business and trade disputes, labour disputes or civil disputes resolved by the District People's Courts.

Source:

[1] *The World Bank in Vietnam, World Bank, 2019*

[2] *Investing in Vietnam – Practical Law, Thomson Reuters, 2019*

[3] *Legal guide to investment in Vietnam, Allens, 2017*

[4] *How to Set Up in Vietnam, Vietnam Briefing, 2019*

[5] *Doing Business in Vietnam 2018, Deloitte*

[6] *Doing Business in Viet Nam, PwC, 2018*

[7] *Doing Business in Vietnam 2018-19, Dezan Shira & Associates*

[8] *Vietnam Issues New Competition Law, Vietnam Briefing from Dezan Shira & Associates, 2018*

[9] *New Law on Competition, PwC Vietnam, 2018*

[10] *Vietnam Competition Law – Key Changes in 2019, Mayer Brown, 2018*

[11] *U.S. Chamber International IP Index, GIPC 2019*

[12] *Procedure and timeline for registering trademark in Vietnam, S&B Law, 2016*

[13] *Vietnam's Import and Export Regulations Explained, Vietnam Briefing, 2019*

[14] *Business Registration, National Business Registration Portal*

[15] *Dispute Resolution Around the World, Baker McKenzie*

3. Taxation, Transfer Pricing, Banking and Currency Control

Executive Summary

The main forms of taxation include personal and corporate income tax (CIT), value added tax (VAT), and among other specific business taxes.

Transfer pricing provisions were enacted in February 2017, and officially came into effect in May 2017.

Vietnam adopts a managed float exchange rate regime by the State Bank of Vietnam. Vietnam generally welcomes foreign direct investments, with the exception of a selected number of industries, in which both foreigners and Vietnamese are restricted from investing in. Use of foreign currencies is restricted in Vietnam, with the Vietnamese Dong (VND) being required for most transactions within the country.

3. Taxation, Transfer Pricing, Banking and Currency Control

I. Taxation Practice[1]

All taxes in Vietnam are imposed at the national level, with no local, state, or provincial income taxes. There is no tax residency for corporate income tax (CIT).

Companies incorporated in Vietnam are subject to CIT and taxed on worldwide income: 20% CIT is applied to all foreign income, with no tax incentives.

Companies incorporated abroad but conducting businesses in Vietnam with Vietnamese parties are subject to foreign contractor tax (FCT). FCT is not a separate tax, but rather a combination of CIT and value-added tax (VAT).

A. Corporate Income Tax (CIT)[2,3]

Tax Calculation

CIT in Vietnam is calculated from taxable profits.

Companies are required to present adjustments made to accounting profit to arrive at taxable profit in the annual CIT return.

Applicable Tax Rate

The standard CIT is 20% in Vietnam, except for oil and gas industry, as well as activities related to prospecting, exploration and exploitation of certain mineral resources. The following table provides the CIT rates by industry:

Industry	Tax Rate
Standard CIT rate for all industries if not otherwise specified	20%
Oil and gas	32 - 50%
Prospecting, exploration, and exploitation of certain mineral resources (e.g. gold, silver, gemstones)	40% or 50%

Deductible Expenses

When calculating CIT, expenses are generally tax-deductible if they:

- Are related to the generation of revenue;
- Are properly supported by appropriate documentation; and
- Are not specifically identified as being non-deductible.

Examples of non-deductible expenses include:

- Expenses not actually paid or not made in accordance with current regulations;
- Unpaid employee remunerations;
- Staff welfare exceeding one month's average salary;
- Contributions to voluntary pension funds and employee life insurance exceeding VND 3 million per month per employee;
- Interests not contributed, exceeding 20% of earnings before interest, tax, depreciation and amortisation (EBITDA), or 1.5x the interest rate set by the State Bank of Vietnam; and
- Unrealised foreign exchange losses due to year-end revaluation of foreign currency items (other than for accounts payable).

For certain industries (e.g. insurance, securities trading, lotteries, etc.), the Ministry of Finance provides specific guidance on deductible expenses for calculating CIT.

Companies in Vietnam may also set up a tax deductible Research & Development (R&D) fund, where companies can allocate up to 10% of annual profits before tax.

Dividend Income

For dividends paid to foreign corporate shareholders, no withholding or remittance tax will be imposed. For dividends paid to individual investors, a withholding tax of 5% will be imposed.

Losses and Consolidation

Tax losses can be carried forward for a maximum of five years to deduct against future profits. There is no claw-back provision. Each company is taxed independently, without any form of group relief or relief by consolidation.

Profit Remittance

Foreign investors are permitted to remit their profits at the end of each fiscal year, or upon termination of the investment in Vietnam, unless the company has accumulated losses.

The foreign investor or the investee company is required to notify the tax authorities of the plan to remit profits at least seven working days prior to the scheduled remittance.

Tax Filing

Companies must make provisional CIT payments quarterly based on estimates. If the total payment is less than 80% of the annual final CIT liability, any shortfall in excess of 20% is subject to late payment interest (as high as 11% per annum). The annual final CIT return must be filed and submitted no later than 90 days from the fiscal year end. Any outstanding tax payable must be paid at the same time.

For companies with branches in different provinces, only a single CIT return is required for all branches. However, manufacturing companies may be required to allocate tax payments to the various provincial tax authorities on a pro rata basis according to the expenditure in each location.

The standard tax year is the calendar year. Companies are required to notify the tax authorities if they use a tax year other than the calendar year.

Tax Governance[4]

The General Department of Taxation is the highest tax collection agency under the Ministry of Finance.

For more information, please visit the official website (www.gdt.gov.vn/wps/portal/English).

Foreign Tax Relief and Double Taxation Agreement (DTA)

For income derived from countries that do not have DTA with Vietnam, foreign tax credits are allowed.

DTA with Hong Kong[5]

Vietnam has entered into DTAs with 80 countries as of 2019. The DTA between Vietnam and Hong Kong has been in effect since August 2009 (with the second protocol that came into effect in January 2015).

DTA aims to eliminate double taxation. The table below illustrates the tax rates applied on various sources of income stipulated in the DTA between Vietnam and Hong Kong:

Categories	Conditions	Applicable Rates of Withholding Taxes
Dividends	N/A	10%
Interests	Interest derived from certain government bodies	0%
	All other conditions not mentioned above	10%
Royalties	Royalties made as a consideration for the use of, or the right to use, any patent, design or model, plan, secret formula or process	7%
	All other conditions not mentioned above	10%

B. Value Added Tax (VAT)[2,3,6]

VAT is applicable to all goods and services used for production, trading, and consumption in Vietnam. Imported goods are subject to VAT, and VAT must be paid at the same time as import duties. VAT is calculated as output VAT minus input VAT.

VAT Rates

Taxable Business Activities	Tax Rate
• Exported goods and goods processed for export; • Certain exported services; • Goods sold to non-tariff areas, export processing companies, and duty free shops; • Construction and installation carried out for export processing companies; and • International air or sea transportation services.	0% *(Note)*

• Goods and services considered essential, including:
  ○ Clean water;
  ○ Teaching materials and books;
  ○ Medicine and medical equipment;
  ○ Various agricultural products and services;
  ○ Technical or scientific services;
  ○ Certain cultural, artistic, sport services or products; and
  ○ Social housing.
	5%

• Imports of goods or sales of goods or provision of services not exempted or subject to the 0% or 5% rates	10%

Note: The 0% VAT refers to 0% VAT on output VAT, but are still eligible for input VAT credits.

Exemptions from VAT

The following table provides examples of business activities exempt from both output VAT tax and input VAT credits:

VAT Exempt Business Activities
• Goods or services provided by individuals with annual revenue of VND 100 million or lower
• Goods or services for internal use
• Certain imported machinery, materials, airplanes, and ships that cannot be produced in Vietnam
• Various financial services including but not limited to: financial derivatives and credit services, securities services, foreign currency trading, debt factoring, and certain insurance services
• Medical and care services
• Transfer of land use rights
• Transfer of technology, software, and software services, except exported software entitled to 0%
• Gold imported in pieces not processed into jewellery
• Unprocessed exported natural resources or processed but with at least 51% of their cost being natural resources and energy

VAT filing and payments

Companies are required to file VAT returns either monthly by the 20th day of the subsequent month, or quarterly by the 30th day of the subsequent quarter if prior year annual revenue was VND 50 billion or less. In certain cases, branches of a company must separately declare VAT on their own activities.

Other Key Taxes for Manufacturers

Foreign Contractor Tax (FCT)

The FCT applies to foreign companies and individuals doing business or earning income from Vietnam through contracts with Vietnamese parties. The FCT is not a separate tax, but usually a combination of CIT and VAT. There are three calculation methods for FCT: the deduction method, the direct method, and the hybrid method.

Under the deduction method, the foreign company will pay according to standard rules for CIT and VAT (see the respective sections for more details). Under the direct method, companies pay CIT and VAT based on specific rates. Under the hybrid method, companies pay VAT according to standard rules (see the VAT section), and pay CIT based on specific rates. The table below lists out the specific rates used in the direct and hybrid methods:

Category	Items	VAT Rate (%)	CIT Rate (%)
Goods	• Goods accompanied by services in Vietnam	Exempt	1%
Services	• Services provided or consumed within Vietnam	5%	5%
	• Services together with supply of equipment	3%	2%
	• Restaurant, hotel, and casino management	5%	10%
Others	• Construction and installation without supply of materials and equipment	5%	2%
	• Construction and installation with supply of materials and equipment	3%	2%
	• Leasing of machinery and equipment	5%	5%
	• Leasing of aircraft and vessels	Exempt	2%
	• Transportation	3%	2%
	• Interest	Exempt	5%
	• Royalties	Exempt	10%
	• Insurance	Exempt or 5%	5%
	• Reinsurance	Exempt	0.1%
	• Securities transfers	Exempt	0.1%
	• Financial derivatives	Exempt	2%
	• Other activities	2%	2%

Other business taxes in Vietnam that may be applicable depending on a company's business activities include:

- Property tax, a tax payable on the rental fees for land use rights, or land ownership;
- Special Sales Tax (SST), which is a form of excise tax that applies to production or import of certain goods (certain vehicles, and gambling, smoking, or liquor-related goods), and the provision of certain services (typically related to gambling);
- Natural Resources Tax (NRT), a tax payable by industries exploiting Vietnam's natural resources; and
- Environment Protection Tax (EPT), a tax payable on production and import of goods deemed harmful to the environment, such as petroleum and coal.

C. Transfer Pricing Provisions[7]

The transfer pricing provisions for Vietnam are Decree 20/2017/ND-CP (Decree 20), which were enacted in February 2017 and came into effect in May 2017. A guiding Circular 41/2017/TT-BTC (Circular 41) was enacted in April 2017 and also came into effect in May 2017.

Major points of the transfer pricing provisions are as follows:

- Three-tiered transfer pricing documentation including a master file, a local file, and a country-by-country report (CbCR), which must be submitted together with the annual CIT return within 90 days of the fiscal year end;
- Tax authorities have the power to use internal databases for transfer pricing assessment purposes, should taxpayers be deemed non-compliant with Decree 20;
- If the taxpayer's ultimate parent company is located in Vietnam and has global consolidated revenues in the fiscal year of over VND 18,000 billion, the ultimate parent company in Vietnam is responsible for preparing and submitting the CbCR. However, if the ultimate parent is outside Vietnam, the Vietnamese entity is responsible for obtaining a copy of the ultimate parent company's CbCR and submitting this upon request by the tax authorities;
- Companies engaging in related party transactions solely with domestic related parties could be exempt from requirements to disclose information of these transactions, provided that both parties have the same tax rate, and neither party enjoys tax incentives;
- Companies may be exempt from preparing transfer pricing documentation if the company:
    - Has revenue of VND 50 billion or less, and total value of related party transactions of VND 30 billion or less; or
    - Has revenue of VND 200 billion or less, performs simple functions, and achieves earning before interest and taxes (EBIT) margins from the following businesses of at least: distribution (5%), manufacturing (10%), processing (15%); or
    - Concludes an advance pricing agreement (APA), and submits annual APA reports.
- A cap of 20% of EBITDA on the tax deductibility of total interest costs; and
- Various criteria for tax deductibility of tax service charges. For example, taxpayers must demonstrate that the intercompany services provide commercial, financial, and economic value, and provide evidence for the reasonableness of the charges.

D. Statutory Auditing Requirements and Accounting Standards

Audit Requirements

Vietnam has issued 47 auditing standards which are primarily based on international auditing standards.

All companies must file annual financial statements, and are required to appoint a Chief Accountant satisfying the Law on Accounting and guiding regulations. The annual financial statements must be approved by the Chief Accountant and the legal representative of the company. Listed enterprises and public interest enterprises must additionally prepare interim financial statements.

Audited annual financial statements must be completed within 90 days of the fiscal year end date and interim financial statements must be completed within 45 days from the end date of the first half of the fiscal year. These financial statements should be filed with the Ministry of Finance, local tax authorities, Department of Statistics, the applicable licensing body and other relevant authorities.

Audit contracts should be signed with independent auditing companies no later than 30 days before the end of the enterprise's fiscal year. Signing auditors are required to be rotated after three consecutive years. Practising auditors for public interest entities are additionally required to be rotated after four consecutive years. Audit firms for credit institutions are also required to be rotated after five consecutive years.

Accounting Standards

There are currently 26 Vietnamese Accounting Standards (VAS), which were issued between 2001 to 2005 and were primarily based on old versions of the International Accounting Standards (IAS). Some key accounting standards, such as those for financial instruments and impairment of assets, have yet to be issued in Vietnam.

The Accounting Law issued by the National Assembly is the highest accounting regulation in Vietnam. Accounting issues are governed by various decisions, decrees, circulars, official letters, and the VAS.

Certain financial industries, including credit institutions, insurance, securities, fund managers, and funds have industry-specific accounting guidelines. Accounting guidelines for credit institutions are issued by the State Bank of Vietnam.

The basic set of financial statements prepared under VAS comprises the following:

- Balance sheet;
- Income statement;
- Cash flow statement; and
- Notes to the financial statements, including a disclosure on changes in equity.

II. Banking & Currency Control

A. Bank Account Setup Requirements and Restrictions for Foreign Direct Investment (FDI)

Bank Account Setup Requirements[8]

Both locally and foreign incorporated companies can open business bank accounts in Vietnam. Foreign companies may open accounts denominated in VND, and may also open accounts denominated in USD and other foreign currencies.

Each bank may require different minimum deposits to open an account. Each application will generally require a bank-issued application form, a copy of the notification on use of the company seal from the Business Registration Office, the Charter of the Company, the Enterprise Registration Certificate, and other specific documents.

Foreign Direct Investment (FDI) Restrictions[9]

Vietnam generally welcomes FDI. The overarching law governing investments in Vietnam is the Law on Investment (LOI). The LOI provides incentives for investors in specific industries and projects, and also lists out activities that foreign and local investors may be restricted from, as well as the industries designated as government monopolies.

Definition of "Foreign Investment"

Under the LOI, foreign investors are "any foreign organisation or individual using capital in order to carry out an investment activity in Vietnam". A foreign investment means that "a foreign investor brings into Vietnam its capital in lawful cash or other assets in order to carry out an investment activity".

Restricted Business Activities Under the Law on Investment (LOI)

The LOI prescribes certain industries that are prohibited from any investment (foreign or local). For more information, please refer to section 8 of this report.

B. Restrictions on Inbound and Outbound Funding in Foreign Currency and Local Currency

Foreign Currency[10,11,12]

The foreign exchange control policy in Vietnam is primarily administered by the State Bank of Vietnam (SBV). Vietnam has imposed certain foreign exchange controls, which are designed to limit foreign currency outflows. The Vietnam government has also been introducing measures to reduce dependency on USD.

All buying, selling, lending, and transfer of any foreign currency must be made through banks or other financial institutions authorised by the SBV. Remittance of foreign currencies offshore is permitted only in specific cases, including:

- Remittance of invested capital and profits;
- Repayment of offshore loans, and other payments related to such loans;
- Payments for certain imported goods and services; and
- Funding permitted activities offshore, such as offshore investments and offices.

Foreign individuals working in Vietnam are permitted to receive salaries, bonuses, and allowances in foreign currencies, and may deposit these amounts in foreign currency accounts in Vietnam.

Restrictions of foreign currency earnings, payments, and exchange transactions may not apply to companies operating in export processing zones (EPZ). For more information, please refer to section 9 of this report.

There are no restrictions on the amount of foreign currency that may be brought into or out of Vietnam, but any amount over USD 5,000 or equivalent must be declared upon arrival or departure.

Local Currency

The VND is not freely convertible, and cannot be remitted overseas. VND must be used for all domestic transactions, except in certain specified cases.

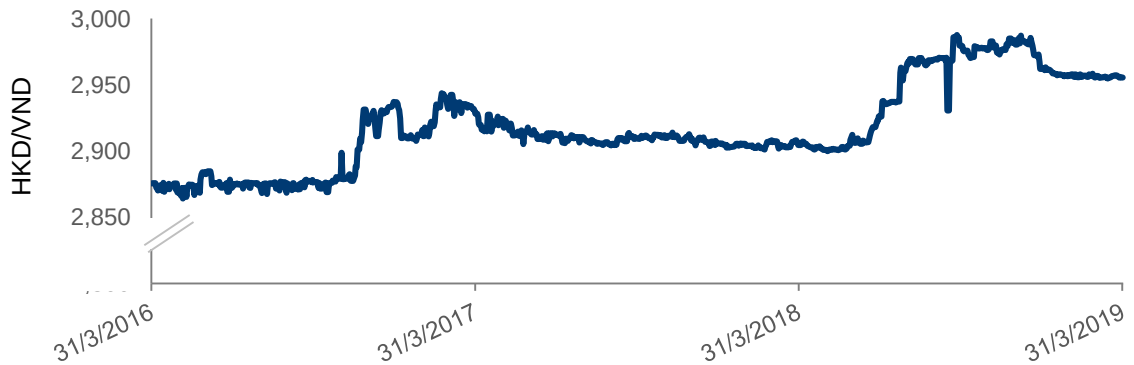
There are no restrictions on the amount of VND that can be brought into or out of Vietnam, but any amount over VND 15 million (around USD 650) must be declared upon arrival or departure.

C. Policy on Foreign Exchange Rate and Three-year Historic Trend

A managed floating exchange rate regime is adopted by Vietnam by which the value of the VND is determined mainly by market forces to allow the currency to fluctuate within a range determined by the SBV.

Publishing or quoting prices for products or services by Vietnamese businesses in foreign currencies are not permitted, even for businesses established by foreign investors.

Three-year Exchange Rate Trend for HKD to VND (Part 1/2)[13]



Three-year Exchange Rate Trend for HKD to VND (Part 2/2)[13]

Date	HKD/VND Rate
30/03/2016	2,876.06
30/03/2017	2,928.57
30/03/2018	2,903.96
30/03/2019	2,954.28

D. List of Banks from Foreign Investments[14,15]

As of 30 June 2018, there are nine wholly-owned foreign banks in Vietnam according to the SBV. The Vietnamese government plans to limit or completely stop issuing new licenses for wholly-owned foreign banks, in order to encourage takeovers of weaker local lenders.

List of Wholly-owned Foreign Banks

	Names of Banks
	ANZ Bank (Vietnam) Limited - ANZVL
	Hong Leong Bank Vietnam Limited - HLBVN
	Hongkong – Shanghai Bank Vietnam Limited - HSBC
	Shinhan Bank Vietnam Limited - SHBVN
	Standard Chartered Bank (Vietnam) Limited - SCBVL
	Public Bank Vietnam
	CIMB Vietnam
	Woori Bank Vietnam
	United Overseas Bank Vietnam

In addition, there are 47 foreign bank branches, and 49 foreign banks that have a representative office in the country. For a detailed list of the foreign bank branches and representative offices, please refer to Appendix 1.

Source:

[1] *Vietnam – Taxes on corporate income, PwC*

[2] *Vietnam Pocket Tax Book 2019, PwC*

[3] *Vietnam Tax Profile, KPMG, Aug 2018*

[4] *About us, General Department of Taxation*

[5] *Comprehensive Double Taxation Agreement – Vietnam, Inland Revenue Department of the Government of the Hong Kong Special Administrative Region*

[6] *Vietnam Highlights 2019, Deloitte*

[7] *Decree 20/2017/ND-CP, The Government of the Socialist Republic of Vietnam*

[8] *Doing Business 2019 – Vietnam, World Bank*

[9] *Law on Investment, National Assembly of the Socialist Republic of Vietnam*

[10] *Foreign Investment (June 2018), Clifford Chance*

[11] *Doing Business in Vietnam 2018, Deloitte*

[12] *Viet Nam Customs, Currency & Airport Tax regulation details, International Air Transport Association*

[13] *Bloomberg*

[14] *Wholly Foreign-Owned Banks, State Bank of Vietnam*

[15] *Vietnam to limit new foreign bank licenses to encourage local acquisitions (Aug 2018), Reuters*

4. Labour, Compensation Rule and Labour Supply Situation

Executive Summary

Vietnam's labour laws provide guidance on matters such as maximum working hours, minimum wages and welfare to protect employees.

The sizable labour force is an attractive factor for expanding manufacturing operations to Vietnam for Mainland China and Hong Kong businesses. However, since the ratio of highly educated and skilled labour is still low, considerable investments in employee training are expected. Another concerning factor in recent years is the increasing labour costs in Vietnam, in which the average monthly manufacturing and construction salary has been increasing at around 8% per year from 2015 to 2018.

Vietnam generally welcomes foreign workers and they can be employed in the country as managers, general directors, experts or technicians. They are required to obtain a work permit for legal employment in Vietnam, subject to certain exemptions.

4. Labour, Compensation Rule and Labour Supply Situation

I. Overview on Laws and Regulations over Local Labour Employment

A. Contracts and Protection Towards Employees[1,2,3,4,5,6]

The legal framework for Vietnamese employment conditions are set out in the Labour Code and other relevant regulations.

In general, employers and employees are free to negotiate their labour contracts, provided that the contract terms are not less favourable than the conditions prescribed by law.

Minimum Legal Working Age

The minimum age of employment is 15 under normal working conditions and 16 under hazardous working conditions (except for apprentices working in approved trade training centres, who must be at least 13).

Labour Contracts

In Vietnam, all workers (including full-time, part-time, temporary, and agency workers), must enter contracts with their employers, which are subject to the regulations under the Labour Code. All labour contracts must be in writing, except for certain temporary jobs of less than three months which can be contracted verbally. If the employment concerns foreigners, bilingual contracts (one of which must be Vietnamese) may be used but should inconsistencies between the two languages arise, the Vietnamese version prevails.

There are three types of labour contracts in Vietnam depending on the term:

- Indefinite term: contract without specification of the term and employment termination date;
- Definite term: contract with exact employment termination date, typically with a period of 12 to 36 months;
- Specific/seasonal term: contract of a specific/seasonal job of less than 12 months.

Probationary Contract/Provision

Before entering into longer term contracts (i.e. definite or indefinite), it is a common practice to arrange a probationary period when hiring new workers in Vietnam, especially for jobs that require certain levels of technical skills. Employers can include the probation period in the labour contract or enter into a separate probation contract.

Probationary periods may last up to 60 days, depending on the types of job requirements:

Job Requirements	Max. Probationary Period
Jobs requiring a college diploma or above	60 days
Jobs requiring a specialised worker or technical qualifications like secondary vocational certificate and secondary professional qualification	30 days
Other jobs including manual and general manufacturing labour	6 days

During the probationary period, the employer must pay a salary corresponding to at least 85% of the ordinary salary. Either party may terminate the employment during the probation without notice or paying compensation.

Apprenticeship

If companies or factories cannot hire employees with sufficient skills or want to train their own workers, the owners have the option to enter into "apprentice contracts" with new workers. In general, apprentice contract terms are based entirely on mutual agreement, including wage, duration of apprenticeship, etc.

Employers are not required to register apprenticeships as vocational training activities, but they must not charge fees for any training provided during an apprenticeship and must enter into a written contract with the apprentice. At the end of the apprenticeship, new labour contracts must be signed to establish a formal employment relationship if the employer would like to hire the apprentice as a formal employee.

Periodic Declaration of Use of Employees

The employer is required to declare its use of employees periodically to the Provincial Departments of Labour, War Invalids and Social Affairs (DOLISA), with the first declaration to be done within 30 days from the date of its commencement of operation. Further reports of labour usage changes (including termination of employment) must be submitted every six months.

Internal Labour Rules (ILRs)

Employers with more than 10 employees must establish written ILRs. The employer must consult with the company's trade union (if applicable) and register the ILRs with the DOLISA. Without an effective ILR, the employer will not be able to apply any disciplinary actions to employees or terminate labour contracts, even within circumstances prescribed by law.

Salary Payment

The compensation of Vietnamese employees must be paid in Vietnamese Dong (VND), while foreign employees can be paid in foreign currency.

Renewal of Labour Contract

The definite or seasonal term labour contracts must be renewed within 30 days after the expiry date of the old contract; otherwise the contract will be converted to an indefinite contract (for definite contract) or a definite contract (for seasonal term contract).

In all cases, after two consecutive definite term contracts, an indefinite term labour contract must be entered for the continuation of employment. In other words, employers cannot enter into three consecutive definite contracts with any employees.

Termination of Employment

The Labour Code specifies circumstances where employees and employers can lawfully terminate the labour contract unilaterally. Required notice period and compensation are also explicitly stipulated by law.

Notice Period

The notice period varies depending on the type of labour contract.

Type of Labour Contract	Notice Period (for both employers and employees)
Indefinite Term	45 days
Definite Term	30 days
Specific/seasonal Term	3 working days

Permitted Grounds for Unilateral Termination of Employment

Both employers and employees are permitted to terminate a labour contract unilaterally. However, in general, employers are subject to more stringent conditions. The table lists out some of the common causes for labour contract termination.

Examples of Permitted Grounds for Unilateral Termination of Contracts in Vietnam

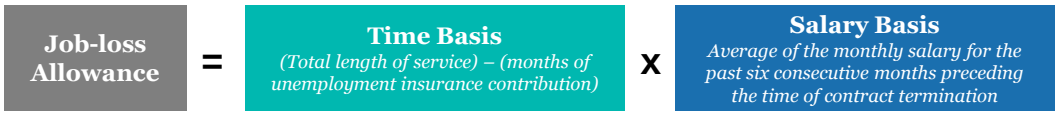
Initiated by Employee		Initiated by Employer	
Indefinite Term Contracts	1. Unilateral termination is permitted without cause;	Under all types of contracts	1. Employee repeatedly fails to perform his work in accordance with the terms of his contract;
Definite Term Contracts	2. Employee is assigned a duty or assigned to work at a location/condition inconsistent with the labour contract, or against his/her will;		2. Employee is ill and remains unable to work after having received treatment for certain periods of time;
	3. Employee is not paid in full or on time; and		3. Employer must reduce production after attempting all measures to recover from an event of force majeure; and
	4. Employee is maltreated or forced to do inappropriate tasks, etc.		4. Termination for disciplinary violations, etc.

Severance Payment

Employees working for at least 12 months shall be entitled to severance allowance upon termination of labour contract (exception in cases of dismissal on disciplinary grounds). Severance payment is calculated as follows:

Severance Payment = **Time Basis** *(Total length of service) – (months of unemployment insurance contribution)* x **Salary Basis** *Average of the monthly salary for the past six consecutive months preceding the time of contract termination* x **1/2**

Job-loss allowance: In the event of retrenchment due to organisational restructuring (mergers & acquisitions, separation, transfer of assets, etc.) or technology changes, the terminated employee is entitled to job-loss allowance provided that the worker has been working for 12 months or more. The allowance is calculated as follows, subject to a minimum of two full months' pay:

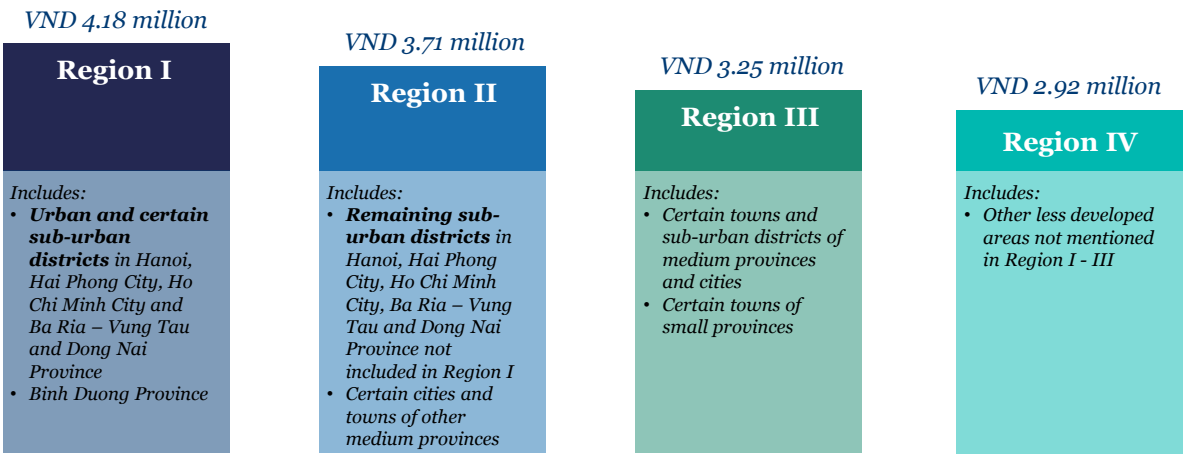


B. Minimum Wage Level[7,8,9,10]

There are national and regional minimum wage level in Vietnam. The national minimum wage is used to determine social and health insurance contributions while the regional minimum wage governs the minimum stated salary in labour contracts of Vietnamese employees in that particular region.

The monthly national minimum wage is VND 1.49 million (around USD 64) starting from 1 July 2019 as stipulated in Decree 38/2019/ND-CP.

The regional minimum monthly wages are categorised into four regions according to Decree 157/2018/ND-CP with effect from 1 January 2019. The regional minimum wage levels are set as follows:



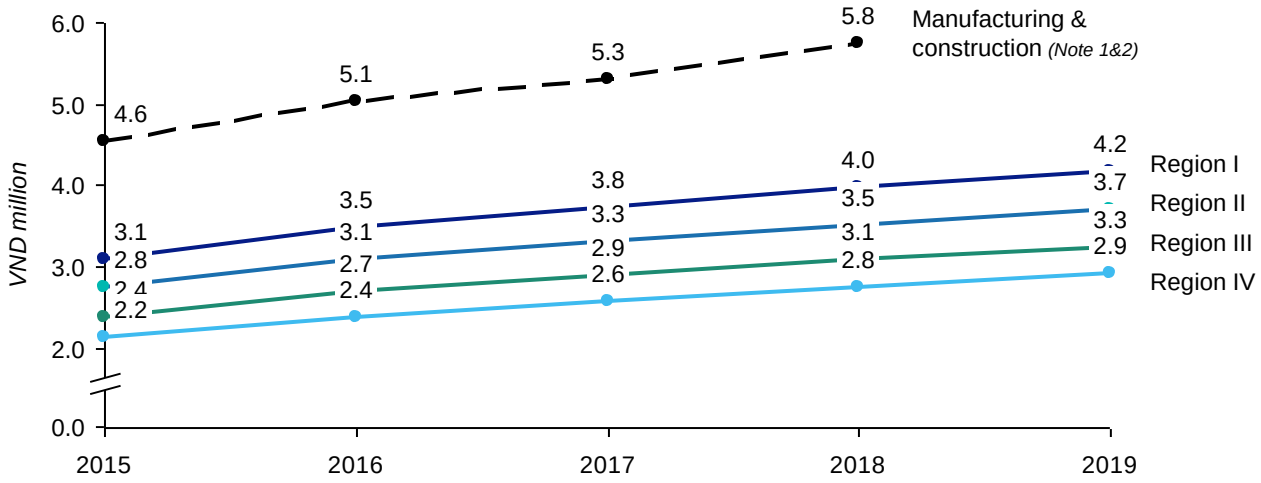
The above mentioned wage rates only apply to Vietnamese employees without vocational training. Employees considered as skilled workers by law (e.g. holders of vocational training certificates/ diplomas, graduates from professional secondary schools or above, etc.), shall be paid at least 7% higher than the regional minimum wage.

There is no specific minimum wage established for apprentices, but employers are encouraged to pay a reasonable subsidy to cover their transport and meals.

Both foreign and local enterprises shall apply the regional minimum wages according to the operating regions of their headquarter and branches. Enterprises operating in industrial parks and export processing zones will instead apply the highest regional minimum wage level within the province.

The regional classifications of individual city may be subject to change year by year. Please refer to the Ministry of Labour for updated regional rates.

Vietnam's Five-year Monthly Minimum Wage Trend by Region (2015 – 2019) and Average Monthly Wage in Manufacturing and Construction Sector (2015 – 2018)



Note 1: The latest available data in 2018 is as of Q1. The other data points in 2015 – 2017 are as of Q4.

Note 2: Based on constant exchange rate as of 28 Jun 2019, the average monthly wage in manufacturing and construction sectorin USD, based on constant exchange rate on 28 Jun 2019, is as follows: 2015: USD 194; 2016: USD 216; 2017:USD 227; 2018: USD 246.

Over the past five years, the minimum wages across all regions have been increasing at a rate of 8% per year. As for the manufacturing and construction sector, the average monthly wage has been consistently at around 45% higher than the minimum wage in Region I.

C. Maximum Working Hours and Days[2,3,4]

The maximum number of hours per day is eight hours in normal working conditions or six hours in hazardous working conditions, but not exceeding 48 hours per week.

Employees are who work for eight consecutive hours in normal working conditions or six consecutive hours in hazardous working conditions are entitled to at least a 30 minute break within their respective working hours. Employees who work night shifts (between 10pm-6am of the following day) are entitled to at least a 45 minute break within their working hours.

Overtime

Overtime is normally limited to 4 hours/day, 30 hours/month and 200 hours/year. In some sectors, the limit may be extended to 300 hours/year subject to the approval of the labour authority. The overtime pay must be at least 150% of actual hourly wage on a normal working day; at least 200% on a weekly day off; and at least 300% on a public holiday or paid days off.

D. Mandatory Welfare[1,5,11,12,13,14]

Compulsory Social Insurance (SI), Health Insurance (HI) and Unemployment Insurance (UI)

Eligibility of participation in SI/ HI/ UI: Whether an employee is subject to compulsory insurance contribution depends on the employee's nationality and the type of labour contract:

- SI: Vietnamese and foreigners with an indefinite term or definite term contract of at least one month;
- HI: Vietnamese and foreigners with an indefinite term or definite term contract of at least three months;
- UI: Only Vietnamese workers with an indefinite term or definite term contract of at least three month.

Contribution Basis

The types of income subject to SI/HI/UI contributions include salary, certain allowances and other regular payments prescribed in law, but is capped at 20x of national minimum wage for SI/HI and 20x of regional minimum wage for UI. The following table summarises the SI/HI/UI contribution basis and contribution percentage for employee and employer.

Type of Insurance	Maximum Cap of Contribution Basis	Employee Contribution %	Employer Contribution %
SI	VND 29.8 million	8.0%	17.5%
HI		1.5%	3.0%
UI	VND 58.4 million – 83.6 million	1.0%	1.0%
Total		10.5%	21.5%

Other Statutory Rights of Employees Under the Labour Code

The Labour Code of Vietnam includes a wide range of protections and rights for Vietnamese employees:

- Holiday entitlement: all local and foreign employees are entitled to 12 days annual paid leaves (or 14 – 16 days if working under hazardous conditions) with one additional day for every five years of employment. There are 10 public holidays with full salary payment for employees in Vietnam, in addition to which, a foreign employee is entitled to one day off for the traditional new year and national day of his country respectively;
- Sick leave: all Vietnamese employees are entitled to paid sick leaves ranging from 30 to 70 days per year, depending on the number of years of contribution to social insurance and working conditions. The sick leave pay is covered by the social insurance fund, not by the employer. Sick leave entitlement for foreign workers is subject to negotiation between employer and employee;
- Maternity rights: female workers are entitled to six months of maternity leave. They are paid at 100% of the average monthly gross income, which are covered by the social insurance fund. The maternity entitlements of foreign employee is, however, subject to negotiation with employer; and
- Other statutory leave entitlements: the Labour Code also permits paid leaves for various personal commitments, including marriage, bereavement, parental commitments, (i.e. paternity, surrogacy, adoption and parental care) etc.

Besides the abovementioned statutory rights, an employer must also comply with relevant laws and regulations and satisfy their obligations to ensure occupational safety and hygiene, as well as prevent work-related accidents and occupational diseases.

E. Labour Law Governing Authorities, Enforcements, and Restrictions[2,11,15,16,17]

Governing Authorities

- The Ministry of Labour, War Invalids and Social Affairs (MOLISA): the MOLISA is the government body authorised to implement national policies on employment, provide guidance concerning such policies, and supervise those subject to the policies to ensure compliance; and
- Provincial Departments of Labour, War Invalids and Social Affairs (DOLISA): the DOLISA administers employment issues within its governed province. It is responsible for the registration of a company's internal labour rules (ILRs), review of renewal applications for work permits and reports on termination of employment.

Labour Law Enforcements

- The Vietnam General Confederation of Labour supervises compliance with labour laws;
- The People's Court is the judicial institution responsible for settling labour disputes, which comes at two levels as follows:
    - The People's Court in a district level has jurisdiction to settle labour disputes involving local employer located within its governed district and its local employees; and
    - The People's Court in a province or centrally-run city, on the other hand, has jurisdiction to settle labour disputes that involve foreign companies/individuals and that relate to an entity located within that province or city.

Restrictions on Employment

Restrictions on Foreign Employment

Generally, foreigner nationals can only be employed as manager, general director, expert or technician (as prescribed in the Law of Enterprises). Under Vietnam's commitments to the World Trade Organization (WTO), at least 20% of the total number of the managers, executive directors and experts of the enterprise must be Vietnamese citizens, but at least three non-Vietnamese managers, executives and specialists should be permitted per enterprise.

The labour laws do not prohibit any industries where foreigners cannot be employed.

Restrictions on Labour Outsourcing Services in Vietnam

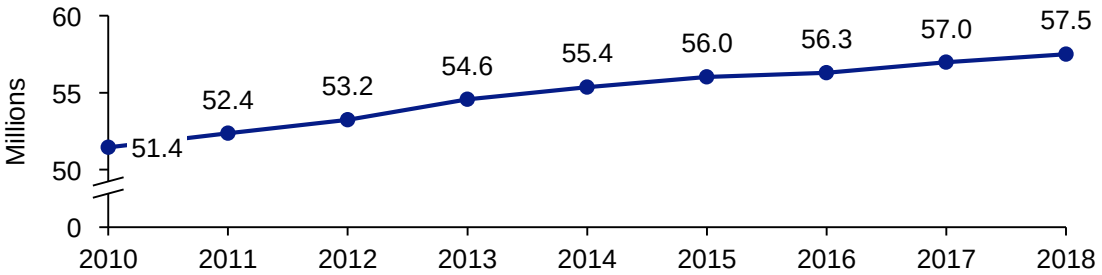
According to Decree No. 55/2013/ND-CP, labour outsourcing services are restricted to 17 job categories, including sales support staff, financial and tax consultants, and manufacturers of telecom equipment etc.

The duration of labour outsourcing service may not exceed 12 months and may not be extended with the same outsourced employee, but the company supplying the outsourced employee is not bound.

II. Local Labour Supply Market Condition

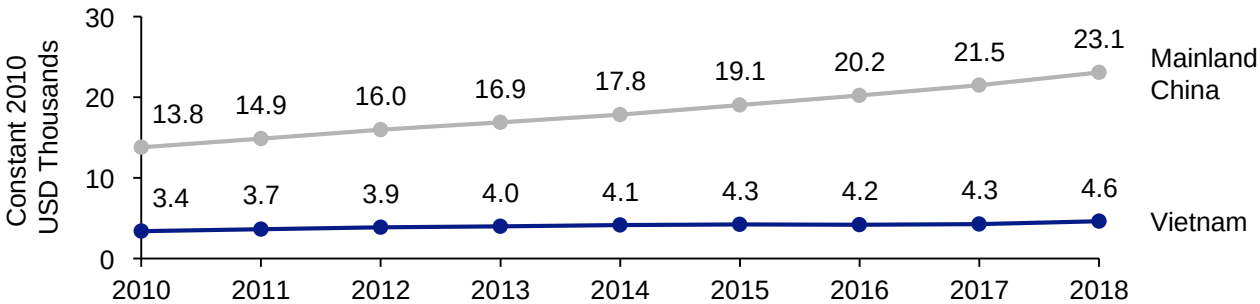
A. Supply Situation for Total Labour Force[18,19]

Vietnam Total Labour Force (2010 – 2018)



The total labour force was around 57.5 million in 2018. Workforce between the ages of 15 and 39 years accounted for nearly half of the total labour force. As of 2018 Q1, around 39% of the labour force worked in the agricultural sector, 35% in the service sector (vs 32% in 2014) and 27% in the manufacturing and construction sector (vs 22% in 2014). It shows that agricultural labour has been shifting to service, manufacturing and construction sectors.

Vietnam Industry Labour Productivity (value added per worker) *(Note)* (2010 – 2018)

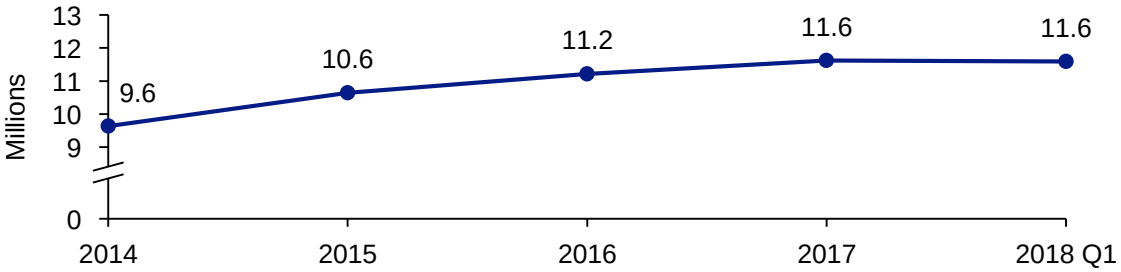


Vietnam's labour productivity grew at a lower rate (around 3.9%) than Mainland China's (around 6.7%) between 2010-2018, and its productivity was around 80% lower in comparison to Mainland China in 2018. When compared with other ASEAN countries, Vietnam's productivity is the second lowest (i.e. only higher than that of Cambodia).

Note: Industry labour productivity measures the value added per worker in manufacturing, construction, mining and quarrying and public utility sectors.

B. Supply on Educated Employees[20]

Vietnam Estimated Employed Population with Higher Education (2014 – 2018 Q1)



The estimated employed population with at least three months of vocational training, professional secondary school, professional college and other tertiary education was around 11.6 million in Q1 2018, around 21% of the total employed population. Only 12% of the employed population possessed tertiary education in Vietnam.

C. Government Support on Employee Training[21,22]

The Law on Vocational Education and Training (VET Law) established in 2015 provides the rights and responsibilities of the government and private enterprises in vocational training:

- The MOLISA is the government body responsible for overseeing the national vocational training system; and
- Private enterprises should provide information on training needs to training institutes and create conditions for employees to join vocational training in working hours.

The Vietnam government also provides preferential tax policies for enterprises engaging in vocational training activities. For example, expenditures for the purchase of fixed assets for VET activities and expenditures incurred for employees' training are tax deductible.

As of February 2018, there are over 1,900 public and private vocational training institutes in Vietnam. They offer programmes in various sectors such as garment and textiles, precision mechanics, construction, etc. For further detail on programmes, please consult the individual vocational training institutions.

D. Labour Unionisation and Related Government Regulations[5,17]

The Labour Code and the Law on Trade Unions regulate all the activities of trade unions in Vietnam. The Vietnam General Confederation of Labour (VGCL) is the umbrella organisation to all the grassroots trade unions established at company level. The minimum establishment requirement of a grassroots trade union is five employees. All local and foreign companies in Vietnam are required to allow their employees to form trade unions and grant union officers are granted certain paid time off to fulfil their duties in the unions.

Union Fee

The employer is required to contribute 2% of total SI contribution basis of all employees per month as a trade union fee.

Collective Labour Agreements (CLA)

If requested by the majority of employees in the company, the employer and the enterprise's trade union shall enter into a CLA, setting out terms and conditions regarding both parties' rights and obligations. The CLA must be registered with DOLISA.

Strike

The law stipulates that a legal strike must be organised and led by trade union according to the statutory process. A strike may be deemed illegal if the strike participants do not work for the same company or the strike does not arise due to collective labour disputes, among other reasons. If the provincial court considers the strike to be illegal, the employer may require the trade union or even employees to compensate their losses.

E. Work Permits and Visa[5,23]

Work Permits

In general, all non-Vietnamese nationals are required to obtain a work permit from DOLISA before the commencement of employment. A work permit is valid for a maximum period of 24 months and may be renewed afterwards.

Exemptions for Work Permit

There are various exemptions for foreign workers to be employed in Vietnam without a work permit. In order to enjoy the exemptions, except if otherwise specified, the employer must file an application of "Confirmation on Work Permit Exemption" with the DOLISA. The most common exemptions are laid out in the following table.

Category	Conditions for Exemptions
Short term assignment (30/90 rule)	• Each employment of not more than 30 days; • Total employment not exceeding 90 days per year; and • Exempted from applying a "Confirmation on Work Permit Exemption".
Short term assignment (3-month category)	• Stay in Vietnam less than three consecutive months; • Sell services or handle emergency matters/technical issues; and • Exempted from applying a "Confirmation on Work Permit Exemption".
Investor/member of Board of Directors	• Capital contributing member/owner of a limited liability company; and • Member of the Board in a Vietnamese entity.
Lawyer	• Holder of Foreign Registered Lawyer License.
Internal transfer in 11 service industries in Vietnam's WTO commitments	• Assigned by a foreign company to work in its Vietnamese subsidiaries/branches; and • Employed by the original foreign company for at least 12 months before transferring to Vietnam.

Application Process

Employers are responsible for ensuring legal employment of foreign employees in Vietnam, which involves the three steps described below.

Application Steps	Documents Required	Timeline	Outcome
Step 1 Registration of the need of using foreigners	• Report on the need of using foreigners	10 working days	Approval on the need of using foreigners
Step 2 Application for a work permit	• Application form • Approval on the need of using foreigner from Step 1 • Criminal record from overseas or in Vietnam • Health check from overseas or in Vietnam • Experience confirmation and Educational Qualification	7 working days	Issue of work permit
Step 3 Submission of labour contract (recruitment case)	• Copy of signed labour contract	The signed labour contract must be submitted to the labour authority within 5 working days upon the date of signing the labour contract	

Visas

Foreign nationals must hold valid visas to enter and remain in Vietnam but visas do not confer the rights of employment. Thus, in order to work in Vietnam, both visa and work permit are required. The following are the visas commonly held by the foreign employees in Vietnam:

- Business visa: this type of visa targets foreigners entering Vietnam for business purposes with common validity of three months.
- Working visa: this type of visa is issued when the foreigner obtains a work permit, with a maximum validity of two years.
- Investment visa: foreign investors mentioned in the Enterprise Registration Certificate and the Investment Registration Certificate can apply for this visa with a maximum validity of five years.
- Temporary Residence Card (TRC): foreign workers who reside in Vietnam for at least one year with a valid work permit may be granted a TRC (subject to a maximum validity of five years) to replace their visa. The dependent family members of the foreign worker are entitled to TRC as well. The TRC can be renewed if the foreign worker continues to work for the same company sponsoring the visa.

Travelling to Vietnam

Hong Kong residents are required to apply for a visa to enter Vietnam for any purposes (including tourism). Individuals may apply for a Vietnam visa via 1) Online (www.vietnamimmigration.org/vietnam-visa-application-online); 2) Embassy or consulate of Vietnam in Hong Kong; or 3) Request for visa on arrival from the Immigration Department of Vietnam through authorised travel agencies.

F. Religious and Cultural Concerns or Considerations[24,25]

Religion

Vietnam is officially an atheist country. However, many Vietnamese follow folk religions and religious customs. The most common religions in Vietnam include Mahayana Buddhism, Catholicism, Protestantism, Daoism, etc. There may still be sensitivities around discussing religion in public and foreigners should be aware and mindful when invited to such discussions.

Culture

Personal relationships play a large role in Vietnamese business culture. Trust is key to good business; thus third-party introductions maybe necessary for a new business relationship. Moreover, gift giving is common and welcome in Vietnam as a token of appreciation, however one should be mindful of the value of the gifts sent or received in order to avoid bribery offenses.

Source:

[1] *Vietnam Labour Laws 2019, PersolKelly*

[2] *Legal guide to investment in Vietnam, Allens & Linklaters*

[3] *Doing business in Vietnam 2018, Foreign Investment Agency of Ministry of Planning and Investment Foreign and Deloitte*

[4] *An Introduction to doing business in Vietnam 2018-19, Dezan Shira & Associates*

[5] *Managing Change – labour law in Vietnam, Rodl & Partner*

[6] *Guide to Vietnamese Labour Law for the Garment Industry 2018, International Labour Organization (ILO) and International Finance Corporation (IFC)*

[7] *PwC Vietnam Legal NewsBrief – New minimum salaries from January 2019, PwC*

[8] *PwC Vietnam NewsBrief - Government boosts minimum basic salary from July 2019, ,PwC*

[9] *Decree 157/2018/ND-CP, Ministry of Labour, War Invalids and Social Affairs (MOLISA)*

[10] *Minimum Wage – Vietnam, WageIndicator.org*

[11] *Labour inspection country profile: Vietnam, International Labour Organisation (ILO)*

[12] *Employment and employee benefits in Vietnam, Thomson Reuters Practical Law*

[13] *Social Insurance Law from 2018, Mazar*

[14] *Vietnam Briefing – Managing Human Resources in Vietnam, Dezan Shira & Associates*

[15] *Doing Business in Vietnam, PwC*

[16] *New Guiding Decree on Labour Outsourcing Services in Vietnam, Tilleke & Gibbins International Ltd*

[17] *Employment Manual, Russin & Vecchi International Legal Counsellors*

[18] *Total Labour Force (Vietnam), The World Bank*

[19] *Industry (including construction), value added per worker (constant 2010 US$), the World Bank*

[20] *Vietnam Labour Force Survey (2014 – 2018), General Statistic Office of the Ministry of Planning and Investment*

[21] *Vietnam Vocational Education and Training Report 2016 (issued in 2018), Directorate of Vocational Education and Training*

[22] *Vietnamese Government to Provide Vocational Training for 2.2 Million People, HR in Asia*

[23] *VietnBwqam Visa Requirement For Hong Konger, Vietnamimmigration.org*

[24] *Cultural Information – Vietnam, Global Affairs Canada*

[25] *The Cultural Atlas, IES, 2019*

5. Research and Development Environment

Executive Summary

Vietnam transformed from a low income to a middle income country mainly through low-tech manufacturing development, and the country is now a major Southeast Asian manufacturing hub. The national government has implemented the 2011-2020 Strategy for Science and Technology (S&T) Development to help the country grow from a low-tech to a hi-tech manufacturing hub and boost economic competitiveness.

However, the country is lagging behind and is still far from reaching the targets set in the Strategy. The S&T development is experiencing major hurdles. The lack of a skilled workforce and a poor intellectual property protection framework slow down foreign investments and prevent Vietnam from upgrading its economy.

5. Research and Development Environment

I. The Science and Technology (S&T) in Vietnam

Vietnam is a well-known manufacturing hub in Southeast Asia. In recent years, it has also grown into an attractive destination for research and development (R&D) investment. This trend is supported by the government's strong will to upgrade the country's S&T capacity, through establishing national policies to develop S&T in the country.

A. Policies and Trends in S&T

The Strategy for Science and Technology Development for 2011–2020[1]

Vietnam's Ministry of Science and Technology (MOST) drafted an overall strategy to guide the country towards an S&T ecosystem upgrade over a ten-year period. The Strategy for Science and Technology Development for 2011–2020 sets broad policy directions designed to enhance every aspect of the S&T framework (i.e. education, investments, Intellectual Property (IP), international integration). S&T is a national priority for Vietnam and should contribute to the country's fast and sustainable socio-economic development. The overall objective of the strategy is to enhance Vietnam's economic competitiveness and reach the S&T level of the most advanced ASEAN countries. Other major goals are:

- Couple S&T with education and trainings in order to form a skilled workforce enabling the country to speed up industrialisation and modernisation;
- Reform S&T organisations and national agencies (e.g. management structure, operational mechanism) to promote R&D;
- Increase national S&T investments and further develop funding to help and incentivise companies to invest in R&D/S&T;
- Strengthen the IP Protection framework and increase enforcement levels in order to encourage R&D; and
- Enhance Vietnam's international integration in the S&T ecosystem to foster technology transfers and upgrade the country to international standards.

To reach the objectives mentioned above, MOST also drafted specific targets that will serve as indicators to assess the success of the Strategy. Some of the main numerical S&T goals are:

- The value of hi-tech products will account for about 45% of the GDP by 2020;
- The number of research publications from state-funded agencies should increase at a 15%-20% rate year-on-year;
- Total R&D investments should reach 1.5% of GDP in 2015 and 2% in 2020;
- The country should have a ratio of researchers and engineers of 11-12 per 10,000 people; and a total count of 10,000 hi-tech engineers by 2020; and
- By 2020, Vietnam aims to have 60 international level research institutions dedicated to S&T; 5,000 certified S&T enterprises and 30 hi-tech technology incubators.

In the 2011-2020 Strategy, MOST also lists out the key industries where an increase in R&D activities would benefit the entire country:

- Agriculture: become an agriculturally strong country in terms of rice, tropical and livestock products (e.g by using biotechnologies);
- Medicine and Pharmaceuticals: improve general living standards (e.g. by mastering advanced techniques in diagnosis and treatment of diseases);
- Energy: ensure an appropriate energy structure (e.g. by developing technologies in electricity, nuclear energy, renewable energies);
- Transport: study and develop safe, smart and environmental-friendly transport technologies;
- Construction: foster a sustainable urban and rural development; and
- Others sectors: which include marine research or natural resources management and usage.

Additional Specific Policies[2,3]

The Vietnamese government also developed other national policies targeting specific industries in order to strengthen the 2011-2020 Strategy. Some examples are the Sustainable Development Strategy or the Mechanical Engineering Industry Development Strategy. All the policies focus on the same aspects: develop a highly skilled workforce, increase investments in R&D, roll out fiscal incentives for S&T companies and steer towards a sustainable development.

Outlook[4,5,6,7,8]

Policies implementation is encountering major challenges. According to the recent situation assessment, Vietnam is unlikely to meet its 2020 objectives defined in the Strategy for Science and Technology Development. The implementation of the overall policy is confronted with major difficulties. First of all, national organisations and private companies are reluctant and afraid to go through technological changes. This is a direct result of a lack of government support and also of an unclear implementation roadmap. The country has also not yet managed to reform the state-owned S&T organisations and agencies. Another major obstacle is the difficulty for companies to profit from existing incentives. Private firms are faced with complicated and inefficient administrative procedures, preventing them from being certified as a S&T company. Without being certified by the government, companies are less likely to receive funding or being granted tax incentives. Last but not least, S&T businesses are still not able to become Vietnam's innovation engine. A lack of clear communication and efficiency prevents R&D advancement from being implemented in the business operations. As a result, companies fail to upgrade their products which will hinder Vietnam's improvement of its economic competitiveness.

These issues are therefore preventing Vietnam from meeting its S&T objectives and upgrading its economy:

- The country lacks S&T-focused enterprises: in 2019, only 380 firms are certified as an S&T enterprise and 2,100 are in the process to be certified versus an objective of 5,000;
- The economy is not hi-tech driven: only 5-6% of companies in the country are using hi-tech and advanced technologies while the target is around 40%; and
- Lack of transparency on R&D investments: data from 2015 indicates R&D investments of 0.44% of GDP versus a target of 1.5% of GDP in 2015.

As a result, Vietnam's innovation capabilities are decreasing compared to other countries. The country lost 11 places in the 2018 Global Competitiveness Index. Vietnam ranked 82nd out of 140 countries versus 71st in 2017 on the "Innovation Capability" criteria of this report. The country was only ranked higher than Laos and Cambodia among the ASEAN countries (Myanmar is not ranked in this report).

B. S&T Related Organisations

In Vietnam, the various ministries manage around 160 research institutions, which focus on agricultural and rural development, health, science and technology, as well as industry and trade. The most important S&T organisation in the country is the Ministry of Science and Technology.

Ministry of Science and Technology (MOST)[9]

The MOST is a governmental body responsible for overseeing and managing Vietnam's S&T related activities. Its areas of expertise include: development of the country's S&T potential, scientific research, technology development, innovation activities, IP protection and energy (i.e. atomic energy and nuclear safety). Its main missions are:

- To draft and implement long and short term S&T strategies;
- To support the establishment of a comprehensive S&T ecosystem in Vietnam (e.g. agencies, private sector, incubators, human resources); and
- To develop, guide and organise the implementation of IP laws related to S&T.

The MOST also manages two major Vietnamese funding agencies: the National Foundation for Science and Technology Development (NAFOSTED) and the National Technology Innovation Fund (NATIF).

II. The Infrastructure of Science and Technology

S&T infrastructure is an important mean to develop R&D activities in Vietnam. However, the 2011-2020 Strategy does not heavily focus on infrastructure enhancement as some major hi-tech parks or private R&D centres have just been built in the last 15 years.

A. Government R&D Institutes and/or Funding Agencies[10]

To promote S&T and attract domestic and foreign investments, Vietnam uses the Hi-Tech Park model. These parks, generally located in major cities act like hubs connecting R&D activities with manufacturing facilities. They also offer additional services or facilities such as training centres, incubators or funding agencies in order to create a comprehensive S&T environment. To attract companies, Hi-Tech Parks generally offer various incentives such as tax exemptions.

In Vietnam, there are three national Hi-Tech Parks located in Hanoi (Hoa Lac Hi-Tech Park), Ho Chi Minh City (Saigon Hi-Tech Park) and Da Nang (Da Nang Hi-Tech Park).

In order to attract investments, companies can benefit from multiple incentives in these three locations:

- Corporate income tax (CIT): exemption for the first four years, then rate of 10% for 15-30 years depending on total investment (the normal CIT rate for outside enterprises is 20%);
- Import duty: exemption for the first five years for raw materials and accessories (that cannot be domestically produced/sourced);
- Free Land rental: selected high-tech projects are eligible for free land rental for the entire term of the investment project, and will only be required to pay construction costs, utilities, and other disbursements; and
- Other incentives such as immigration assistance or housing provided for foreign workers.

Vietnam's Hi-Tech Park Ecosystem

Hoa Lac Hi-Tech Park (Hanoi)[11]

Hoa Lac Hi-Tech Park (HHTP) is the oldest park in Vietnam. It was built in 1998 in Hanoi. It is currently the second most important park of the country with a total of 81 investment projects for a total value of USD 3 billion. To further develop the park, management aims to attract investors working in R&D, training, incubation and hi-tech product manufacturing. The main industries in the park include biotechnology, information communications technologies (ICT), automation and new materials.

Da Nang Hi-Tech Park[12]

Established in 2010, Da Nang is the latest and currently the smallest hi-tech park of the country with investments amounting to USD 390 million in 2018 (for around 10 projects). Its main missions are to support R&D activities in hi-tech, training a hi-tech workforce and incubating S&T start-ups. An example of a current project in the park is a digital factory investment which will be supported by the construction of an automation and hi-tech R&D centre, a training centre and also a solution centre focusing on Industry 4.0 technologies.

This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Saigon Hi-Tech Park (Ho Chi Minh City)[13]

Created in 2002 by the government, Saigon Hi-Tech Park (SHTP) is the most important park of the country as it accommodates (in 2018) more than 100 projects worth around USD 6.5 billion. The hub's priority is to attract investments from four hi-tech sectors: 1) microelectronics, information technology, telecommunications; 2) precision engineering and automation, 3) biotechnology (in pharmaceuticals) and 4) new materials, new energy, nano technologies. Major industry leaders companies are present on the campus, amongst which includes Intel (chip assembling and inspection), Samsung (manufacturing electronic devices), Nidec (manufacturing precision mechanical equipment) and Sanofi (pharmaceutical research).

B. University-based R&D Institutes[14]

Apart from the government, universities are important players in the R&D field. According to the 2019 QS Asia University Rankings, Vietnam has only four universities ranked in the top 300, indicating a poor quality in research and teaching. Typically, QS Institute ranks the top universities in Asia according to six criteria, among which the most important ones are academic reputation (assessing teaching and research quality) and citation per faculty (assessing importance of research outputs). The top Vietnamese institution only comes in 124th place, implying that research carried out in the university has a low impact in the international S&T scene. Below is an overview of the top three institutions.

University	Research Fields in the University[15,16,17]
Vietnam National University, Hanoi (124th)	The largest university in Vietnam (which is under the direct control of the Prime Minister). The university's S&T research facilities include: the Institute of Natural Resources and Environmental Studies, the Information Technology Institute and the Institute of Microbiology and Biotechnology. The university also focuses on Humanities and Social Sciences.
Vietnam National University, Ho Chi Minh City (144th)	The university plays a key role in the national S&T research activities. The institution focuses on training engineers in multiple domains and carries out research in: Natural Sciences (mathematics, physics, chemistry, biology, environmental sciences) and Technology (ICT, automation, electronics, energy, material S&T).
Hanoi University of Science and Technology (270th)	The first technology university established in Vietnam back in 1956. The institutions hosts 20 laboratories and research centres focusing on: material science, information science, bioelectronics, software engineering, satellite navigation and precision machine engineering.

C. Private Business Firms (Research Centres)[18]

In Vietnam, the private sector plays a key role in the R&D ecosystem. In recent years, the country has become more and more active in building R&D hubs. Multinational corporations are building R&D centres in the country in order to improve geographical proximity with their manufacturing facilities. The increasing number of Foreign Direct Investment (FDI) projects related to R&D could positively influence Vietnam's economy and transform it into a hi-tech one. Some examples of multinational companies with R&D centres in Vietnam include: Samsung, Bosch, Panasonic, Yamaha, GE and HP. Other smaller enterprises like Grab (ride hailing platform) have recently opened their R&D campus and many others are in the process of establishing one. Below is a detailed table of some major R&D centres opened or currently under construction in Vietnam.

Selected Major Private R&D Centres in Vietnam

Investor	Research Focus	Description[19,20]
Samsung	Software and smart devices	Invested USD 300 million in 2012 to open the Samsung Vietnam Mobile R&D centre (SVMC) in Hanoi. The centre hosts 2,600 employees focusing on: • Research on smart devices and its applications/use; • Collaboration with manufacturer for product testing, application testing, and application development (e.g. software for Galaxy A7).
	Household appliances and electronics	Invested USD 600 million in 2017 to build a second R&D centre, the Samsung Ho Chi Minh Research & Development centre (SHRD). The centre is the largest of its kind in Southeast Asia with a focus on: • Cutting-edge technologies to be used in household appliances and electronics such as washing machine and fridge; • Designing and producing products with specific functionalities to cater to its 64 different markets around the world.
	Mobile phones and network devices	Currently building a USD 300 million R&D centre in Hanoi for hi-tech electric electronic and telecom products (estimated to be opened in 2022). This centre will focus on: • Mobile phones and network devices; • Samsung's 5G technology development; • Contributing to smart factories in Vietnam.
Bosch	Automotive	Invested in 2014 to build an automotive R&D centre in Ho Chi Minh. The centre focuses on: • Automotive technologies such as computer-aided design (CAD), continuously variable transmission (CVT) and fuel injection technologies; • Simulations and testing of hardware.
	Internet of Things	Invested in a Software and Engineering R&D centre in Ho Chi Minh. It serves as: • A laboratory for smart cities and Industry 4.0 solutions (e.g. smart solution such as embedded software, hardware and information technology (IT) tools or IT-enabled services); • An Internet of Things (IoT) test lab. A total of 1,400 employees work in both Bosch R&D facilities.

D. Infrastructure Availability for Foreign Investments

The government plans to lever R&D and S&T to increase Vietnam's economic competitiveness. To do so, it rolled out major incentives directed at foreign companies in order to attract their investments in the country. Two of the main objectives of the Strategy for Science and Technology Development for 2011–2020 are technology transfer and international integration in the S&T ecosystem. To meet these targets, a strong collaboration between foreign companies and Vietnam is required. In addition, the government built Hi-Tech Parks offering various incentives to the domestic and foreign investors. Therefore, the Vietnamese government is very keen on receiving S&T or R&D-related FDI and national infrastructure such as Hi-Tech Parks, which are available for foreign investments.

III. Priority Areas in Vietnam[21]

Due to its relatively cheap and large labour force, attractive tax policies, stable political environment and openness to trade, Vietnam attracts many foreign companies looking to expand their low-end manufacturing facilities. In 2018, the top five exports from Vietnam were:

Top Five Exports	% of Total Exports (in 2018)
Electrical Machinery and Equipment	40.3%
Apparel and Clothing	10.6%
Footwear	7.8%
Machinery and Equipment	5.5%
Other Commodities	3.8%

Generally, these industries feature low to medium technology, however in 2017, roughly 30% of Vietnam's exported products were classified as hi-tech (e.g. products with high R&D intensity, such as in computers, aerospace, pharmaceuticals). This indicates that the country has been upgrading its technology levels over the past few years.

IV. Funding for S&T and R&D[22,23]

In Vietnam, the Ministry of Science and Technology operates the two main funding agencies of the country.

National Foundation for S&T Development (NAFOSTED)

The NAFOSTED provides grant programmes for:

- Basic research in mathematics, physical sciences and astronomy, chemistry, computer sciences, mechanics, life sciences, earth sciences and interdisciplinary sciences.
    - To apply for the funding, the lead scientist (team leader) must be affiliated with an S&T organisation and be a PhD holder, or have relevant credentials published in scientific journals.
- Other projects including applied research, emergence/breakthrough research task and international cooperation.

The foundation also provides interest-free or low interest loans to S&T organisations (businesses or individuals) that execute research projects in new and emerging technologies, which could have a positive impact on the social and economic growth. Details of the loan criteria are described below:

- Priority is given to projects in hi-tech, green-tech and new highly competitive products;
- Maximum loan of 70% of the total investment; this amount cannot exceed VND 10 billion; and
- Lending period limited to 36 months.

National Technology Innovation Fund (NATIF)

The agency provides grants and preferential loans (e.g. subsidised loans interest) to S&T organisations, companies and individuals. The projects eligible for funding should focus on: hi-tech R&D, S&T enterprises incubators, workforce trainings and hi-tech technology transfer. The main mission of the agency is to sponsor the development of a comprehensive hi-tech ecosystem in Vietnam. At the same time, they also focus on technology transfer for agricultural and rural development.

V. Human Resources for S&T[24,25]

Vietnam's workforce is generally regarded as tech-proficient and embracing of new technology. The country has a relatively high rate of Internet and smartphone penetration (i.e. more than 50 million Internet users). However, finding a skilled S&T workforce in Vietnam is a major challenge preventing companies from investing in Vietnam. In fields such as hi-tech, the quality of the workforce falls short of investors' requirements. As an example, the management of Dasan Zhone Solutions (provider of telecommunications networking equipment) highlighted that the company lacks "chip programming" personnel because Vietnam's IT universities do not train graduates in this specific topic. One of the main solutions mentioned by investors is to create a linkage between universities and the private sector. Firms should collaborate with institutions to offer specific industry trainings, allowing students to apply their theoretical knowledge with real life challenges and gain valuable experience. Additional initiatives from companies such as funding scholarship or offering R&D internships are key elements to solve the current knowledge gap in Vietnam.

Overall, in the 2019 Global Innovation Index, the country ranked 58th out of 126 countries in the criteria of "Researchers, FTE/mn pop." with a ratio of 701 researchers per 1 million people. This ratio is the fourth highest among the ASEAN countries. In addition, 23% of tertiary graduates students graduated in science and engineering. *(Note)*

Note: the figure represents the share of all tertiary-level graduates in natural sciences, mathematics, statistics, information and technology, manufacturing, engineering, and construction as a percentage of all tertiary-level graduates.

VI. Supports in Testing and Certification

The testing and certification market is growing in Vietnam with more and more companies entering this field. There is no specific government support provided to the companies. However, the largest institute in Vietnam's testing, inspection and certification market is the state owned agency STAMEQ. Operating under the MOST, the agency prepares and drafts the national standards with benchmarking against international best practices.

VII. Intellectual Property (IP) Policies[26]

IP rights are an important factor to consider when entering a country. Some nations have trouble implementing a strong framework to protect IP rights which can lead to serious damages to the companies. Each year the Global Innovation Policy Center (GIPC) publishes a worldwide ranking which analyses eight IP protection-related categories: patents, copyrights, trademarks, trade secrets, commercialisation of IP assets, enforcement, systemic efficiency, as well as membership and ratification of international treaties. According to the 2019 IP Index published by the GIPC, Vietnam's IP Protection is very low. Globally, the country is ranked 43rd out of 50 analysed countries. Regionally it is also underperforming when compared to other Asian countries. Overall, Vietnam scored 31% compared to 52% for the Asian average (as a reference the top five world economies' average was 92% in the index).

The report underlines areas where Vietnam's IP protection have improved over the years:

- Overall basic level of IP protection;
- Increasing enforcement (e.g. stronger penalties for commercial-scale infringements);
- Greater integration into international IP platforms due to the Free Trade Agreements (FTAs) (e.g. through EU-Vietnam FTA); and
- General efforts to implement a strong IP protection framework.

However, substantial weaknesses still exist, including:

- Overall, low IP enforcement with insufficient penalties and administrative inaction;
- Poor copyright protection (e.g. online infringement);
- High physical counterfeiting rates;
- High digital piracy rates (software piracy estimated at 74%); and
- Specific inefficiency in life science patents protection.

Source:

[1] *Approving the Strategy for Science and Technology, Ministry of Science and Technology*

[2] *Vietnam Sustainable Development Strategy for 2011-2020, Socialist Republic of Vietnam*

[3] *Vietnam's mechanical engineering industry development strategy until 2010 & vision to 2020, Socialist Republic of Vietnam*

[4] *National Strategy on Science and Technology Development encounters hindrances, VietnamNet, 2018*

[5] *Vietnam: New Incentives for Science and Technology Firms, Vietnam Briefing, 2019*

[6] *Ministry of Planning and Investment, 2017*

[7] *Research and development expenditure (% of GDP), World Bank , updated in 2018*

[8] *The Global Competitiveness Report 2018, World Economic Forum*

[9] *Functions and Tasks, Ministry of Science and Technology*

[10] *Vietnam's Third High-Tech Park Offers Incentives to Investors, Tilleke & Gibbins, 2018*

[11] *Masterplan; Vietnam Economic News, Government offers incentives for high-tech park development, HHTP, 2018*

[12] *Da Nang Hi-Tech Park; Vietnam Economic News, Da Nang seeks investment in Hi-Tech Park, HHTP, 2018*

[13] *Saigon Silicon City, About Hi-tech Park*

[14] *QS Asia University Rankings 2019, QS World University Rankings*

[15] *Vietnam National University Hanoi, Institutes*

[16] *Vietnam National University Ho Chi Minh City, Research*

[17] *Hanoi University of Technology*

[18] *MNCs see benefits of R&D centres in Vietnam, Vietnam Economic Times, 2018*

[19] *Vietnam becoming Samsung's global R&D headquarters, Vietnam Investment Review, 2018; Samsung eager to develop R&D centre in Hanoi, 2019*

[20] *Bosch looks to grow its name in Vietnam, The Voice of Vietnam, 2017*

[21] *Trade Map, International Trade Centre*

[22] *NAFOSTED, Funding programmes*

[23] *NATIF, Supported Projects*

[24] *MNCs see benefits of R&D centres in Vietnam, Vietnam Economic Times, 2018, Vietnam sets target to develop digital economy, Hanoi Times, 2018*

[25] *Global Innovation Index 2019, INSEAD*

[26] *2019 IP Index, Global Innovation Policy Center, 2019*

6. Supply Chain Environment

Executive Summary

In the last decade, Vietnam has undergone a substantial shift in its economy, moving away from the agriculture sector to become more industry and services focused. To accelerate the industrialisation process in Vietnam and further establish the country as a regional manufacturing hub, the Vietnamese government focuses on the supply of raw materials, spare parts, and components in the key electronics, garment, and hi-tech industries.

In order to better support these industries, Vietnam has enacted a number of schemes aiming to build a mature manufacturing ecosystem with relevant supporting infrastructure.

6. Supply Chain Environment

I. Industry Profiles in Vietnam

Breakdown of 2018's Top 10 Exports[1]

Vietnam's major sectors by gross domestic product (GDP) in 2017 were services (51.3%), industry (33.3%) and agriculture (15.3%).

The services sector in Vietnam mainly includes tourism, transportation, banking, and finance.

The industry sector refers to electrical machinery, mechanical appliances and parts, furniture, garment, as well as optical and medical instruments.

The main agricultural products in Vietnam are livestock, and crops such as coffee, corn, coconuts, and cashews.

Over the years, Vietnam has experienced rapid growth due to its industrial exports. In 2018, Vietnam's total exports amounted to USD 290 billion, of which over 75% were contributed by its top 10 exports.

Product Groups *(Note)*	Value in 2018	% of Total Exports
1. Electrical machinery and equipment	USD 117.2 billion	40.3%
2. Footwear, and related products	USD 22.6 billion	7.8%
3. Machinery, and mechanical appliances	USD 15.9 billion	5.5%
4. Apparel and clothing, not knitted or crocheted	USD 15.8 billion	5.5%
5. Apparel and clothing, knitted or crocheted	USD 14.8 billion	5.1%
6. Other commodities	USD 11.0 billion	3.8%
7. Furniture and bedding	USD 9.8 billion	3.4%
8. Optical and medical instruments	USD 6.2 billion	2.1%
9. Fish and other seafood	USD 5.6 billion	1.9%
10. Coffee, tea, and spices	USD 4.4 billion	1.5%

Note: The above categories are grouped based on the Harmonized Commodity Description and Coding System (HS Code). For specific items within each category, please refer to www.censtatd.gov.hk/trader/hscode/index.jsp.

Vietnam is a global leader in the field of electrical machinery and equipment. According to the Observatory of Economic Complexity, Vietnam was the second largest producer of broadcasting equipment in 2017 with USD 31 billion worth of goods, the third largest exporter of telephones and parts with USD 15 billion worth of goods, and the 10th largest integrated circuits supplier in the world with USD 15 billion worth of goods.

Vietnam also occupies a strong position in global leather and footwear industry. In 2017, Vietnam was the second largest global exporter of footwear with around 1 billion pairs (7.1% of the global market), behind Mainland China which exported around 10 billion pairs (67.5% of the global market).

II. The Key Supported Industries in Vietnam[2]

In 2017, the Vietnamese government issued Decision 68/2017/QĐ-TTg, which outlines the development plan for key industries over 2016-2025. It aims to attract domestic and foreign investments into these industries to create an entry point for Vietnamese enterprises to step into the global value chains.
The key supported industries include electronics, garment textile and footwear, hi-tech, and automotive.

A. Supply Chain Policy for Key Supported Industries and Local Supply Situations

Electronics

In 2018, Vietnam was the 10th largest global exporter of electronic goods by value and the third largest in ASEAN. Many electronic goods manufacturers are moving their factories into Vietnam. For example, Mainland China's Goertek, the assembler for Apple's AirPods (wireless headphones) has confirmed plans to move production to Vietnam.

Certain raw materials such as plastic and glass components, batteries, and certain metals used in the manufacturing of electrical machinery may be eligible for tax incentives.

Garment, Textile and Footwear

Vietnam is the second largest exporter in garment, textile and footwear. Multinational companies (MNCs), such as Nike and Adidas, have set up manufacturing bases in the country. According to the Vietnam Customs, the industry export turnover reached USD 2.5 billion in the month of January 2018 (a 15% increase from Jan 2017), accounting for 12% of the country's total export turnover.

In order to reduce the garment industry's dependency on imported raw materials, the government has set a target to increase domestic textile output to 18 billion metres by 2025 (vs 2.9 billion in 2016). In order to achieve such target, the Vietnamese government has established several textile industrial parks. Vietnam National Textile and Garment Group (Vinatex), the country's largest state-owned textile company, has started the construction of Rang Dong industrial park in Nam Dinh, which is set to become the country's largest garment and textile centre. The goal of the park is to attract both foreign and local investors to Vietnam's apparel and textile industries, and to produce 1 billion metres of fabrics in 2020 and 1.5 billion metres by 2025.

Hi-tech

Many hi-tech MNCs such as Intel, LG, Panasonic, and Samsung have a presence in Vietnam. Currently the supply of domestic companies in hi-tech industries is still limited. For instance, only 10% of Samsung's suppliers are domestic firms and they usually focus on providing relatively lower value added activities. In addition, the supply of skilled workers able to operate advanced automated machines is relatively scarce in Vietnam. In order to solve the human resources issue, the Saigon Hi-Tech Park (SHTP) in Ho Chi Minh City set up the Viet Nam-Japan Training and Technology Transfer Centre, with the aim of training and upskilling local workers to meet the demand of hi-tech manufacturers.

Automotive

Global automotive firms such as Chevrolet, Toyota, Honda or Ford have established assembly lines in Vietnam. However, the localisation rate of automotive parts and components has remained relatively low at 10-40%. From 2018 to 2025, the domestic automobile manufacturing industry is predicted to grow at a 18.5% rate with output reaching 0.5 million units by 2025 and 1.8 million by 2035. The localisation rate is expected to increase to 25-40% in 2020 for all types of automobiles.

To further promote localisation of automotive industry, the government will provide incentives for raw materials used in the production of automobiles, such as tires, aluminum rims, generators and seats, encouraging the development of local supply. The complete list of qualifying parts and accessories can be found under Decree No. 111/2015/ND-CP.

III. Key Raw Materials Sourcing Platforms/Channels

The Vietnamese government has established the website Asemconnectvietnam.gov.vn with the aim of promoting international integration and trade exchanges between Asian and European enterprises. The website is run by the Vietnam Industry and Trade Information Centre under the Ministry of Industry and Trade. However, for other industries such as garment, textile and footwear, or electronics, Vietnam has yet to establish sourcing platforms at the moment. Foreign investors, however, can still benefit from the numerous Original Equipment Manufacturers (OEMs), who can provide direct sourcing of raw materials and parts.

IV. Procurement Situation (local and overseas) of Raw Materials[3]

A. Hurdles or Problems Encountered

In recent years, Mainland China's rising labour costs and other sociopolitical factors (e.g US-China trade disputes) have led to many Chinese companies looking for alternative manufacturing destinations. The Vietnamese government has strategically positioned the country as a "China plus one" destination by engaging in numerous free trade deals and developed its infrastructure to become a desired target for Chinese companies looking to expand their manufacturing base outside of Mainland China. However, anti-Chinese sentiment still continues to pose an issue for companies looking to expand to Vietnam.

Unlike other more developed countries, Vietnam's current economy is not able to support companies along the entire supply chain, especially in the supply of parts and components needed for many industries. According to the Vietnam Chamber of Commerce and Industries, there are around 151,000 enterprises working in the industrial and construction sector in Vietnam. However, only 1,400 Vietnamese companies, mostly small and medium-sized enterprises (SMEs), are engaged in industries supporting the global supply chain.

According to the World Bank, Vietnam's garment and textile industry is expected to achieve a growth rate of 41% by 2020. However, fabric production only meets 15-16% of the domestic demand due to the lack of domestic cotton suppliers. Vietnam therefore needs to import large amounts of cotton every year, as a result, customs play an important role for most businesses in this industry.

According to a 2019 report by the World Bank, Vietnam ranked the 69th out of 190 countries in Ease of Doing Business. It was ranked fifth among the ASEAN countries (Hong Kong ranked fourth worldwide in the same report).

B. Efficiency of Customs and Clearance Process

All goods arriving in and departing from Vietnam are governed by the Law on Customs and supplementary government circulars. The 8-digit ASEAN Harmonised Tariff Nomenclature (AHTN) is used for trade transactions between Vietnam and the other ASEAN countries, whilst the 6-digit Harmonised Commodity Description & Coding System (commonly known as the HS Code) applies for trade with non-ASEAN countries. Most goods imported and exported are subjected to duties and tax.

An investment license and a business registration certificate are required from the Department of Planning and Investment (DPI) to import into Vietnam. If the imported goods are for the purpose of wholesale or retail sales in Vietnam, a trading license must also be obtained.

Goods to be imported or exported are subject to the relevant customs clearance standards, which effectively check the quality, specifications, quantity and volume of the goods. Export shipment procedures are typically completed on the same day, while import shipments typically take around one to three days to complete for full container loads (FCL) and less than container loads (LCL).

Custom Clearance Process

Customs Declaration

Step 1:

Goods imported or exported are subject to customs declaration. Relevant list of documents are required for submission by the General Department of Custom, within 30 days from the date of arrival at the check-point.

Lodging the Goods

Step 2:

Goods shall be lodged to the customs offices at the checkpoint. After acceptance of the customs, goods are permitted to be unloaded to the warehouse.

Payment of Duties and Taxes

Step 3:

Depending on whether the goods are subject to import duties, payment for taxable goods can be made at the customs checkpoint or through the bank.

The list of goods eligible for tax exemption are determined by the Ministry of Finance.

Inspection and Release of Cargo

Step 4:

All goods for importation will be inspected by customs officials, depending on the characteristics of the goods. Goods will be released after duty collection and inspection.

The following table shows the supplementary documents needed for customs declaration:

Import Goods	Export Goods
Bill of lading	
Certificate of origin	
Commercial invoice	
Packing list	
Technical standard/health certificate	
Import goods declaration form	Customs export declaration form
Import permit (for restricted goods)	Export permit
Cargo release order	Electronic export customs declaration
Customs import declaration form	Contract
Inspection report	
Delivery order (for goods imported through seaports)	

Priority Customs Treatment

Companies can apply for priority treatment to reduce the complexity of customs clearance. Standards for qualifying for priority treatment can be found in Decree No. 08/2015/ND-CP. Potential benefits of the preferential customs treatment are:

- Exemption from examination of supplementary customs documentation; and
- Exemption from physical inspection of goods.

V. Logistics Support

A. Infrastructure Conditions (e.g. major airports/ports/highways)[4]

Vietnam's transport infrastructure is expanding, but at a lower rate than the country's socio-economic growth.

Airports

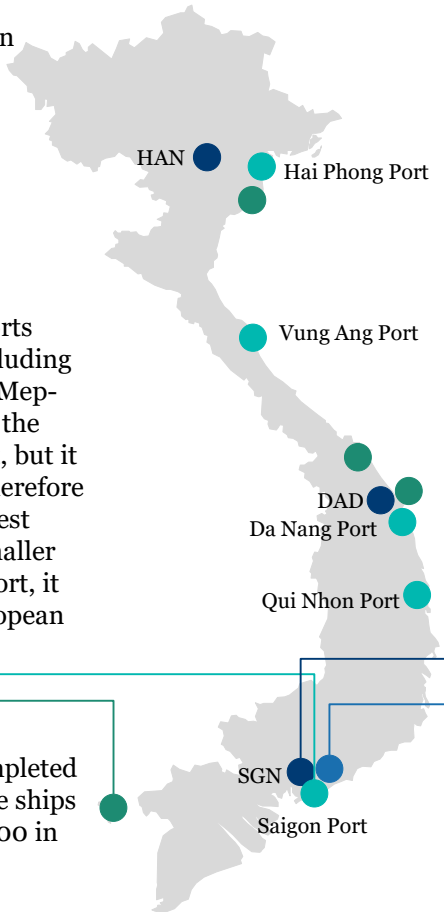
Vietnam has a total of 23 civil airports, of which, 11 are international airports. The three main airports are Noi Bai International Airport (HAN) in Hanoi, Tan Son Nhat International Airport (SGN) in Ho Chi Minh City, and Da Nang International Airport (DAD) in Da Nang. The government is currently expanding and modernising the airport infrastructure, most notably with the construction of Long Thanh airport in the Dong Nai province.

Seaports

Vietnam has 8,000 km of inland waterways. As of December 2017, the country has 44 seaports with a total capacity around 500 million tonnes per year. The major ports include: Hai Phong and Vung Ang in the north (construction of Lach Huyen), Qui Nhon and Da Nang in central Vietnam (construction of My Thuy and Lien Chieu seaports), and Ho Chi Minh City in south (construction of Hon Khoai seaport).

Location of Major Airports and Seaports in Vietnam

- Airport
- Airport Under Construction
- Port
- Port Under Construction



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Saigon Port

Saigon Port is a network of ports around Ho Chi Minh City, including the international ports of Cai Mep-Thi Via and Cat Lai. Cat Lai is the largest and most modern port, but it is not a deepwater port and therefore cannot accommodate the largest ships. Cai Mep-Thi Via is a smaller port, but being a deepwater port, it has direct connections to European ports.

Tan Son Nhat International Airport (SGN)

The busiest airport in Vietnam (serving 38.5 million passengers in 2018). The airport has reached its maximum capacity of 25 million passengers, but is undergoing expansion works including: construction of a new passenger terminal that will have a capacity of 20 million passengers, and other supporting facilities such as cargo terminals and logistics processing facilities.

Hon Khoai Seaport

Mega-port expected to be completed by 2020, able to accommodate ships with a capacity of up to 250,000 in deadweight tonnage (DWT).

Long Thanh Airport

Upon completion, it may become the largest airport in Vietnam, accommodating up to 25 million passengers and 1.2 million tonnes of cargo a year.

Highways

The road system in Vietnam is approximately 233,000 km, of which about 60% of roads are paved. However, most of the roads have fewer than four lanes and no separate interchanges. Despite this, road is still the dominant mode of freight in Vietnam, serving about 75% of all freight transport. The lack of well-maintained and sufficiently outfitted road infrastructure network hinder Vietnam's economic growth.

To improve the road infrastructure in the country, the Vietnamese government plans to complete a 2,000 km long transnational expressway by 2025. The main infrastructure of the plan includes the North-South Expressway. The estimated cost is about VND 118 trillion (USD 5.1 billion), of which nearly 50% is funded by the state. The project is divided in 11 sections, three of which will kick start in 2019.

Railways

Vietnam's current railway system is 2,600 km long. The rail network includes 15 main routes and branches connecting 35 provinces and cities. Several railway lines have been proposed for construction in recent years, most notably is the high speed North-South Express Railway. The project is funded by the Vietnamese and Japanese government and is planned to be implemented in three phases: Hanoi to Vinh City (285 km); Vinh City to Nha Trang (364 km); and Nha Trang to Ho Chi Minh City (896 km). Construction activities on the first phase are expected to commence in 2020 and the whole project is scheduled for completion in 2050.

B. Key Logistics Hubs[5]

In response to the increased demand for transport and logistics hubs, the Vietnamese government has permitted foreign investors to establish joint venture and wholly foreign-owned logistic enterprises to provide cross-border maritime transport and international logistics services. A recent trend for both domestic and multinational companies is to outsource logistics functions to third-party logistics service providers (3PLs). To take advantage of this increasing demand, many international logistics companies, such as Kerry Logistics from Hong Kong, have set up a presence in Vietnam.

Vietnam also aims to become a regional logistics hub by 2025 and Decision No. 200/QD-TTg was issued to set out the objectives and targets. The objectives include increasing the contribution of the logistics sector to 8-10% of GDP, reaching a service growth rate of 15-20%, increasing the proportion of outsourcing logistic services to 50-60%, while reducing logistic costs.

To achieve these objectives, the Vietnamese government intends to improve the legal environment for the logistics sector, to upgrade the logistics infrastructure, and to enhance the capacity of enterprises and services quality.

C. Logistics Information Tractability and Transparency[6]

In the 2018 World Bank's Logistics Performance Index (LPI), Vietnam ranked 39th out of 160 countries for the overall LPI, an improvement from 2016's result (ranked 64th out of 160 countries). Vietnam ranked third amongst the ASEAN countries.

On a granular level, the LPI score is made up of six elements: (1) Customs; (2) Infrastructure; (3) International shipments; (4) Logistics competence; (5) Tracking and tracing and (6) Timeliness. Vietnam performed relatively better in Logistics competence (33rd) and Tracking and tracing (34th), but suffered in Infrastructure (47th) and International shipments (49th).

Source:

[1] *Trade Map, International Trade Centre*

[2] *Supporting Industry Promotion Policies in APEC (2017), Asia-Pacific Economic Cooperation*

[3] *Supporting Industries in Vietnam, Vietnam Briefing*

[4] *Port Infrastructure in Vietnam, Vietnam Briefing*

[5] *Prime Minister Decision No. 200/QD-TTg*

[6] *Logistics Performance Index (LPI), The World Bank*

7. Infrastructure

Executive Summary

Industrial parks in Vietnam are popular investment destinations for foreign businesses. As Vietnam continues to attract foreign direct investment, industrial zones have been improving their infrastructure to meet international standards.

Rapid economic and population growth, increasing global interconnectivity, intensifying competition within the ASEAN region, and the Vietnamese government's plan to develop the country into a dominant transportation centre to attract more foreign investments have resulted in corresponding needs for more and better infrastructure. Overall, Vietnam's infrastructure is lagging behind some of it's Southeast Asian peers. However, more than USD 600 billion are expected to be spent on various initiatives to improve Vietnam's infrastructure by 2040.

Attracting new private investors is critical to the implementation of Vietnam's infrastructure strategy.

7. Infrastructure

I. List of Major Industrial Parks or Zones and Geographical Locations

A. Availability of Infrastructure, Associated Cost of Usage, and Options for the Major Industrial Parks or Zones[1,2]

Industrial zones are popular investment destinations for foreign businesses. In Vietnam these zones are locations earmarked by the government for the production of industrial goods and services. Typically, industrial zones complement certain activities (e.g. production, export, or hi-tech), and offer incentives for businesses setting up there.

As of December 2018, there were around 326 industrial zones set up countrywide, with 249 in operation. According to the Ministry of Planning and Investment (MOPI), the occupancy rate was 73%. Industrial zone's management is typically decentralised: the MOPI is in charge of general policy making and property management, while provincial and municipal governments are responsible for attracting foreign direct investment (FDI) and drafting regulations. Over the past few years, industrial zones have been improving their infrastructure to meet international standards.

Support and Incentives

Utilities

Industrial parks are equipped with utilities including water, electricity, water flood defenses, centralised sewage services, etc. Typically industrial zones have multiple power supply options (to guarantee the absence of power failures) and amenities such as housing (e.g. apartments for foreigners), clinics, schools, banks, shops, restaurants, and sports facilities.

Transportation

Many industrial zones are located near highways leading to airports, seaports, and railway stations for easy connection with various transportation means. According to the 2018 Provincial Competitiveness Index, the best infrastructure of the country are found in Binh Duong, Da Nang, Vinh Phuc, Hai Duong, and Ba Ria-Vung Tau provinces.

Government Incentives

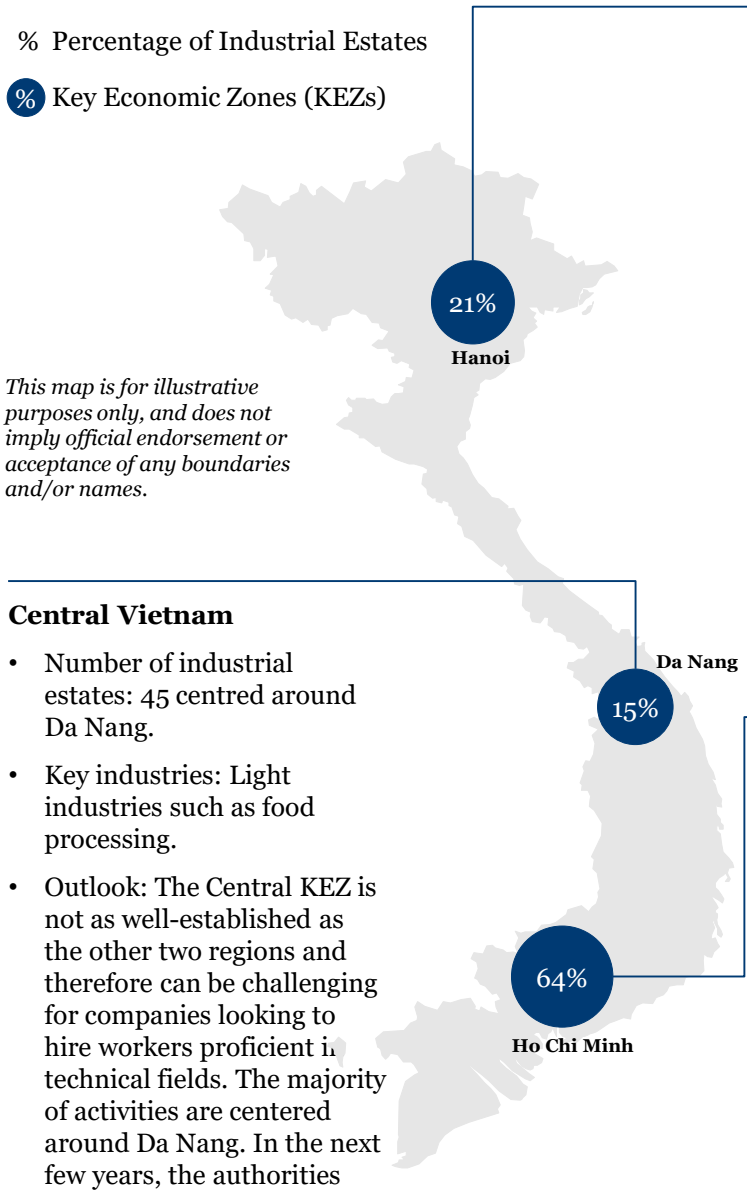
Vietnam has a series of tax and non-tax incentives in place to encourage both domestic and foreign investments in various industries:

- Tax incentives are granted based on the business lines and location of the investors. The incentives include exemptions or reductions for specific periods on corporate income tax, value added tax and import tariffs;
- Encouraged sectors include education, healthcare, sports, culture, high technology, environmental protection, scientific research, infrastructural development, or software manufacturing.

Additional exemptions from import duty and incentives on land rental are also offered to investors. Such incentives and exemptions depend on the industry and the location of investment. For more details, please refer to section 8 of this report.

Industrial Estates by Zones and Regional Implications

The country's industrial zones are located in three different areas: the Northern, Central, and Southern Vietnam. Each region has its own characteristics, as well as unique incentive programmes *(Note)*.



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

Northern Vietnam

- Number of industrial estates: 64 centred around Hanoi.
- Key industries: Agriculture.
- Outlook: The proximity of the zone to Mainland China is particularly suitable for companies eager to expand manufacturing operations to Vietnam but continue operating in Mainland China, as part of the "China plus one" strategy. Talent is available and competitive in the north, with cities such as Hanoi and Hai Phong having ample supply of qualified workers. Minimum wages are higher in these cities than in other provinces.

Central Vietnam

- Number of industrial estates: 45 centred around Da Nang.
- Key industries: Light industries such as food processing.
- Outlook: The Central KEZ is not as well-established as the other two regions and therefore can be challenging for companies looking to hire workers proficient i technical fields. The majority of activities are centered around Da Nang. In the next few years, the authorities aim to develop sectors such as oil and gas, ship building, logistics, and other high-tech industries.

Southern Vietnam

- Number of industrial estates: 194 centred around Ho Chi Minh City.
- Key industries: Technology, telecommunications, commerce, and services.
- Outlook: The Southern KEZ is a well-established industrial hub, which attracts the highest number of FDI thanks to its favourable investment climate. The zone benefits from preferential access to the largest commercial port in Vietnam. Talents are available and supported by various education institutions, however competition between employers to hire skilled personnel is high in the region.

Note: 20 industrial estates are not accounted for in this map according to official sources.

For further details regarding specific industrial estates (e.g. estate address, size and proximity to major transportation hubs etc.), please refer to the IZ Vietnam homepage (viipip.com /homeen/?module=listip). Please refer to Appendix 2 for the list of industrial estates per location.

Foreign Direct Investment (FDI)[3]

Vietnam has an advantageous geographical location, abundant natural resources, and an affordable labour force. The country is therefore one of the main FDI destinations in Southeast Asia. In 2018, Vietnam received USD 35 billion FDI, with the top three leading investors being Japan (24.2%), Korea (20.3%) and Singapore (14.1%). An important point to note is that Mainland China has been increasing its investment in Vietnam rapidly. This can partly be attributed to the US-China trade war, but some analysts say that Mainland China is also pushing investment through Hong Kong as Vietnam becomes more cautious about Chinese investment.

Vietnam's industrial and economic zones attracted 8,000 foreign projects with a total capital of around USD 145 billion by the end of 2018 (and 7,500 domestic projects worth USD 42 billion).

Cost of Usage

The land price in industrial estates varies from one site to another depending on factors such as location, provision of utilities, transportation links, proximity and access to raw materials, etc.

Industrial estates are usually specialised, with facilities tailored to meet the needs of specific industries. Investors not operating in these industries are unlikely to benefit from the existing infrastructure. They may therefore end up paying a premium as industrial estates would charge higher prices (e.g rental) for the availability of any required infrastructure.

Vietnam's industrial zones can impose limits on the minimum land parcels available for lease. Therefore settling in the country's most popular zones can be challenging and expensive.

For prices of specific sites, please refer to the Industrial Park Homepage (industrialzone.vn/lng/2/industrial-zone-search/90/0/0/0/search.aspx)

Outlook

Infrastructure remains a major hurdle for FDI expansion in Vietnam. Companies may refrain from investing in the country as they can suffer from poor access to utilities or from the lack of transport networks necessary for daily operations.

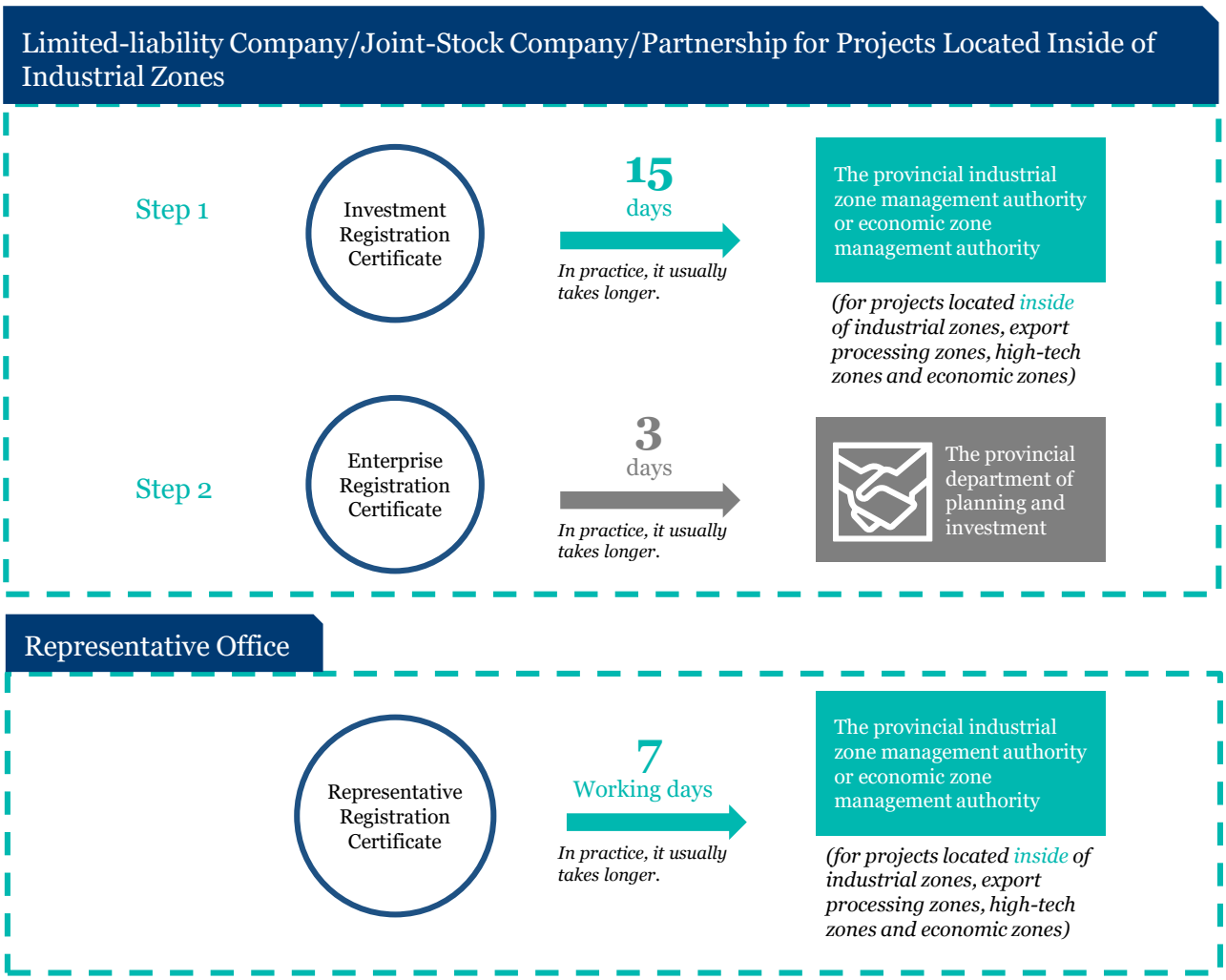
However, industrial zones provide a possible solution to these issues and therefore have become increasingly popular. The proximity to ports and other transportation networks, availability of tax and non-tax incentives, and access to talent pools proficient in specific industries are among the multiple advantages of these zones. Therefore, the number of industrial zones in Vietnam continues to rise and their infrastructure quality is increasing to meet international standards. Nevertheless, investors should pay specific attention to assessing the quality of factory buildings and warehouses, sources of electricity and water, wastewater treatment plants, etc. of the specific industrial zone prior to expanding there.

B. Land or Building for the Major Industrial Parks or Zones

Availability for Foreign Ownership

A foreign-invested enterprise may purchase real estate for commercial operations in industrial parks, export processing zones, hi-tech parks or economic zones. For prices of specific sites, please refer to the Industrial Park Homepage (industrialzone.vn/lng/2/industrial-zone-search/90/0/0/0/search.aspx).

Application Procedures for Setting up Business Operations in Industrial Estates:



II. Potential Infrastructure Shortfall[4]

Vietnam has rolled out projects designed to improve infrastructure quality. However, planning flaws and slow construction progress remain major hurdles to the country's development. In the World Economic Forum's 2018 Competitiveness Report, Vietnam ranked 75th out of 140 countries for the quality of its infrastructure, well below other Southeast Asian countries such as Singapore (1st) or Malaysia (32nd). The country ranked especially low on criteria such as: quality of roads (109th), road connectivity (107th), and efficiency of air transport services (101st). Improving these rankings is essential to make the country more competitive.

These ranking reflects the reality of Vietnam's infrastructure. The main identified challenges are:

- Poor quality of national roads, with only around 60% being paved;
- Limited capacity of ports: ports may reach their maximum capacity due to increasing trade volumes; and
- Ageing railways: the Hanoi – Ho Chi Minh City railway needs severe upgrades.

To address these issues, Vietnam needs to attract additional private investors. The government has therefore been working towards reforming the country's Public-Private Partnership (PPP) framework. However, the current environment remains highly regulatory and deterring for many potential investors.

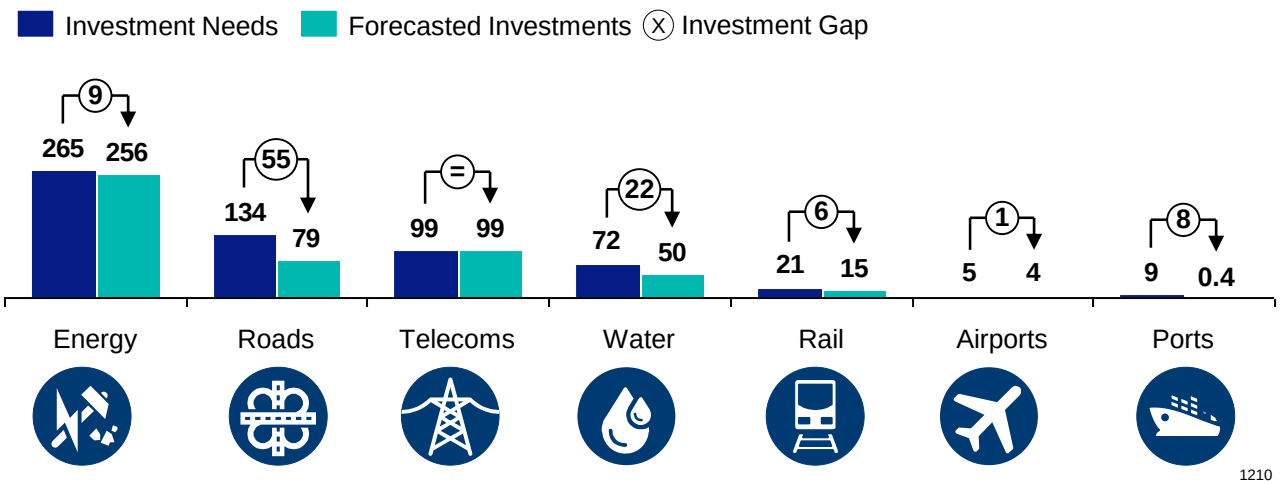
III. Latest and Upcoming Major Local Infrastructure Projects and Spending[5]

This section highlights the major infrastructure developments in Vietnam. Please refer to Appendix 3 for a comprehensive list of projects.

Vietnam needs to develop new infrastructure and upgrade existing ones in order to address the challenges posed by rapid economic and population growth, increasing global interconnectivity, and intensifying competition within the ASEAN region. In addition, the government plans to transform the country into a regional transportation hub in order to attract more foreign investments. Therefore, in 2016, the Vietnamese government launched a new Socio-Economic Development Plan (SEDP), which is a five-year reform plan aiming to support the country in achieving an annual GDP growth of 6.5% to 7% by 2020, through the development of multiple sectors, one of which is infrastructure.

From 2016 to 2040, around USD 605 billion will be needed to finance all infrastructure projects planned by the government (see chart below for breakdown by sector). Over the period it is forecasted that Vietnam's public and private sectors will invest USD 503 billion, therefore covering 80% of the country's needs.

Vietnam's Infrastructure Investment Needs 2016-2040 per Sector (USD billion)



Transportation

Transportation-specific development plans are consolidated under the Transport Strategy 2020. The strategy forecasts 6.3 billion passenger movements in 2020 (around 90% by road). Total cargo volumes are expected to reach 2.1 billion tonnes (around 70% by road and the rest by inland waterway and sea).

Examples of major initiatives under the strategy include:

- Construction of the new Long Thanh International Airport in southern Vietnam (located outside Ho Chi Minh City). Total project budget is USD 5.6 billion;
- Improvements of the railway between Hanoi and Ho Chi Minh City (which is expected to reduce travel time from 32 to 7 hours). Total project budget is USD 2.3 billion;
- Resumption of the Van Phong Port construction to transform it into the largest Vietnamese port. Total project budget is USD 500 million; and
- Modernisation of road networks (currently only 60% of the country's roads are paved)

Water

There is a lack of water supply systems and sewage infrastructure in both residential and industrial areas. The government has therefore set rigorous targets to upgrade wastewater treatment capacity. By 2025, all urban cities should have wastewater treatment and collection systems capable of collecting and treating 70 to 80% of municipal wastewaters. Numerous PPP projects (worth USD 500 million) developing water treatment and water supply facilities/infrastructure are underway in major cities. More companies will be pushed to develop better wastewater treatment facilities as the government is taking a tougher stance on pollution issues.

Telecommunications

There is an increasing number of government initiatives designed to upgrade the country's telecom infrastructure such as expanding the broadband network and developing the 5G mobile connectivity (5G frequencies tests are ongoing in 2019).

Funding Infrastructure through Public-Private Partnership and Equitisation

To increase the efficiency and scope of infrastructure development, the government encourages foreign and private investment via PPP. A law enabling PPP in a wider scope of infrastructure projects is set to be passed in 2020. The types of projects listed include:

- Upgrading and constructing roads, bridges, and railways;
- Expanding capacity and reliability of power grids in Hanoi and Ho Chi Minh City;
- Construction and development of industrial parks and complexes; and
- Expansion of existing port capacity.

Vietnam has attracted 147 PPP infrastructural projects worth a total VND 1,140 trillion (USD 50 billion).

IV. Availability of Natural Resources[6,7,8]

Natural Resources	Details
Natural Vegetation, Forests and Timber	• Around 14 million hectares (ha) of forested land, which constitutes 41% of the total land area. • Around 10 million ha are primary or otherwise naturally regenerated forest, and around 4 million hectares are planted forest. • Wood sourced from the Vietnamese forests often originates from plantations. • Species most commonly used in forestry plantations are Acacia and Eucalyptus.
Agriculture	• Agriculture accounts for almost 15% of GDP. • Agriculture's contribution to the national GDP is expected to decline by 0.5% annually, due to decreasing employment in the primary agricultural sector. • Dominant crops include coffee, rubber, cashew and rice.
Fishing/ Aquaculture	• The Vietnamese government aims to turn the country into a global leading seafood exporter which is set out in the country's fisheries development strategy plan 2020. • Under this plan, the seafood industry is expected to contribute to 30-35% of the country's agro-forestry-fisheries GDP. • Vietnam's most important seafood products include shrimp, pangasius and tuna.
Livestock	• Meat production in the past decade has grown rapidly in response to the growing demand for meat, milk, and eggs. • In 2014, Vietnam spent around USD 500 million to import poultry meat and beef from the US, Brazil, Korea, Australia, etc. • In 2016, 5 million tonnes of pork, beef, and poultry were slaughtered in Vietnam. Pork dominates Vietnamese meat production (73%), poultry (19%), beef (6%), and buffalo (2%).
Water Resources	• Water resources in Vietnam comprise both natural and artificial water bodies. • Water resources are under increasing pressure from over-exploitation due to rising irrigation demand, urban and industrial development, as well as concentrated areas of increasing population.
Minerals	• Vietnam is reasonably endowed with mineral resources, yet many have not been developed. • In 2018 mining and quarrying accounted for around 7.9 % share of GDP, the sector employed less than 1% of the workforce. • Common types of mineral in Vietnam include, antimony, bauxite, chromium, copper, gold, iron, rare elements, etc.
Coal, Oil and Fossil Fuels	• Vietnam is one of the three leading producers of oil in Southeast Asia. • The state-owned PetroVietnam holds a monopoly in the oil industry and in 2014 it was estimated to account for 20% of the national GDP as well as contributing up to 25% of Vietnam's state budget. • Vietnam is a major producer of coal and the government owns all coal in the country. Vietnam uses this resource in domestic power plants and also exports to the Asia Pacific nations.
Renewable Energy	• With Vietnam's coal reserves depleting, the government is seeking to expand the energy mix away from fossil fuels, wind and solar power are poised for a significant rise in Vietnam and will hit 20 gigawatts (GW) by 2030.

Source:

[1] *Vietnam's Industrial Zones – How to Pick a Location for Your Business, Vietnam Briefing, 2019*

[2] *Industrial Park, Vietnam Industrial Parks Investment Promotion, 2019*

[3] *Vietnam lures $35.46 billion FDI in 2018, Vietnam Net, 2018*

[4] *2018 Competitiveness Report, World Economic Forum, 2018*

[5] *Forecasting infrastructure investment needs and gaps, G-20, 2017*

[6] *Vietnam Introduction, Encyclopedia Britannica*

[7] *Natural Resources in Vietnam, Facts and Details*

[8] *Renewables in Vietnam: Current Opportunities and Future Outlook, Vietnam Briefing*

8. Types of Industries Encouraged by the Local Government

Executive Summary

All domestic and foreign enterprises investing in Vietnam must follow the Law on Investment, enacted in 2015. The Law on Investment encourages investment in certain type of industries and geographical locations.

The Law on Investment also details the types of business activities that are prohibited or restricted from either domestic or foreign participation.

8. Types of Industries Encouraged by the Local Government

I. Government Programmes Encouraging Investment in Specific Industries[1,2]

The Law on Investment (LOI) and Law of Enterprises (LOE), effective since 1 July 2015, provide guidelines on the investment regime in Vietnam. The government adopts identical legal mechanisms for domestic and foreign investors. Government support and investment incentives are granted to foreign investors for projects in the following industries:


Scientific Research & Development


Hi-tech


Infrastructural Development


Information Technology


Healthcare


Environmental Protection


Renewable Energy


Agricultural and Aquatic Products


Education


Sport and Culture

Depending on which sub-industry a business is engaged in, they may receive more incentives. For further detailed specialisation on encouraged/specially encouraged investment projects, please refer to Appendix I of Decree 118/2015/ND-CP.

Investment in a Specific Geographical Location

The LOI also specifies that investments are eligible for incentives if they are located in: 1) Administrative divisions in disadvantaged or extremely disadvantaged areas or 2) Special zones such as industrial zones (IZs), economic zones (EZs) or hi-tech zones (HTZs).

Specific Types of Manufacturing Projects

For large manufacturing projects that are not subject to special sales tax or related to the exploitation of mineral resources, the LOI also specifies certain criteria for projects to receive various investment incentives:

- Capital investment ≥ VND 6 trillion, with investment disbursed within three years from the date listed on the investment registration certificate;
- Projects in a rural area employing more than 500 workers; and
- Hi-tech, science and technology companies or organisations.

Qualified projects may be eligible for investment incentives such as reduced taxes, import duty exemptions, and land rental benefits. For further details on the specific incentives, please refer to section 9 of this report.

II. List of Business Activities that Foreign Participation may be Prohibited or Restricted from[1,2,3]

Prohibited Foreign Investment Activities

The general rule under the LOI is that foreign investors can invest in all sectors not prohibited by law. The Vietnamese government prohibits all illegal business activities, including trading of illegal drugs, prostitution, human trafficking, sale of tissues and parts of human body, etc. The government will not issue licenses to any foreign investment project in sectors or regions which may have adverse effects on national defence, national security, cultural and historical heritage, fine custom and tradition, or the environment.

The government prohibits both domestic and foreign participation and maintains monopoly over certain goods and services. The complete list of prohibited goods and services is shown below:

Category	List of Prohibited Activities
Vietnamese Government Monopolies	• Performance of national defence and security tasks; • Production and supply of industrial explosives; • Production and supply of toxic chemicals; • National electricity transmission, multi-purpose hydropower and nuclear power of extreme socio-economic importance associated with national defence and security; • Management and operation of national and urban railways, national and urban railway transport control; • Management and operation of airports which play an important role in national defence, security and flight control; • Maritime safety assurance; • Public postal services; • Lotteries; • Publishing (excluding printing and distribution of publications); • Money printing and minting; • Cartography serving national defence and security; • Management and exploitation of inter-provincial and inter-district irrigation works and sea walls; • Planting and protection of upstream forests, protective forests or specialised forests; • Provision of credit loans for socio-economic development; and • Member enterprises of state-owned groups/corporations which play a key role in production and business activities, development strategies or hold business and technological know-how.

Restricted Activities for Foreign Investments

As part of Vietnam's World Trade Organization (WTO) agreement, Vietnam reserves its sovereign right to restrict foreign investment in certain sectors by setting conditions which foreign investment projects must satisfy, such as:

- Foreign ownership limitations;
- Ownership percentage;
- Investment forms or requiring Vietnamese partners; and
- Operational contents.

A comprehensive list of 243 "conditional sectors" is provided by the Ministry of Planning and Investment. Investment sectors in which foreign investments are restricted include (non-exhaustive):

Banking and Finance

Construction

Entertainment

Education

Trading and Distribution

Real Estate

Transportation

Telecommunications

Foreign investment projects with a capital above VND 300 billion, or in these conditional sectors, must be approved by the Ministry of Planning and Investment. The issue of an investment certificate for those projects usually takes 30 to 45 business days.

To access the complete list of investment conditions applied to foreign investors, please refer to Clause 2 Article 13 Decree 118/2015/ND-CP and the "List of Investment Conditions Applied to Foreign Investors" consolidated by the Ministry of Planning and Investment.

Source:

[1] *Law on Investment (2014), The National Assembly of Vietnam*

[2] *Law on Enterprises (2014), The National Assembly of Vietnam*

[3] *Decree 118/2015/ND-CP, The Minister of Planning and Investment*

9. Key Government Incentives

Executive Summary

The Vietnamese government regulates investments with the Law on Investment, which treats both domestic and foreign investments homogenously. Investments that are eligible for incentives are entitled to preferential corporate income tax rates, import duty exemption for fixed assets, as well as exemption or reduction of land use fees/land rental and tax allowance.

Vietnam also has various types of special industrial and economic zones serving different purposes, providing incentives for enterprises residing in these areas.

9. Key Government Incentives

I. Criteria and Eligibility for Government Incentives

Under the Law on Investment (LOI) in Vietnam, incentives are given to both foreign and domestic investment projects in certain business sectors and locations. Incentives include:

- Exemption or reduction of corporate income tax for a definite term or for the whole project life;
- Import duties exemption for fixed assets; and
- Exemption or reduction of land use fees/land rental.

Corporate Income Tax (CIT) Incentives[1,2]

Companies can receive CIT incentives in both tax rate and tax holidays based on the industry, location, and size of the investment. The Vietnamese government has classified certain regions in the country as disadvantaged and extremely disadvantaged. These are generally remote and mountains areas where ethnic minorities live (e.g. Northern Highlands, Central Highlands and parts of Southern Vietnam). Investments in these areas will usually receive more incentives. For a detailed list of which areas fall under these categories, please refer to Decree 118/2015/ND-CP.

CIT Incentives by Industry

Industry	Preferential Tax Rate *(Note)*	Tax Holiday
• High-tech industries • Environmental protection • Infrastructure development • Software production • Supporting industries	10% for 15 years	4 years of tax exemption; and 50% reduction for the subsequent 9 years
• Socialised projects (e.g. education, healthcare) not located in disadvantaged or extremely disadvantaged areas	10% for project duration	4 years of tax exemption; and 50% reduction for the subsequent 5 years
• Socialised projects (e.g. education, healthcare) located in disadvantaged or extremely disadvantaged areas	10% for project duration	4 years of tax exemption; and 50% reduction for the subsequent 9 years
• Agriculture and forestry-related industries in disadvantaged areas	10% for project duration	Based on incentives for location (if applicable)
• Agriculture and related industries not in disadvantaged areas	15% for project duration	N/A
• Steel, energy saving products, agricultural machinery, forestry and fisheries, etc.	17% for 10 years	N/A

Note: Standard CIT is 20%.

CIT Incentives by Location

Location	Preferential Tax Rate	Tax Holiday
• In extremely disadvantaged areas; • Economic zones (EZs); or • Hi-tech zones (HTZs).	10% for 15 years	4 years of tax exemption; and 50% reduction for the subsequent 9 years
• In disadvantaged areas	17% for 10 years	2 years of tax exemption; and 50% reduction for the subsequent 4 years
• Industrial parks	N/A	2 years of tax exemption; and 50% reduction for the subsequent 4 years

CIT Incentives by Size (for manufacturing projects)

Investment Size	Preferential Tax Rate	Tax Holiday

• > VND 6 trillion in total capital with:
  ○ Annual revenue of VND 10 trillion by the fourth year; or
  ○ More than 3,000 employees by the fourth year of operation.
	10% for 15 years	4 years of tax exemption; and 50% reduction for the subsequent 9 years

• > VND 12 trillion in total capital, disbursed within five years since the license issuing date, and using evaluated technologies		

Import Duty Exemption for Fixed Assets

Under the LOI, Vietnamese government grants foreign investment projects exemptions on import duty for certain items, including:

- Equipment and machinery;
- Specialised means of transportation used by transport workers;
- Components, details, parts, fittings, moulds and accessories accompanying the equipment;
- Raw materials used in manufacturing components, details, parts, fittings, moulds and accessories accompanying equipment; and
- Construction materials which are not yet domestically produced.

The exemption from import duty shall also apply to the following items, if used for expansion or technology upgrade on a current project:

- Raw materials and components imported for production of projects in sectors where investment is specially encouraged or in regions with specially difficult socio-economic conditions; and
- Other special goods which need investment encouragement.

Exemption or Reduction of Land Use Fees/Land Rental

The incentives on land rental and land use fees are set out in Decree 46/2014/ND-CP. The incentives depend on whether the project is in disadvantaged or extremely disadvantaged areas, and whether it is in an encouraged or specially encouraged sector. For the specific designations for both categories, please refer to Decree 118/2015/ND-CP.

The table below summarises the incentives on Land Rental.

Project	Land Rental Exemption Period
• Invest in specially encouraged sectors and in extremely disadvantaged areas; and • Project with a total capital ≥ VND 6 trillion in specially encouraged sectors.	The whole rental period
• Invest in encouraged investment sectors; and • New business development bases.	3 years
• Invest in disadvantaged areas; and • Labour-intensive projects in rural areas using ≥500 full-time employees.	7 years
• Invest in: specially encouraged sectors, extremely disadvantaged areas, or encouraged sectors in disadvantaged areas; • Labour-intensive projects in rural areas using ≥500 full-time employees in encouraged sectors; and • Project with a total capital ≥ VND 6,000 billion.	11 years
• Invest in: specially encouraged sectors in disadvantaged areas, or encouraged sectors in extremely disadvantaged areas; • Labour-intensive projects in rural areas using ≥500 full-time employees in specially encouraged sectors; and • Project with a total capital ≥ VND 6,000 billion in encouraged sectors.	15 years

II. Scope of Special Economic Zone Scheme and Geographical Location[3,4]

Economic Zones (EZs)

EZs aim to promote investments, socio-economic development, and maintain national defence and security. There are 18 coastal economic zones with more than 300 state supported industrial parks throughout the country. EZs are categorised into the following types:

Type of Zone	Definition	Incentives
Costal Economic Zone	An economic zone on a coastal area and its surrounding areas	• Tax deductibles for expenses in construction, operations, or renting of apartments and social infrastructure for workers. • Priority in investment projects in the construction of houses, cultural and sport works, and social infrastructure for workers. • Entitled to receive assistance from competent authorities in carrying out administrative procedures for investment, trade and others under the "single-window or one-stop-shop" mechanism and other related issues during the process of executing the project.
Border-gate Economic Zone	An economic zone on the border areas of Vietnam and its surrounding areas	

Proposed Special Economic Zones (SEZs)

The draft law on SEZ was proposed to be adopted by the Vietnamese National Assembly in June 2018. However, the bill has raised controversy as it allows potential foreign investors to lease land in the zones for up to 99 years. As a result, the land-related policies in the draft law have been omitted. The Vietnamese government agreed to postpone passing the draft law on SEZ.

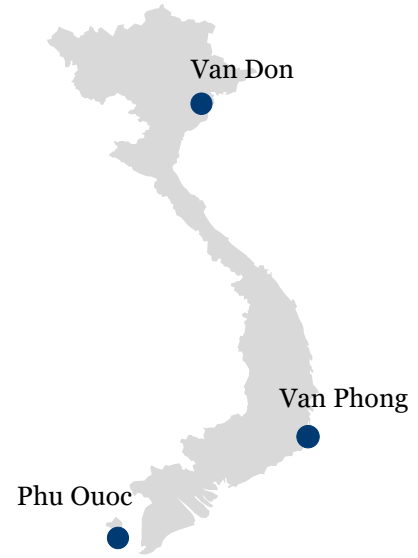
The three proposed SEZs include:

• Van Don (Quang Ninh Province).

• Van Phong (Khanh Hoa Province).

• Phu Quoc (Kien Giang Province).

Location of Proposed SEZs



This map is for illustrative purposes only, and does not imply official endorsement or acceptance of any boundaries and/or names.

III. Other Local Government Support Funding Schemes, Including Both Local and Foreign Investment[5]

Hi-tech Zones (HTZs)

HTZs are multifunctional economic-technical parks, established by the Prime Minister, aiming to develop and apply advanced technologies, encourage hi-tech enterprises, train hi-tech manpower, as well as produce and trade in hi-tech products. For more information regarding each hi-tech park in Vietnam, please refer to section 5. The following industries are encouraged to participate in HTZs:

- Building and operations of technical infrastructural works;
- Manufacturing and trading of hi-tech products;
- Scientific research and technology development, training of hi-tech manpower;
- Development of advanced technologies, hi-tech enterprises and hi-tech trade promotion;
- Provision of assorted services;
- Information, communications, software technologies;
- Bio-technologies in service of agriculture, aquaculture and healthcare;
- Microelectronics, precision mechanical engineering, electro-mechanical, electro-optical and automation technologies;
- New materials and nanotechnologies; and
- Environmental and new energy technologies.

Each hi-tech park will offer different incentives to attract investors. Investors can generally expect to receive corporate income tax incentives, import duty exemptions, and free land rental, among other specific incentives. For specific incentives in each hi-tech park, please contact each individual hi-tech park.

Source:

[1] *Law on Investment (2014), The National Assembly of Vietnam*

[2] *Doing Business in Vietnam 2018, Ministry of Planning and Investment*

[3] *Decree No.82/2018/ND-CP, Management of Industrial Parks and Economic Zones, The Minister of Planning and Investment*

[4] *Draft law on administrative-economic units, Ministry of Planning and Investment*

[5] *Decree No.99/2003/ND-CP, Promulgating the Regulation on High-tech Parks, The Government of Vietnam*

10. Environmental Requirements

Executive Summary

The Ministry of Natural Resources and Environment (MONRE) is the primary regulatory body responsible for environmental protection in Vietnam. The Law on Environmental Protection is the primary environmental law in Vietnam. Any foreign businesses wishing to invest or do business in Vietnam must abide by the Law.

Factories in Vietnam may encounter environmental hurdles or problems, such as historical pollution and license requirements.

There are environmental organisations and agencies in Vietnam providing relevant environmental supporting services to those companies in need.

10. Environmental Requirements

I. Environmental Laws and Regulations in Vietnam[1]

In Vietnam, Ministry of Natural Resources and Environment (MONRE) is the primary regulatory body responsible for environmental protection. The Law on Environmental Protection is the primary environmental law in Vietnam, which specifies that environmental protection should be in harmony with economic development, social protection, biodiversity protection and adapting to climate change. It also states that organisations and individuals benefit from the environment are responsible for providing financial support for environmental protection activities. At the same time, it adopts a polluter-pays principle.

A. The Main Environmental Protection Administrations in Vietnam

Ministry of Natural Resources and Environment (MONRE)[2]

In 2003, the government established the MONRE, tasked with the following responsibilities:

- Support the government by implementing laws and regulations to protect the environment;
- Support the government with national policies, strategies, and plans on environmental protection;
- Establish and regulate a system of environmental standards;
- Create plans to combat environmental degradation;
- Perform uniform management of the registration of environmental protection undertakings nationwide;
- Organise the evaluation and approval of environmental impact assessment (EIA) reports;
- Provide guidance on the registration of environmental-friendly establishments and products; and
- Grant environmental standard conformity certificates.

Vietnam Environment Administration (VEA)[3]

The Vietnam Environment Administration (VEA) was established under the MONRE in 2008. The responsibility of VEA is to assist the MONRE in execution of state environmental management tasks, including the functions and tasks listed below:

- Assist the development of policies, legislation, strategies, planning of national programs on environmental protection;
- Develop action plans for the implementation of national strategies on environmental protection, and submit them to the Minister of Natural Resources and Environment for consideration and approval; and
- Implement environmental examinations and inspections, and enforce relevant environmental laws.

The table below lists out the main environmental protection organisations under the VEA.

Category	Organisation Name
Departments	• Department of Policy and Legal Affairs • Department for International Cooperation, Science and Technology • Pollution Control Department • EIA & Appraisal Department • Waste Management and Environmental Promotion Department • Department for Supervision of Environmental Activities • Institute for Environmental Sciences
Centres	• Centre for Environmental Monitoring • Centre for Environmental Consultation and Technology • Centre for Environmental Information • Centre for Environmental Training and Propaganda • Environmental Protection Magazine
Regional Agencies	• Regional Agency in Ho Chi Minh City • Regional Agency in Da Nang City

B. The Main Environmental Legislation in Vietnam

The Law on Environmental Protection is the primary environmental law in Vietnam. In addition, any pollutants generated must comply with various environmental standards, such as technical regulations on the wastewater, noise, air emission, etc.

The Law on Environmental Protection

Environmental Impact Assessment (EIA)[4,5]

Before construction begins, an EIA is required for all projects that may have a significant environmental impact. The contents of an EIA is precisely defined by law, and must include any potential environmental impact during construction and operation of the project, as well as any specific mitigation measures and contingency plans taken. For projects not subject to EIAs, an environmental protection undertaking must be registered with the local authorities.

An EIA report must be revised if there is any change in the project location, scale or capacity, or any technological change in the project that may cause greater adverse environmental impact. Revision of the EIA is required if the project has not been implemented within 24 months from the original date of approval.

Inspection and approval (if applicable) of the EIA will be given within 20 days after the EIA report is received. If the report is rejected, detailed reasons for the rejection will be provided to the project owner in writing.

Pollution Control

The Law on Environmental Protection provides regulation on pollution control, and environmental remediation of air, water, and solid waste. Under this Law, all manufacturers and businesses are responsible for applying measures to control environmental pollution.

Businesses causing serious environmental pollution will be penalised for administrative violations and placed on the list of establishments causing serious environmental pollution. Also, these businesses must then take measures of pollution removal or else they will face further punishments.

Penalties

The Law establishes strict penalties and fines for breaching environmental protection rules. Offenders are required to clean up, rehabilitate, and pay compensation for losses incurred by third parties. In addition, management of offenders may be liable for criminal charges in cases of serious environmental damage. Similar rules apply to public servants who abuse their position to cover up relevant offences.

The Law on Environmental Protection Tax (EPT)[6,7,8]

The EPT was passed by the National Assembly on 15 November 2010, and has been in effect since 1 Jan 2012. The EPT is built on the principle of "polluters must pay ", forcing polluters and related entities to bear responsibility for the costs incurred from their polluting activities by factoring external cost into the price.

Compositions

The EPT will be imposed on any polluters, where the production progress involves the consumption or utilisation of goods that are considered to negatively impact the environment, including:

- Petrol, oil or grease;
- Coal;
- Hydrochlorofluorocarbons (HCFCs);
- Nylon bags; and
- Some limited usage chemicals (e.g. pesticides).

EPT Rate

Goods	Taxable Unit	Tax (VND)
Petroleum, Oil, Grease	L	900 - 3,000
Coal	tonne	10,000 - 20,000
HCFCs	kg	4,000
Nylon Bags	kg	40,000
Limited Use Chemicals	kg	500 - 1,000

Other Environmental Regulations (air, water, wastes, etc.)

Vietnam has issued supplementary environmental laws and regulations such as the Decree on Solid Waste Management (2007), and Circular on Environmental Protection in the Industry and Trade Sector (2015), etc. Emissions, industrial wastewater, other wastes, and hazardous materials are clearly regulated by the relevant laws, orders, and decrees, with corresponding penalties for violation of such laws and regulations.

A detailed list of environmental laws and regulations in Vietnam can be found in Appendix 4.

C. Main Environmental Related Joint Announcements and Statements which HK and Mainland China Have Issued with Vietnam

The Chinese Ministry of Foreign Affairs has issued a joint statement between the People's Republic of China and the Socialist Republic of Vietnam, to further strengthen Mainland China and Vietnam's comprehensive strategic partnership. The statement encourages cooperation in the environment-related fields.

In addition, there are also a series of statements and plans to further enhance the environmental cooperation between Mainland China and the ASEAN that will affect Vietnam.

Main Environmental-Related Joint Announcements and Statements[9,10,11]

Statements	Impact	Clause
Joint Statement of the People's Republic of China and the Socialist Republic of Vietnam	Encourage cooperation in environmental protection, water resources management, and sustainability.	Clause 5 (5)
Joint Statement of China and ASEAN Leaders on Sustainable Development	Encourage cooperation in conservation of biodiversity and the environment, in clean production, and in awareness of environmental.	Clauses 6 & 8
China-ASEAN Environmental Protection Cooperation Strategy 2016-2020	Establish the China-ASEAN Environmental Protection Cooperation Centre to enhance environmental cooperation. It also improves the sharing of knowledge and experiences, and encourages factories to comply with the environmental laws and regulations.	Clauses 45, 47, 53, 54

D. The Main Environmental Permits in Vietnam[12,13,14]

Vietnam has enacted laws and announced numerous environmental regulations, specifying what environmental permits are required.

Environment Impact Assessment (EIA)

An EIA is required for certain activities or projects in Vietnam, and is critical for the establishment of a factory.

Hazardous Waste Generator Registration

Businesses engaged in activities generating hazardous waste must register with the local provincial-level Department of Natural Resources and Environment.

Wastewater Discharge Permit

All individuals and enterprises producing wastewater and discharging waste with a flow of 5m^3 or more per day must apply for the wastewater discharge permit.

II. Environmental Situations in Vietnam

A. Hurdles or Problems Encountered and Resolutions

Before Land Acquisition	Pre-construction Period			Operation Period
Historical Pollution Issues	**License Requirements**			**Environmental Pollution Issues**
Environmental Due Diligence (EDD) checks for existing soil and groundwater pollution, which can help investors avoid liability for historical pollution	EIA	Wastewater Discharge Permit *(subject to project characteristic)*	Hazardous Waste Generator Registration *(subject to project characteristic)*	Each industry has different characteristics of pollutants, and will require appropriate monitoring and environmental protection equipment

Before Land Acquisition: Historical Pollution Issues

Soil and groundwater of the targeted land may have been polluted by previous land users. Companies may be liable for historical pollution, or be negatively impacted in the future, if such issues are not identified.

Resolutions

Environmental Due Diligence (EDD)

EDD can help by systematically identifying the environmental risks and responsibilities before investment or expansion of the site. An EDD will typically take around two months to complete, but may not be required for every project. The processes are as follows:

- Supporting agency selection: There are no license requirements from local environmental departments on third party agencies providing EDD services. Companies may hire a capable third party service to conduct an EDD where necessary;
- Phase I Environmental Site Assessment: The EDD provider will conduct a limited environmental, health and safety compliance assessment supporting the due diligence for the industrial transaction;
- Phase II Environmental Site Assessment: Based on the results from Phase I, the EDD provider will conduct the actual sampling, monitoring or testing of the soil, air, groundwater, and building materials, in order to evaluate the potential presence of contaminants in the scope;
- Results: The EDD provider will identify potential significant environmental risks in a report.

EDD Case

An international company planned to purchase a manufacturing facility located in Bin Duong, Vietnam. They appointed a local supporting agency to conduct EDD for the client's pre-acquisition transaction.

The primary objectives of the study was: 1) to determine the procedures and practices pertaining to general environmental management, hazardous materials, wastewater, air emissions, nuisance controls; 2) to conduct a detailed review of the physical and biological site setting; and 3) to include a checklist detailing the environmental regulatory requirements applicable to the operations and activities at the target facility and the current compliance status of the facility with respect to each regulatory obligation.

For a list of organisations/agencies providing EDD services in Vietnam, please refer to Section 10.III.A.

Pre-construction Period: Environmental Impact Assessment (EIA)

Decree 21-2008-ND-CP has stipulated the projects of industries which are required to conduct an EIA, and that they are not allowed to operate without an EIA.

Resolutions

EIA

According to the Law on Environmental Protection, the EIA must be performed in the preparatory stage of the project.

EIA Processes:

- Supporting agency selection: The owners of the project must carry out EIA themselves or hire a qualified advisory organisation to conduct EIA;
- EIA report compilation: Typically requires one to two months depending on the size and scope of the project;
- Submission: Submitting EIA report to the appropriate appraisal authority (the appraisal authority can be MONRE, Provincial People's Committee or other ministries. For most private enterprises, the EIA report will be submitted to the Provincial People's Committee);
- Review and approval: The EIA & Appraisal Department (under VEA and MONRE) will examine the EIA report and issue a decision in 45 days, while the Provincial People's Committee normally takes 30 days.

Types of projects/activities with EIA requirements for the key industries can be found in Appendix 5.

EIA Case

According to the list of projects for which an EIA report must be prepared (issued with Decree 21-2008-ND-CP), a fish cultivating tourist project was required to obtain EIA approval in Mekong river, Vinh Long province. The project proponent appointed a qualified Vietnamese company to prepare EIA report for them and subsequently received the approval. As a result, the project met the compliance requirements and started successfully.

For a list of organisations/agencies providing EIA Supporting Services in Vietnam, please refer to Section 10.III.B.

Pre-construction period: Wastewater Discharge Permit

The factories producing wastewater and discharge into receiving water source with a flow of 5m^3 per day must apply the wastewater discharge permit, or else they will not be allowed to operate.

Resolutions

Wastewater Discharge Permit

- If the factory discharge more than 3000 m^3/day, the Wastewater Discharge Permit application shall be submitted to the MONRE. If the discharge is less than 3000 m^3/day/night (30,000 m^3/day/night for aquaculture facilities), the application shall be submitted to the local provincial Department of Natural Resources and Environment (DONRE);
- After receiving the application, the MONRE or DONRE will proceed a check and evaluation, normally the permit will be granted within 45 days. The license will be valid for a maximum of 10 years with a possible extension for another five years provided that the extension is filed three months prior to the expiration date.

Pre-construction Period: Hazardous Waste Generator Registration

The factories engaged in activities generating hazardous wastes shall register hazardous wastes source with the local provincial-level DONRE, or else they will not be allowed to operate.

Resolutions

Hazardous Wastes Generator Registration

- The owner of hazardous waste source shall submit a registration dossier or send it by post to the provincial-level DONRE where the hazardous waste-generating establishments are based;
- The DONRE will consider and grant a hazardous waste source owner registration book typically within 15 working days after the submission.

For a list of organisations/agencies supporting the hazardous waste generator registration in Vietnam, please refer to Section 10.III.C.

Operation Period: Environmental Pollution Problems

During the operation period, companies may face environmental pollution problems resulting from non-compliant environmental management or equipment failure:

- Wastewater: Excessive pollutants in wastewater causing soil or groundwater pollution;
- Air emissions: Industrial exhaust emissions that are not in compliance, causing air pollution;
- Hazardous waste disposal: Non-compliant disposal of hazardous wastes leads to soil or groundwater contamination, resulting in subsequent penalties; and
- Noise pollution: Noise pollution caused by the operation of machinery and equipment.

Resolutions

Environmental Monitoring

The Pollution Control Department is mainly responsible for the control of environmental pollution problems. In the case of such problems, the following measures can be taken:

- Hiring third party service providers to conduct regular monitoring or to help with disposal of hazardous waste;
- Enhancing environmental awareness of related workers;
- Improving relevant equipment in use; and
- Optimising the manufacturing process.

For a list of organisations/agencies providing environmental monitoring and related services in Vietnam, please refer to Section 10.III.C, D, and E.

Environmental Pollution Case

A monosodium glutamate producer in Vietnam who were caught red-handed polluting the Thi Vai River in Ba Ria Vung Tau Province, 67km south of Ho Chi Minh City. They have been discharging thousands of cubic meters of untreated wastewater into the river every day for the last 14 years and as a result a 15km stretch of the river is now grossly polluted.

The Vietnamese government suspended the factory operations and fined the company a USD 7.5 million retrospective environmental protection fine. In addition to this, nearly 1,000 local residents whose health have suffered as a consequence are in the process of preparing a class action against the company.

B. Study on the Key Manufacturing Industries in which HK/Mainland China Companies Have Invested in Vietnam

Potential Environmental Issues[a]	Electronics	Garment & Clothing	Watches & Jewellery	Toys & Games	Hi-tech[b]
Historical Soil Pollution or Groundwater Pollution	✓	✓	✓	✓	✓
Lack of Relevant Environmental Related Licenses	✓	✓	✓	✓	✓
Wastewater Causing Soil or Groundwater Pollution	✓	✓	✓	✓	✓
Industrial Exhaust Emissions Causing Air Pollution	✓	✓	✓	—	—
Disposal of Hazardous Wastes Leading to Soil or Groundwater Contamination	✓	✓	—	✓	—
Noise Pollution Caused by the Operation of Machinery and Equipment	✓	✓	✓	✓	—

✓ indicates that the factory may face the environmental issues in the industry.

"—" indicates that the factory is less likely to face the environmental issues in the industry.

Note:

a. *"Environmental issue" indicates any environment related problems factories may have faced during the pre-approval period, construction period and operation period.*

b. *Hi-tech in this table mainly includes industries producing electronic components, and components and accessories used for new power generators and renewable generators, etc.*

C. Comparison of Industrial Effluent/Emission Standards Between Vietnam and Mainland China

Please refer to below legend for the understanding of all the comparison tables in this section.

Values in brackets indicate the parameters of industrial wastewater when it is discharged into the water sources serving tap water, and the values outside the brackets indicate the parameters of industrial wastewater when it is discharged into the water sources not serving tap water supply (except for electronic industry and textile industry).

For the Mainland China standards in the electronic and textile industry, values are the limitation of effluent discharged into environment directly.

"↓" indicates the requirement of Mainland China is stricter than Vietnam.

"↑" indicates the requirement of Vietnam is stricter than Mainland China.

"= " indicates the requirement of Mainland China is the same as Vietnam.

"-" indicates there is no requirement in the standards.

"N/A" indicates that there is no comparison available due to the lack of a standard from one country.

The following tables list out the common pollutants in various industries. For a complete list, please refer to the Notes section below each table for relevant standards.

All standards listed below are applicable to factories in industrial areas. There are no official specialised requirements/standards for non industrial areas in Vietnam at the moment, i.e. residential areas. If there are plans to build or operate factories in such areas, it is recommended to confirm with the local environmental department for specific regional requirements.

Electronics (Part 1/5)

Water and air pollutants are the main pollutants in the electronics industry. The following table compares the effluent and emission standards of Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Vietnam[a]	Mainland China[b]	
Electronics	Water pollutants mg/L (Except pH, on a scale of 0-14)	pH		5.5-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Suspended solids		100 (50)	50	↓ (=)
		COD		150 (75)	80	↓ (↑)
		Ammonia nitrogen	Special electronic materials	10 (5)	10/20[c]	=(↑)/↑[c](↑[c])
			Electrical units		5	↓ (=)
			Printed circuit boards		20	↑ (↑)
			Semiconductor devices		10	= (↑)
			Display device and photoelectron components		5	↓ (=)
			Electron terminals products		5	↓ (=)
		Total nitrogen	Special electronic materials	40 (20)	20/30[c]	↓(=)/↓[c](↑[c])
			Electrical units		15	↓ (↓)
			Printed circuit boards		30	↓ (↑)
			Semiconductor devices		15	↓ (↓)

Electronics (Part 2/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Vietnam[a]	Mainland China[b]	
Electronics	Water pollutants mg/L (Except pH, on a scale of 0-14)	Total nitrogen	Display device and photoelectron components	40 (20)	15	↓ (↓)
			Electron terminals products		15	↓ (↓)
		Total phosphorus	Special electronic materials	6 (4)	0.5/1.0[c]	↓ (↓)/↓[c] (↓[c])
			Electrical units		0.5	↓ (↓)
			Printed circuit boards		1.0	↓ (↓)
			Semiconductor devices		1.0	↓ (↓)
			Display device and photoelectron components		0.5	↓ (↓)
			Electron terminals products		0.5	↓ (↓)
		Sulfide	Special electronic materials	0.5 (0.2)	-	N/A
			Electrical units		-	N/A
			Printed circuit boards		1.0	↑ (↑)
			Semiconductor devices		1.0	↑ (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Copper	Special electronic materials	2.0 (2.0)	0.5	↓ (↓)
			Electrical units		0.5	↓ (↓)
			Printed circuit boards		0.5	↓ (↓)
			Semiconductor devices		0.5	↓ (↓)
			Display device and photoelectron components		0.5	↓ (↓)
			Electron terminals products		-	N/A

Electronics (Part 3/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Vietnam[a]	Mainland China[b]	
Electronics	Water pollutants mg/L (Except pH, on a scale of 0-14)	Zinc	Special electronic materials	3.0 (3.0)	1.5	↓ (↓)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		1.5	↓ (↓)
			Display device and photoelectron component		1.5	↓ (↓)
			Electron terminals products		-	N/A
		Cadmium	Special electronic materials	0.1 (0.05)	0.05	↓ (=)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.05	↓ (=)
			Display device and photoelectron component		-	N/A
			Electron terminals products		-	N/A
		Total chromium	Special electronic materials	-	1.0	N/A
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.5	N/A
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A
		Hexavalent chromium	Special electronic materials	0.1 (0.05)	0.2	↑ (↑)
			Electrical units		-	N/A
			Printed circuit boards		-	N/A
			Semiconductor devices		0.1	= (↑)
			Display device and photoelectron components		-	N/A
			Electron terminals products		-	N/A

Electronics (Part 4/5)

Industry	Major Types of Pollution	Pollutants		Limits		Comparison
				Vietnam[a]	Mainland China[b]	
Electronics	Water pollutants mg/L (Except pH, on a scale of 0-14)	Arsenic	Special electronic materials	0.1 (0.05)	0.3	↑ (↑)
			Electrical units		0.3	↑ (↑)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↑ (↑)
			Display device and photoelectron component		0.2	↑ (↑)
			Electron terminals products		-	N/A
		Lead	Special electronic materials	0.5 (0.1)	0.2	↓ (↑)
			Electrical units		0.1	↓ (=)
			Printed circuit boards		-	N/A
			Semiconductor devices		0.2	↓ (↑)
			Display device and photoelectron component		0.2	↓ (↑)
			Electron terminals products		-	N/A
		Nickel	Special electronic materials	0.5 (0.2)	0.5	= (↑)
			Electrical units		0.5	= (↑)
			Printed circuit boards		0.5	= (↑)
			Semiconductor devices		0.5	= (↑)
			Display device and photoelectron components		0.5	= (↑)
			Electron terminals products		-	N/A
		Total Cyanide	Special electronic materials	0.1 (0.07)	0.2	↑ (↑)
			Electrical units		0.2	↑ (↑)
			Printed circuit boards		0.2	↑ (↑)
			Semiconductor devices		0.2	↑ (↑)
			Display device and photoelectron components		0.2	↑ (↑)
			Electron terminals products		-	N/A

Electronics (Part 5/5)

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
Electronics	Air pollutants mg/m^3	TVOC	-	150	N/A
		NMHC	-	100	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Vietnam Standards: National Technical Regulation on Industrial Wastewater[15], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17].*

b. *Mainland China Standards: Emission Standard of Pollutants For Electrical Industry[18], and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

c. *The value suitable for enterprises producing electrode foil of aluminum electrolytic capacitor.*

Garment & Clothing

Water and air pollutants were the main pollutants from wool scouring, printing and dyeing, degumming and washing processes in the garment & clothing industry. The following table compares the effluent and emission standards between Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
Garment & Clothing	Water pollutants mg/L (Except pH, on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0	↓ (=)
		Suspended solids	100 (50)	50	↓ (=)
		COD	150 (75)	80	↓ (↑)
		BOD_5	50 (30)	20	↓ (↓)
		Colour[c]	150 (50)	50	↓ (=)
		Ammonia nitrogen	-	10	N/A
		Total nitrogen	-	15	N/A
		Total phosphorus	-	0.5	N/A
		Chlorine dioxide	-	0.5	N/A
		Excess chlorine	2 (1)	-	N/A
		AOX	-	12	N/A
		Sulfide	-	0.5	N/A
		Aniline	-	Not be detected	N/A
		Hexavalent chromium	0.10 (0.05)	Not be detected	↓ (↓)
		Cyanide	0.10 (0.07)	-	N/A
		Total surfactant	10 (5)	-	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Vietnam Standards: National Technical Regulation on the Effluent of Textile[21], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17] .*

b. *Mainland China Standards: Discharge Standard for Water Pollutants in Textile Dyeing and Finishing Industry[22], Integrated Emission Standard of Air Pollutants[19] , and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

c. *"Colour" is the indicator in Vietnam Standard, while it refers to "Chroma" in Mainland China Standard.*

Watches & Jewellery

Water and air pollutants from washing process and air pollutants from polishing process were the main pollutants in the watches & jewellery industry. The following table compares the effluent and emission standards between Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
Watches & Jewellery	Water pollutants mg/L (Except pH, on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solids	100 (50)	150 (70)	↑ (↑)
		COD	150 (75)	150 (100)	= (↑)
		BOD_5	50 (30)	30 (20)	↓ (↓)
		Ammonia nitrogen	10 (5)	25 (15)	↑ (↑)
		Total cyanide	0.1 (0.07)	0.5 (0.5)	↑ (↑)
		Hexavalent chromium	0.1 (0.05)	0.5 (0.5)	↑ (↑)
		Petroleum	-	10 (5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Vietnam Standards: National Technical Regulation on Industrial Wastewater [15], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17].*

b. *Mainland China Standards: Integrated wastewater discharge standard[23], Integrated emission standard of air pollutants[19], and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

Toys & Games

Water pollutants from washing process and air pollutants resulting from the production and storage of polymers and the precursors process are the major types of pollution in the toys and gaming Industry. The following table compares the effluent and emission standards between Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
Toys & Games	Water pollutants mg/L (Except pH, on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solids	100 (50)	150 (70)	↑ (↑)
		COD	150 (75)	150 (100)	= (↑)
		BOD_5	50 (30)	30 (20)	↓ (↓)
		Ammonia nitrogen	10 (5)	25 (15)	↑ (↑)
		Sulfide	0.5 (0.2)	1.0 (1.0)	↑ (↑)
		Total cyanide	0.1 (0.07)	0.5 (0.5)	↑ (↑)
		Hexavalent chromium	0.1 (0.05)	0.5 (0.5)	↑ (↑)
		Petroleum	-	10 (5)	N/A
		Total Phenols	0.5 (0.1)	-	N/A
		Volatile Phenols	-	0.5 (0.5)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Vietnam Standards: National Technical Regulation on Industrial Wastewater [15], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17].*

b. *Mainland China Standards: Integrated wastewater discharge standard[23], Integrated emission standard of air pollutants[19], and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

Hi-tech

Water and air pollutants from the chemical cleaning process are the major type of pollution in the hi-tech industry. The following table compares the effluent and emission standards of Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
Hi-tech	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solids	100 (50)	150 (70)	↑ (↑)
		COD	150 (75)	150 (100)	= (↑)
		BOD_5	50 (30)	30 (20)	↓ (↓)
		Ammonia nitrogen	10 (5)	25 (15)	↑ (↑)
		Sulfide	0.5 (0.2)	1.0 (1.0)	↑ (↑)
		Total copper	2 (2)	1.0 (0.5)	↓ (↓)
		Total zinc	3 (3)	5.0 (2.0)	↑ (↓)
		Formaldehyde	-	2.0 (1.0)	N/A
		Total Phenols	0.5 (0.1)	-	N/A
		Volatile Phenols		0.5 (0.5)	N/A
		Total cyanide	0.1 (0.07)	0.5 (0.5)	↑ (↑)
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Note:

a. *Vietnam Standards: National Technical Regulation on Industrial Wastewater [15], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[23], Integrated Emission Standard of Air Pollutants[19], and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

Food & Beverage, Chemicals & Plastics

Food & beverage industry is one with some obvious characteristic pollutants, such as COD, TSS, and other organic substances in the wastewater. Vietnam has introduced the National Technical Regulations on effluent discharged from the cassava starch processing factories[24] and on effluent discharged from the seafood processing factories[25]. In general, limits for effluent discharged into water sources in Vietnam in the industry are stricter than those in Mainland China in terms of total cyanide and COD concentration.

Compared with other industries, chemicals & plastics industry involves more significant potential environmental risk. Mainland China has established special standards focusing on industries such as the Emission Standards of Pollutants for Inorganic Chemical Industry, the Emission Standard of Pollutants for Nitric Acid Industry, the Emission Standard of Pollutants for Sulfuric Acid Industry, etc. Vietnam has established special standards on the emission of chemical fertiliser manufacturing industry and on the effluent of bioethanol processing, of which limits on COD, TSS and BOD_5 discharged into the water sources not serving tap water supply are more stringent in Vietnam than in Mainland China.

General Industries

General industries refer to those industries which do not produce massive or characteristic pollutants (such as logistics & transportation industry, furniture industry, etc.). Such industries should be in compliance with the general environmental standards available in both countries.

The following table compares the general effluent/emission standards of Vietnam and Mainland China:

Industry	Major Types of Pollution	Pollutants	Limits		Comparison
			Vietnam[a]	Mainland China[b]	
General Industries	Water Pollutants mg/L (Except pH, on a scale of 0-14)	pH	5.5-9.0 (6.0-9.0)	6.0-9.0 (6.0-9.0)	↓ (=)
		Suspended solids	100 (50)	150 (70)	↑ (↑)
		COD	150 (75)	150 (100)	= (↑)
		BOD_5	50 (30)	30 (20)	↓ (↓)
		Ammonia nitrogen	10 (5)	25 (15)	↑ (↑)
		Sulfide	0.5 (0.2)	1.0 (1.0)	↑ (↑)
		Formaldehyde	-	2.0 (1.0)	N/A
	Air Pollutants mg/m^3	NMHC	-	120	N/A
	Noise Emission dB (A)	Noise limits for boundary of industrial enterprise	-	Daytime 65 Night 55	N/A
		Noise emission limits from production, construction, trading, service provision and life	Daytime 70 Night 55	-	N/A
	Hazardous Waste	Hazardous wastes are required to be disposed by a qualified third party. For more hazardous waste information, please refer to II.A of this section.			

Notes:

a. *Vietnam Standards: National Technical Regulation on Industrial Wastewater [15], National Technical Regulation on Industrial Emission of Organic Substances[16], and National Technical Regulation on Noise[17].*

b. *Mainland China Standards: Integrated Wastewater Discharge Standard[23], Integrated Emission Standard of Air Pollutants[19], and Emission Standard for Industrial Enterprises Noise at Boundary[20].*

III. The Main Local Supporting Organisations/Agencies in Vietnam

Vietnam's environmental laws and regulations system are currently undergoing a refining process. The overall trend will be more stringent to the industries.

To ensure environmental compliance and to maintain a good relationship with the public, the investor should pay attention to the environment survey, license application and meet the local discharge standards in the design-build and operation periods.

The following tables list out the main local organisations and agencies providing relevant environment-related supporting services.

A. Environmental Due Diligence Services in Vietnam

Agency/Organisation	Service Coverage	Contact
PwC	• Environmental Due Diligence; • Environmental and Social Risk Management; • Supply Chain Risk Management; • Environmental and Health & Safety (EHS) Regulatory Compliance Assessments; and • Independent Assurance, etc.	+84 (28) 3823 0796
SLP Environmental	• Due Diligence, Transaction and Funder Services; • Soil and Groundwater Contamination Surveys; and • Environmental and Health & Safety (EHS) Regulatory Compliance Assessment, etc.	+ 66 (0) 2168 7016 (ASEAN Headquarters)
Royal Haskoning DHV	• Environmental Due Diligence; • Sustainable Solutions for Site Infrastructure and Building Design; and • Environmental and Social Impact Assessments, etc.	+84 (28) 6281 4556

B. EIA Supporting Services in Vietnam

Agency/Organisation	Service Coverage	Contact
Minh Phuong Construction Design & Investment Joint-Stock Company	• EIA Report; • Consulting for Environment Protection; • Design of Construction Works; and • Design of Wastewater Treatment System, etc.	+84 (28) 3514 6426
EUC	• EIA Report; • Installation, Repair, Maintenance of Wastewater Treatment, Air and VOCs Pollution Control; • Wastewater Discharge Permit; and • Environmental Monitoring Report, etc.	+84 (274) 3 667 006
Green Eye Environment	• EIA Report; • Environmental Standard Registration; and • Designing, Construction and Installation of the Clean Water Treatment, Wastewater Treatment, and Air Pollution Treatment, etc.	+84 (28) 3827 9706

C. Environmental Monitoring/Permit Application Services in Vietnam

Agency/Organisation	Service Coverage	Contact
CRS VINA	• Environmental Monitoring Report; • Wastewater Discharge Permit and Hazardous Waste Generator Registration; • Design and Construction of Treatment System; and • EIA Report, etc.	+84 0903 980 538
Cao Nguyen Green Environment Consulting	• Environmental Monitoring Report; • Wastewater Discharge Permit and Hazardous Waste Generator Registration; and • EIA Report, etc.	+84 0938 395 254
QCVN	• Environmental Monitoring Report; • Water Analysis (Drinking Water, Ice Water, Wastewater, Surface Water); and • Food Testing, etc.	+84 (28) 7308 6678

D. Hazardous Wastes Disposal Services in Vietnam

Agency/ Organisation	Service Coverage	Contact
Hoa Binh Xanh Environmental Technology	• Collecting Hazardous Wastes and Transporting Hazardous Wastes; • Wastewater Treatment & Waste Gas Treatment; • EIA Report; and • Wastewater Discharge Permit and Hazardous Waste Generator Registration, etc.	+84 0906 840 903
KBEC VINA	• Industrial Solid Wastes Landfill; • Hazardous Wastes Burial Sites; • Transportation Collection Service; • Waste Identification Service; and • Temporary or Emergency Waste Disposal Service, etc.	+84 (254) 389 7209 /7210
Vietnam Green Environment Company	• Hazardous Wastes Collection and Disposal; • Recycle of Hazardous Wastes; • Business In Pre-classified Materials and Scrap Materials; and • Hazardous Waste Generator Registration, etc.	+84 (28) 3770 1202
Vietnam Australia Environment S.J.	• Waste Transportation and Treatment; • Recycle of Wastes and Scraps; • Business In Scraps and Recycled Products; and • EIA Report, etc.	+84 (28) 3766 1530

E. Pollutants Treatment Services in Vietnam

Agency/Organisation	Service Coverage	Contact
EUC	• EIA Report; • Wastewater Treatment; • Hazardous Wastes Management; • Wastewater Discharge Permit; • Water Underground Exploiting Permit; and • Environmental Monitoring Report, etc.	+84 0933 425 239
Tran-Dong A Environmental Technology	• Consulting, Designing, Installing, Maintaining and Repairing of Waste Treatment Equipment/Facilities; and • Client-tailored Environmental Treatment Solutions and Associated Services, etc.	+84 0983 588 592

Source:

[1] *Law on Environmental Protection No: 55/2014/QH13, LSE 2015*

[2] *Setting Up and Operating in Vietnam, Russin & Vecchi 2016*

[3] *Management Authorities, Vietnam Environment Administration 2019*

[4] *Investment Policy Review of Viet Nam, UNCTD 2008*

[5] *Legal Guide to Investment in Vietnam, Allens 2019*

[6] *The Law on Environmental Protection Tax No. 57/2010/QH12, 2010*

[7] *Workshop on Tax Policy for Domestic Resource Mobilization and Seminar on Property Tax Reform, MOF 2018*

[8] *Investment Guide Vietnam, DFDL 2018*

[9] *Joint Statement of the People's Republic of China and the Socialist Republic of Vietnam, 2008*

[10] *Joint Statement of China and ASEAN Leaders on Sustainable Development, 2010*

[11] *China-ASEAN Environmental Protection Cooperation Strategy 2016-2020, 2017*

[12] *Environmental License and permit for Industrial Parks in Vietnam, Vietnam Business Law, 2019*

[13] *Circular on Management of Hazardous Wastes, 2015*

[14] *Discharge Permit, CRS VINA 2019*

[15] *National Technical Regulation on Industrial Wastewater No. QCVN 40: 2011/BTNMT, 2011*

[16] *National Technical Regulation on Industrial Emission of Organic Substances No. QCVN 20: 2009/BTNMT, 2009*

[17] *National Technical Regulation on Noise No. QCVN 26:2010/BTNMT, 2010*

[18] *Emission Standard of Pollutants for Electrical Industry, 2nd edition for suggestion*

[19] *Integrated Emission Standard Of Air Pollutants, GB 16297-1996*

[20] *Emission Standard for Industrial Enterprises Noise at Boundary, 2008*

[21] *National Technical Regulation on the Effluent of Textile QCVN 13-MT:2015/BTNMT, 2015*

[22] *Discharge Standards of Water Pollutants for Dyeing and Finishing of Textile Industry, GB 4287-2012*

[23] *Integrated Wastewater Discharge Standard, GB 8978-1996*

[24] *National Technical Regulations on Effluent Discharged from the Cassava Starch Processing Factories QCVN 63:2017/BTNMT, 2017*

[25] *National Technical Regulations about Seafood Processing Waste Water QCVN 11:2015/BTNMT, 2015*

[26] *Law on Biodiversity No. 20/2008/QH12 , 2008*

[27] *Law on Marine and Island Resources No. 82/2015/QH13, 2015*

[28] *Law on Economical and Efficient Use of Energy No. 50/2010/QH12, 2010*

[29] *Law on Thrift Practice and Waste Combat No. 44/2013/QH13, 2013*

[30] *Law on Occupational Safety and Health No. 84/2015/QH13, 2015*

[31] *National Technical Regulation on Surface Water Quality No. QCVN 08-MT:2015/BTNMT, 2015*

[32] *National Technical Regulation on Groundwater Quality No. QCVN 09-MT:2015/BTNMT, 2015*

[33] *National Technical Regulation on Coastal Water Quality No. QCVN 10-MT:2015/BTNMT, 2015*

[34] *National Technical Regulation on Ambient Air Quality No. QCVN 05 : 2013BTNMT , 2013*

Source:

[35] *National Technical Regulation on Hazardous Substances in Ambient Air No. QCVN 06:2009/BTNMT, 2009*

[36] *National Technical Regulation on Vibration No. QCVN 27:2010/BTNMT, 2010*

[37] *National Technical Regulation on The Allowable Limits of Heavy Metals in The Soils No. QCVN 03:2008/BTNMT, 2008*

[38] *National Technical Regulation on Hazardous Waste Thresholds No. QCVN 07:2009/BTNMT, 2009*

[39] *National Technical Regulation on Industrial Emission of Inorganic Substances and Dusts No. QCVN 19: 2009/BTNMT, 2009*

[40] *National Technical Regulation on Effluent of Aquatic Products Processing Industry No. QCVN 11-MT: 2015/BTNMT, 2015*

[41] *National Technical Regulation on Noise - Permissible Exposure Levels of Noise in the Workplace No. QCVN 24:2016/BYT, 2016*

[42] *National Technical Regulation on Control of Noise Levels on Board Ships No. QCVN 80: 2014/BGTVT, 2014*

[43] *National Technical Regulation on Emission of Chemical Fertilizer Manufacturing Industry No. QCVN 21:2009/BTNMT, 2009*

[44] *National Technical Regulation on the Effluent of Bioethanol Processing No. QCVN 60-MT:2015/BTNMT, 2015*

[45] *National Technical Regulation on Emission of Gaseous Pollutants from Assembly-manufactured Automobiles and New Imported Automobiles No. QCVN 05:2009/BGTVT , 2009*

[46] *National Technical on The Fourth Level of Gaseous Pollutants Emission for New Assembled, Manufactured and Imported Automobile No. QCVN 86 : 2015/BGTVT, 2015*

[47] *Decree No. 21-2008-ND-CP on Amendment of and Addition to a Number of Articles of Decree 80-2006-Nd-Cp of the Government Dated 9 August 2006 Providing Detailed Regulations for Implementation of the Law on Protection of the Environment, 2008*

Appendix

Appendix 1

List of Banks from Foreign Investment (Part 1/4)

Type	Institution
Foreign Bank Branches	1. Bank of China HCMC
	2. Bank of India HCMC
	3. Bank of Communications HCMC
	4. Bangkok Bank Ha Noi Branch
	5. BIDC Hanoi
	6. BIDC HCMC
	7. BNP Paribas Hanoi
	8. BNP Paribas HCMC
	9. BPCE IOM HCMC
	10. MUFG Bank, Ltd. – Hanoi Branch
	11. MUFG Bank, Ltd. – HCMC Branch
	12. Cathay Chu Lai
	13. China Construction Bank HCMC
	14. Citibank Hanoi
	15. Citibank HCMC
	16. CTBC HCMC
	17. DBS HCMC
	18. Deutsche Bank AG HCMC
	19. E. Sun Bank – Dong Nai Branch
	20. SinoPac – HCMC
	21. First Commercial Bank Hanoi
	22. First Commercial Bank HCMC
	23. KEB – Hana HCMC Branch
	24. Hua Nan HCMC

Appendix 1

List of Banks from Foreign Investment (Part 2/4)

Type	Institution
Foreign Bank Branches	25. ICBC Hanoi
	26. Industrial Bank of Korea Hanoi
	27. Industrial Bank of Korea HCMC
	28. JP Morgan HCMC
	29. Kookmin HCMC
	30. KEB – Hana Hanoi Branch
	31. Malayan Banking Berhad Hanoi Branch
	32. Malayan Banking Berhad HCMC Branch
	33. Mega ICBC HCMC
	34. Mizuho Hanoi
	35. Mizuho HCMC
	36. OCBC HCMC
	37. The Shanghai Commercial & Saving Bank, Ltd – Dong Nai
	38. SMBC Hanoi
	39. SMBC HCMC
	40. Taipei Fubon Bank – Binh Duong Branch
	41. Taipei Fubon Bank – Hanoi Branch
	42. Taipei Fubon Bank – HCMC Branch
	43. United Overseas Bank HCMC
	44. Siam HCMC
	45. Busan Bank HCMC
	46. NongHyup Bank Hanoi Branch
	47. Agricultural Bank of China Hanoi Representative Office

Appendix 1

List of Banks from Foreign Investment (Part 3/4)

Type	Institution
Representative Offices	1. Acom Co., Ltd (Japan)
	2. Bank Sinopac (Taiwan)
	3. ODDOBHF – Bank Aktiengesellschaft
	4. BPCE IOM
	5. Busan
	6. Cathay United Bank – Hanoi
	7. Cathay United Bank – HCMC
	8. CTBC
	9. Commerzbank AG
	10. Commonwealth Bank of Australia
	11. Daegu HCMC
	12. DBS
	13. E.Sun Commercial Bank
	14. Fukuoka – HCMC
	15. Hua Nan Commercial Bank, Ltd.
	16. ING Bank N.V.
	17. Intesa Sanpaolo
	18. JCB International (Thailand) Company Ltd.
	19. JB Woori Capital
	20. JCBI
	21. JP Morgan Chase Bank
	22. Kasikorn Hanoi
	23. Kasikorn HCMC
	24. Kookmin Bank
	25. Landesbank Baden-Wuerttemberg

Appendix 1

List of Banks from Foreign Investment (Part 4/4)

Type	Institution
Representative Offices	26. Lotte Card Co., Ltd.
	27. MasterCard Asia-Pacific Pte Ltd.
	28. Mitsubishi UFJ Lease & Finance Company Limited
	29. National Australia Bank Ltd
	30. NongHyup Bank
	31. Agriculture Bank of China
	32. Korean Development Bank
	33. Japan Bank for International Cooperation
	34. Ogaki Kyoritsu
	35. Qatar National Bank
	36. RBI
	37. Resona
	38. RHB
	39. Societe Generale Bank – Hanoi
	40. Taishin International Bank
	41. Taiwan Shin Kong Commercial Bank
	42. The Export-Import Bank of Korea
	43. Unicredit Bank AG
	44. Union Bank of Taiwan
	45. Visa International (Asia Pacific), LLC
	46. Wells Fargo – Hanoi
	47. Wells Fargo – HCMC
	48. Juroku, Ltd
	49. JoyoBank, Ltd

Appendix 2

List of Industrial Estates by Zones (Part 1/2)

Zone's District/Province	Number of Industrial Estate (#)
Southern Key Economic Zone and Mekong Delta (20 provinces)	**197**
Binh Thuan Province	*6*
Ho Chi Minh City	*22*
Dong Nai Province	*31*
Binh Duong Province	*28*
Long An	*36*
Ba Ria-Vung Tau Province	*11*
Tay Ninh Province	*4*
Ten Giang Province	*5*
Binh Phuoc Province	*7*
An Giang	*5*
Bac Lieu	*5*
Ben Tre	*2*
Vinh Long	*4*
Dong Thap	*3*
Ca Mau	*4*
Tra Vinh	*1*
Can Tho	*10*
Soc Trang	*4*
Hau Giang	*3*
Ken Giang	*6*
Northern Key Economic Zone (10 provinces)	**64**
Ha Noi Capital	*14*
Vinh Phuc Province	*5*
Quang Ning Province	*4*
Bac Ninh Province	*15*
Hai Phong Province	*5*
Hung Yen Province	*5*
Hai Duong Province	*11*
Ha Nam	*2*
Bac Giang	*1*
Nam Dinh	*2*

Appendix 2

List of Industrial Estates by Zones (Part 2/2)

Zone's District/Province	Number of Industrial Estate (#)
Central Key Economic Zone (11 provinces)	**45**
Da Nang City	6
Tha Thien Hue Province	4
Khanh Hoa Province	5
Quang Ngai Province	6
Quang Nam Province	9
Binh Dinh Province	7
Phu Yen Province	4
Gia Lai	1
Dak Nong	1
Dak Lak	1
Thanh Hoa	1

Appendix 3

Vietnam's Selected Infrastructural Development Pipelines (Part 1/3)

Project	Value (USD m)	Specifications
Transport - Airport		
Long Thanh International Airport	5,620	International airport of 4F standard, Capacity of 100 million passengers/year
Quang Ninh Airport	320	International airport of 4E standard, Capacity of 5 million passengers/year; receive B777, one runway and the system of rolling and landing
Cam Ranh International Airport	212	International airport of 4F standard, Capacity of 1 million passengers/year
Transport - Port		
Van Phong International Port	500	Capacity of 17 million TEU/year; total area 405 ha; berth length between 4,450 to 5,710 metres
Lien Chieu Port – Da Nang	65	Receiving ships of 50,000-80,000 DWT, Capacity of 2.5-3.5 million tonnes/year
Transport – Rail		
Bien Hoa – Vung Tau Railway	5,000	Length of 120 km, double-tracks
Hanoi – Ho Chi Minh City Railway Route	2,300	Upgrading railroad infrastructure, including Khe net and Hai Van Mountain passes; open new stations. Upgrading average speed to 90 km/h.
Railway into Hai Phong International Port	1,600	Length 57km, double-tracks
Hanoi Urban Railway Route 6	1,356	Length: 47km, double-tracks from the centre of Hanoi to Noi Bai Airport

Appendix 3

Vietnam's Selected Infrastructural Development Pipelines (Part 2/3)

Project	Value (USD m)	Specifications
Transport - Road		
Ninh Bình-Thanh Hoa-Nghi Sơn Route of the North-South Highway	1,867	Length: 121km; Highway category A, 6 lanes with average speed of 100 -120km/h.
Hanoi City; Bac Ninh, Bac Giang, Hai Duong and Quang Ninh Provinces	1,762	Length: 148km; Highway category A, 4 lanes with average speed 100-120km/h.
Trung Luong - My Thuan Highway	1,381	Length: 54km, Highway category A, average speed 120km/h, 6 lanes; 4 lanes in the Phase 1
Bien Hoa - Vung Tau Highway	1,175	Length: 78km, Highway category A, average speed 120km/h, 6 lanes; 4 lanes in the Phase 1
Dau Giay-Phan Thiet Highway	757	Length: 99km, Highway category A, average speed 100-120km/h, 6 lanes, 4 lanes in the Phase 1
Ring road No.3 in Ho Chi Minh City from Tan Van to Nhon Trach	400	Length: 17km, Highway category A, average speed 100km/h, 8 lanes, 4 lanes completed at the end of Phase 1
National Road No.19 from Ba Gi Junction to Plei Ku City	100	Upgrade the ramp of 153km flat plain and mountain plain level III, average speed 60-80km/h
Urban Transportation		
Fly-over line 2 – Districts 10, 11 and Binh Tan in Ho Chi Minh City	1,023	Length: 12km, width: 17.5m, 4 lanes
Fly-over line 1 - District 3 in Ho Chi Minh City	736	Length: 10km, width: 17.5m, four lanes
Monorail No.2	715	Length: 27km, from National road 50 (dist. 8)-Nguyen Van Linh-Tran Nao-Xuan Thuy (Dist.2), Binh Quoi residential area, connecting to urban railway no 3a
Fly-over line 3-5, 7, 8, 10 and Binh Chanh Districts in Ho Chi Minh City	702	Length: 8km, width: 17.5m, four lanes
Urban Water Supply		
Song Hau II water supply facility, Chau Thanh	1,000	Capacity of 1 million m^3 for stage 1 and 2 million m^3 for stage 2
Song Hau 1 water supply facility	500	Capacity of 500,000 m^3 for stage 1 and 1 million m^3 for stage 2
Song Duong water supply facility	300	Capacity of 300,000 m^3 for stage 1 and 600,000 m^3 for stage 2
Song Da water supply facility (phase II)	100	Capacity of 300,000 m^3 for phase II

Appendix 3

Vietnam's Selected Infrastructural Development Pipelines (Part 3/3)

Project	Value (USD m)	Specifications
Urban Solid Waste Treatment		
Nam Son solid waste treatment area - Hanoi	210	Total area 148 ha
High tech Waste Treatment Factory in Bac Son, Soc Son - Ha Noi City	150	Daily Capacity of 5,525 tonnes
Binh Nguyen solid waste treatment area	85	Quang Ngai, Total area 70 ha
Cat Nhon solid waste treatment area	75	Binh Đinh Province, Total area 70 ha
Northwestern CuChi hazardous solid waste treatment area	45	Total area 100 ha
Huong Van solid waste treatment area	40	Thua Thien Hue Province, Total area 40ha
Wastewater treatment facility in the Chan May-Lang Co economic zone	39	Capacity of 35,000 m^3/day, construction until 2020
Infrastructure of Industrial Parks		
Hi-tech Industrial Zone – Ha Noi	200	Modern hi-tech industrial zone to develop hi-tech intensive sectors, meet the high standards of developed countries for electronics, precision mechanics, medical tools, pharmaceuticals and chemical industries. Total area 300 hectares.
Special industrial zone for Japanese companies in the southern provinces	n/a	Special industrial area for Japanese companies in the southern provinces under the policy from Prime Minister. From 500 – 1000 hectares, tentative location at Phú Mỹ III Idustrial Park, Tan Thanh, Ba Ria -Vung Tau Province.
Special industrial zone for Japanese companies in the northern provinces	n/a	Special industrial area for Japanese companies in the northern provinces under the policy from Prime Minister. From 300-400 hectares in the Dinh Vu-Cat Hai Industrial Park.

Appendix 4

List of the Main Environmental Laws/Regulations in Vietnam

Ministry of Natural Resource and Environment	Ministry of Finance	Ministry of Labour
Law on Environmental Protection No. 55/2014/QH13	Law on Thrift Practice and Waste Combat No. 44/2013/QH13	Law on Occupational Safety and Health No. 84/2015/QH13
Law on Biodiversity No. 20/2008/QH12		
Law on Environmental Protection Tax No. 57/2010/QH12		
Law on Marine and Island Resources No. 82/2015/QH13		
Law on Economical and Efficient Use of Energy No. 50/2010/QH12		

List of the Main Environmental Ambient Standards in Vietnam

Ambient Standards	1	National Technical Regulation on Surface Water Quality QCVN 08-MT:2015/BTNMT
	2	National Technical Regulation on Groundwater Quality QCVN 09-MT:2015/BTNMT
	3	National Technical Regulation on Coastal Water Quality QCVN 10-MT:2015/BTNMT
	4	National Technical Regulation on Ambient Air Quality QCVN 05 : 2013BTNMT
	5	National Technical Regulation on Hazardous Substances in Ambient Air QCVN 06:20009/BTNMT
	6	National Technical Regulation on Noise QCVN 26:2010/BTNMT
	7	National Technical Regulation on Vibration QCVN 27:2010/BTNMT
	8	National Technical Regulation on the Allowable Limits of Heavy Metals in the Soils QCVN 03:2008/BTNMT
	9	National Technical Regulation on Hazardous Waste Thresholds QCVN 07:2009/BTNMT

Appendix 4

List of the Main Environmental Effluent Standards in Vietnam

Effluent Standards	1	National Technical Regulation on Industrial Wastewater[a] QCVN 40: 2011/BTNMT
	2	National Technical Regulation on Industrial Emission of Inorganic Substances and Dusts QCVN 19: 2009/BTNMT
	3	National Technical Regulation on Industrial Emission of Organic Substances[a] QCVN 20: 2009/BTNMT
	4	National Technical Regulation on the Effluent of Textile[a] QCVN 13-MT: 2015/BTNMT
	5	National Technical Regulation on Effluent of Aquatic Products Processing Industry QCVN 11-MT: 2015/BTNMT
	6	National Technical Regulation on Noise - Permissible Exposure Levels of Noise in the Workplace QCVN 24:2016/BYT
	7	National Technical Regulations on Effluent Discharged from the Cassava Starch Processing Factories[a] QCVN 63:2017/BTNMT
	8	Technical Regulations on Effluent Discharged from the Seafood Processing Factories [a] QCVN10:2015/BTNMT
	9	National Technical Regulation on Control of Noise Levels on Board Ships QCVN 80: 2014/BGTVT
	10	National Technical Regulation on Emission of Chemical Fertilizer Manufacturing Industry QCVN 21:2009/BTNMT
	11	National Technical Regulation on the Effluent of Bioethanol Processing QCVN 60-MT:2015/BTNMT
	12	National Technical Regulation on Emission of Gaseous Pollutants from Assembly-manufactured Automobiles and New Imported Automobiles QCVN 05:2009/BGTVT
	13	National technical on the Fourth Level of Gaseous Pollutants Emission for New Assembled, Manufactured and Imported Automobile QCVN 86 : 2015/BGTVT

Note:
a. Corresponding effluent/emission standards are the main standards utilised in Section 10.II.C.

Appendix 5

List of Projects for which an EIA Report Must be Prepared (issued with Decree 21-2008-ND-CP of the government dated 28 February 2008) (Part 1/3)

Industries	Projects	Scale
All	Projects using part or all of the land of a natural conservation zone, national park, historical and cultural site, world heritage site, ecosphere reserve zone or scenic site which is classified, or which is not yet classified but is the object of a protection decision made by a people's committee of a province or city under central authority	All
	Projects with a potential direct adverse impact on a river watercourse, coastal area or area containing a protected ecosystem	
	Infrastructure construction projects for an industrial zone, high-tech zone, industrial group, export processing zone or handicraft village group	
Electronics	Projects for manufacturing electrical and/or electronic components	Design output capacity of from 500 tons or more of product per year.
Food & Beverage	Projects for processing foodstuffs	Design output capacity of from 5,000 tons or more of product per year
	Projects for slaughtering livestock and/or poultry (abattoir projects)	Design output capacity of from 1,000 head of livestock per day; design output capacity of from 10,000 head of poultry per day
	Projects for processing seafood	Design output capacity of from 1,000 tons or more of product per year
	Projects for manufacturing sugar	Design output capacity of from 20,000 tons or more of sugar per year

Appendix 5

List of Projects for which an EIA Report Must be Prepared (issued with Decree 21-2008-ND-CP of the government dated 28 February 2008)[47] (Part 2/3)

Industries	Projects	Scale
Food & Beverage	Projects for producing alcohol and/or wine	Design output capacity of from 100,000 liters of product per year
	Projects for producing beer and/or soft drinks	Design output capacity of from 500,000 liters of product per year
	Projects for manufacturing MSG (monosodium glutamate)	Design output capacity of from 5,000 tons or more of product per year
	Projects for processing milk	Design output capacity of from 10,000 tons or more of product per year
	Projects for processing cooking oil	
	Projects for producing cakes and confectionery	Design output capacity of from 5,000 tons or more of product per year
	Projects for manufacturing ice	Design output capacity of from 3,000 or more blocks (50 kg per block), or 150,000 kilograms or more of ice per 24 hours
Chemicals & Plastics	Projects for manufacturing cosmetics chemicals	Design output capacity of from 50 tons or more of product per year
	Projects for manufacturing plastics and plastic products	Design output capacity of from 500 tons or more of product per year
	Projects for manufacturing plastic bags	Design output capacity of from 2 million products or more per year
	Projects for manufacturing paint and/or basic chemicals	Design output capacity of from 500 tons or more of product per year
	Projects for manufacturing washing detergents or additives	Design output capacity of from 1,000 tons or more of product per year

Appendix 5

List of Projects for which an EIA Report Must be Prepared (issued with Decree 21-2008-ND-CP of the government dated 28 February 2008) (Part 3/3)

Industries	Projects	Scale
Garment & Clothing	Textile and dyeing projects	All
	Textile (without dyeing) projects	Output capacity of from 100 million meters or more of cloth per year
	Projects for manufacturing and processing clothing products with a stage of washing by hand	Design output capacity of from 50,000 products or more per year
	Projects for manufacturing and processing clothing products without a stage of washing by hand	Design output capacity of from 2 million products or more per year
	Projects for industrial washing and ironing	Design output capacity of from 50,000 products or more per year
	Projects for producing silk thread and artificial thread	Design output capacity of from 1,000 tons or more of product per year
	Projects for manufacturing footwear	Design output capacity of from 1 million products or more per year
	Projects for tanning [leather]	All

Glossary – Section 1 to 9 Operational Requirements

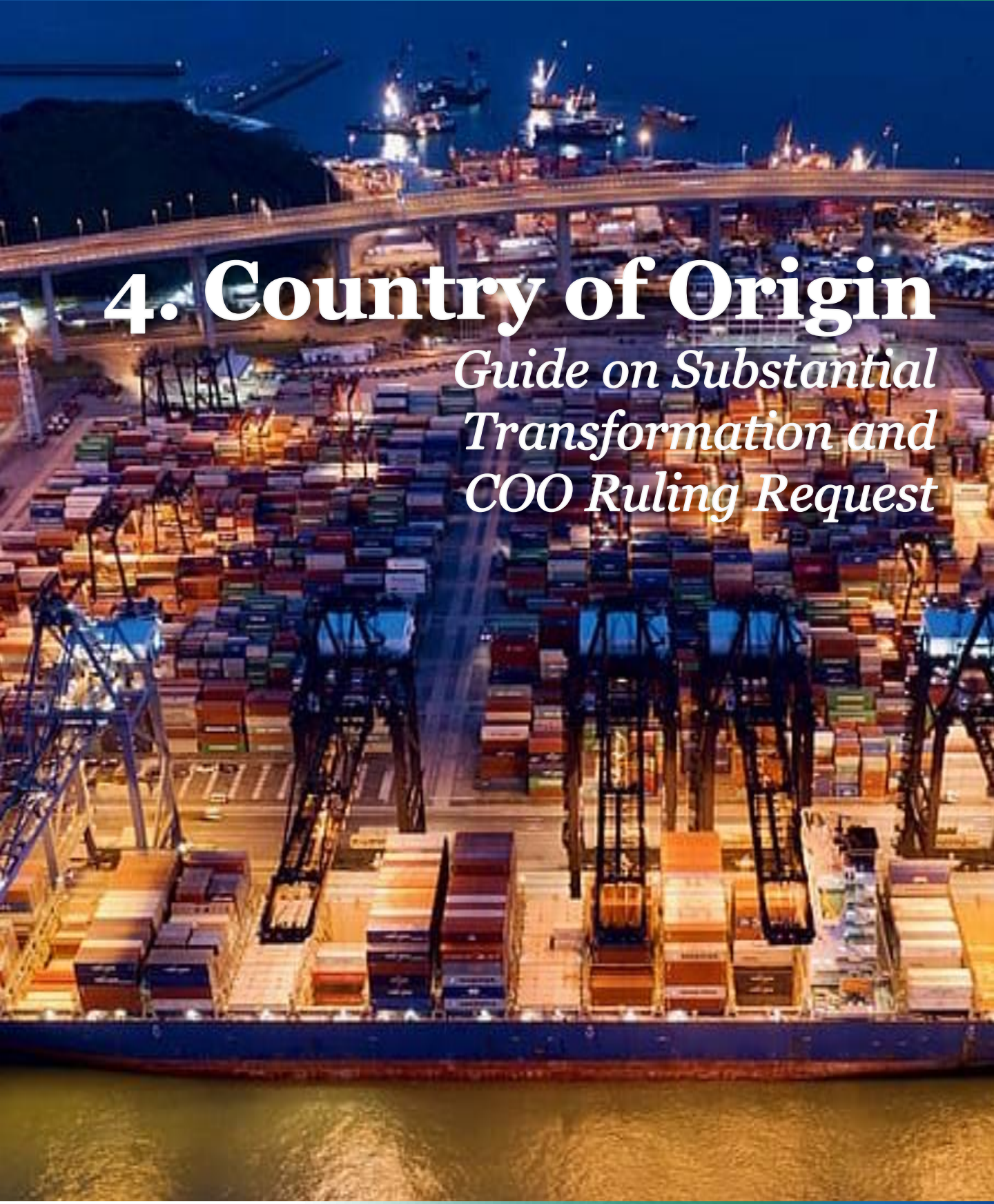
AFTA	ASEAN Free Trade Area
APA	Advance Pricing Agreement
ASEAN	Association of Southeast Asian Nations
BO	Branch Office
CbCR	Country-by-Country Report
CIT	Corporate Income Tax
CKEZ	Central Key Economic Zone
CLA	Collaborative Labour Agreement
DOLISA	Departments of Labour, War Invalids and Social Affairs
DPI	Department of Planning and Investment
DTA	Double Taxation Agreement
EBITDA	Earnings Before Interest, Tax, Depreciation, and Amortisation
EPZ	Export Processing Zones
ERC	Enterprise Registration Certificate
EZ	Economic Zone
FCT	Foreign Contractor Tax
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GDVET	General Directorate of Vocational Education and Training

GW	Gigawatt
HI	Health Insurance
HR	Human Resources
HTZ	Hi-Tech Zone
IAS	International Accounting Standards
ILR	Internal labour Rules
IPR	Intellectual Property Rights
IRC	Investment Registration Certification
IT/ICT	Information Technology/Information & Communications Technologies
IZ	Industrial Zone
JSC	Joint-Stock Company
JV	Joint Venture
LLC	Limited Liability Company
LOC	Law on Competition
LOI/LOE	Law on Investment/Law of Enterprises
LPI	Logistic Performance Index
MNC	Multinational Companies
MOLISA	Ministry of labour, War Invalids and Social Affairs
MOST	Ministry of Science and Technology
NCC	National Competition Committee
NKEZ	Northern Key Economic Zone
NOIP	The National Office of Intellectual Property of Vietnam
NRT	Natural Resources Tax
PPP	Public Private Partnership

R&D	Research and Development
RO	Representative Office
S&T	Science & Technology
SBV	State Bank of Vietnam
SEDP	Socio-Economic Development Plan
SEZ	Special Economic Zone
SI	Social Insurance
SKEZ	Southern Key Economic Zone
SMEs	Small and Medium-sized Enterprises
SST	Special Sales Tax
UI	Unemployment Insurance
USD	United States Dollar
VAS	Vietnam Accounting Standards
VAT	Value Added Tax
VET	Vocational Education and Training
VND	Vietnamese Dong

Glossary – Section 10 Environmental Requirements

AOX	Absorbable Organic Halogen
BOD	Biochemical Oxygen Demand
COD	Chemical Oxygen Demand
DONRE	Departments of Natural Resources and Environment
EIA	Environmental Impact Assessment
EPT	Environmental Protection Tax
HCFCs	Hydro chlorofluorocarbons
MONRE	Ministry of Environment and Natural Resources
NMHC	Non-methane Hydrocarbons
NSEP	National Strategy for Environmental Protection
TVOC	Total Volatile Organic Compounds
VEA	Vietnam Environment Administration



4. Country of Origin

Guide on Substantial Transformation and COO Ruling Request

Country of Origin Ruling Request Submission

Executive Summary

Global supply chains and multi-country processing have added a new complexity to complying with laws that require proper identification of the country of origin on imports entering foreign markets. For most goods entering the United States (US) market that contain parts from different countries or that have been subject to processing in more than one country, the country of origin (COO) is the country in which the product "has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed."

For businesses looking to manufacture in Southeast Asian countries, but maintain their existing supply chains in Mainland China and other countries, they can submit a ruling request to the US Customs and Border Protection (CBP). This COO ruling will be important to businesses in determining the tariffs and taxes on their product for exportation.

Country of Origin Ruling Request Submission

I. Introduction on Country of Origin (COO) Ruling Requests

Global supply chains and multi-country processing have added a new complexity to complying with laws that require proper identification of the country of origin on imports entering foreign markets. For most goods entering the United States (US) market that contain parts from different countries or that have been subject to processing in more than one country, the country of origin is the country in which the product "has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed."

The "substantial transformation" standard or test is highly fact-specific. It involves an intensive review and analysis of 1) the components involved, including their origin, their function, their importance to the finished product, and their monetary value relative to the value of the finished good, and 2) the manufacturing process(es) involved in producing the finished product, including the complexity, the time required, the technical skills required of the employees, and the costs incurred and value added by each step in the manufacturing process.

Obtaining a COO Ruling Request from the US Customs & Border Protection (CBP)

Given the varying details of multi-country processing, the seeming subjectivity of the substantial transformation standard, and a rise in new country-specific tariff measures, obtaining a written binding ruling letter from the CBP confirming the origin of a specific product is increasingly important as a means of mitigating risk and providing assurances to the customers and importers. A ruling letter provides CBP's interpretation of the law as applied to the specific product and is binding with respect to that product when it is imported into or arrives in the US.

Any person who, as an importer or exporter of merchandise, or who otherwise has a direct and demonstrable interest in determining the origin of merchandise, may request a ruling from the CBP. That means Hong Kong firms responsible for manufacturing goods intended for exportation may make such requests. The person making the request may be an individual, corporation, partnership, association or other entity or group, and rulings can be requested on origin or Harmonised Tariff Schedule classification or valuation, including whether a good qualifies for a Free Trade Agreement (FTA) or other preferential trade programs. The request must be for a prospective transaction; goods previously entered into a country would not be covered by a new ruling.

There are two ways to obtain a written binding ruling from CBP. A request letter may be sent to CBP's National Import Specialist Division in New York, at Director, National Commodity Specialist Division, United States Customs and Border Protection, Attn: CIE/Ruling Request, 201 Varick Street, Suite 501, New York, NY 10014. Alternatively, a request may be made through the agency's online system, known as eRulings (erulings.cbp.gov/s/). Generally, a response will be provided within 30 days, unless a laboratory report or consultation with another agency is needed, or if the request is referred to CBP Headquarters.

At a minimum, a request for a binding origin ruling must include the following information:

- The name, address, email address and telephone number of the requesting party;
- A complete and detailed written description of the product. Samples, if practical, a list of ingredients or inputs and percentages thereof, sketches, diagrams or other illustrative material (such as photographs), if useful in supplementing the written description;
- The countries where each of the source materials were made. Cost breakdowns of the component materials or parts and their respective quantities, shown in percentages of the goods, if possible;
- Any other information or materials that may be pertinent for classifying the good and determining its origin, such as:
    - Descriptions of the time and cost of the research and development involved, especially for products with software;
    - Step-by-step descriptions of the manufacturing/assembly processes of the finished products, including identification of the location of each manufacturing process or software application, identification of the skill levels necessary for workers involved in the process, and the time and cost required for manufacturing/assembly; and
    - Detailed information about each manufacturing facility, including information on any hi-tech equipment, clean rooms, or dedicated molds, etc. in the facilities.
- A statement that there are, to the knowledge of the requester, no issues regarding the product pending before any court;
- A statement as to whether advice has been sought from a customs department office, and if so, from whom and what advice was rendered, if any;
- The names, addresses, email addresses and other identifying information of all interested parties, if known, and the manufacturer ID code, if known; and
- The name(s) of the port(s) in which the merchandise will be entered, if known.

CBP National Import Specialists in some instances are reluctant to issue rulings that do not identify the specific countries in which manufacturing steps will occur. For example, simply identifying “an ASEAN country” as the site of manufacturing may result in a ruling request being returned for more information.

In addition, if asked in a ruling request, CBP will treat information as confidential, not to be disclosed in the ruling, if sufficient explanation or justification is provided as to why the information should not be made public. For example, disclosure of a bill of materials that identifies part names and numbers as well as costs and sources, or a detailed description of manufacturing processes or costs of operations and man-hours may undermine the competitive position of the manufacturer sharing the information, especially if this information is not normally shared publicly, and/or it is highly proprietary information that is specific to a particular manufacturer.

For US rulings, it is good practice to check CBP’s online library of prior rulings, known as the Customs Ruling Online Search System (CROSS) (rulings.cbp.gov/home), to consider how CBP ruled on similar products or production scenarios. It is updated frequently, but take note that a determination issued to another person would not be legally binding for other importers or exporters. The ruling letter is binding on CBP only for the person to whom it was issued.

If you disagree with the ruling, you may request reconsideration by sending a written request to. That request must explain why the ruling is incorrect, providing arguments stating how CBP has incorrectly applied the law. Note that protests may not be filed in response to a binding ruling letter. Protests may be filed by an importer only after an entry has been made and within 180 days of liquidation of that entry.

For more information about CBP’s binding ruling program, see its Informed Compliance publication (www.cbp.gov/sites/default/files/documents/cbp_rulings_prog_3.pdf).

Sample COO Ruling Requests Made by Hong Kong Productivity Council (HKPC)

To assist Hong Kong firms in planning their multi-country manufacturing and ensuring that the origin of such products is accurately identified when destined for the US market, the HKPC, on behalf of collaborating Hong Kong companies involved in or contemplating multi-country production scenarios for their manufactured products, sought binding rulings from CBP on six specific electronic products: a printed circuit board assembly (PCBA) for a hair straightener, a Bluetooth wireless boombox with FM radio, a curling iron/wand; a car battery charger, a smart toaster oven, and a car backup camera system.

While each ruling is fact-specific, the following six sections each discussing one of the products for which HKPC requested COO rulings from CBP highlights the common threads among the factors CBP weighs in reaching its origin determinations and instances in which CBP ruled on similar products.

The following six sections provide examples for reference of Hong Kong SMEs, and will assist Hong Kong manufacturers in anticipating the origin effects of possible multi-country production plans and in identifying the information necessary to include in any request for an origin determination, in the event that they want to obtain a binding COO ruling from CBP. Businesses should note that this is only an example for the material that may be requested for submission by CBP, and that the format of each document does not necessarily need to match exactly the materials shown below. Instead, businesses should customise the materials that they send to best match the components and processes of their own product.

Due to confidentiality reasons, certain sections of the sample materials will be redacted. The information presented by HKPC is correct as of 31 January 2020.

II. Printed Circuit Board Assembly (PCBA) for a Hair Straightener

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a PCBA for a hair straightener.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/3)

Director, National Commodity Specialist Division
Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
201 Varick Street, Suite 501
New York, NY 10014

Re: Request for Binding Ruling on Origin of a Printed Circuit Board Assembly, Including Request for Confidential Treatment of Sensitive Commercial Information

Dear Director Mack:

On behalf of the Hong Kong Productivity Council (HKPC) and its collaborating manufacturers, which manufacture products or product parts for exportation to and sale in the United States, we respectfully request confirmation of our view that a printed circuit board assembly (PCBA) intended as a component in a hair straightener, as more fully described below, is a product of Vietnam, where it will be programmed following assembly from components produced in a variety of countries.

Sample Letter (Part 2/3)

It is the view of HKPC that the Main PCBA is classified under HTSUS 8516.90.90, which provides for parts, other, of electric instantaneous or storage water heaters and immersion heaters; electric space heating apparatus and soil heating apparatus; electrothermic hairdressing apparatus (for example, hair dryers, hair curlers, curling tong heaters) and hand dryers; electric flatirons; other electrothermic appliances of a kind used for domestic purposes; electric heating resistors; other than those of heading 8545; parts thereof.

Confidential Treatment Request

HKPC respectfully requests confidential treatment for the bill of materials (BOM), which is provided as a confidential exhibit to this binding ruling request. Consistent with 19 CFR § 177.2(b)(7), confidential treatment of these records identifying the specific inputs and quantities of each, is appropriate because disclosure would undermine the competitive position of the manufacturer sharing this information. This is not information normally shared publicly. It is highly proprietary information that is specific to a particular manufacturer, identifying its inputs, its manufacturing processes and costs of manufacturing.

Prior Requests for a Ruling

An origin request for this PCBA was previously submitted to CBP on November 29, 2019, as Ruling Request N308420, and is being resubmitted in response to CBP's correspondence identifying additional information sought by CBP. The request has never been the subject of review by the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom.

Facts

Two possible production scenarios are under consideration to produce the PCBA, which will be the Main PCBA for a hair straightener. (Another PCBA for battery control for the hair straightener is produced elsewhere and is not part of this ruling request.) The completed Main PCBA will be exported to the United States to be incorporated into a hair straightener to be produced in the United States. The hair straightener for which the Main PCBA is intended has a power rating of 8.4V, 2000mA, on/off/3 temperature settings. (The hair straightener will contain a plastic casing with a ceramic heating element to straighten hair.)

Under the first scenario, the Main PCBA will be manufactured by a surface mount technology (SMT) process in China. Under that process, the components are 1) placed on to the bare board by the SMT pick and place machine, 2) placed in a baking oven, and then 3) subjected to in-circuit tests to ensure functionality and to ensure that the electrical signal can be output. The PCBA will then be shipped to Vietnam, where the microcontroller (an integrated circuit) will be programmed with firmware to perform the necessary functions for the hair straightener. The latter process is generally referred to as MCU programming. Final testing and inspection also are conducted in Vietnam.

Under the second scenario, all of the steps identified above, the SMT process, the MCU programming, and the final testing and the inspection, will take place in Vietnam.

Sample Letter (Part 3/3)

In both scenarios, and as shown in Confidential Exhibit 1, the parts for the Main PCBA are sourced primarily from Taiwan, although some of the 41 different parts (totaling 150 pieces) are sourced from Japan and Malaysia. Two parts are sourced from China, the blank printed circuit board and a magnetic connector.

The Main PCBA rectifies electricity, which allows it to control temperature, but it does not provide electrical protection. There are electrical switches incorporated into the Main PCBA that will allow the user to turn the straightener on or off. Firmware (via the MCU) is installed onto the Main PCBA to control variances of power output and, via a logarithm, to respond to certain buttons to output electricity for temperature control. The Main PCBA would not be able to provide any power to the hair straightener without the installed firmware. There is no power supply or fuse type components on the Main PCBA.

Legal Analysis

It is the view of HKPC that under both scenarios the completed Main PCBA for the hair straightener will be a product of Vietnam because that is the site of the programming, which substantially transforms the assembly into a new and different article.

As noted in Ruling HQ H302801 (October 3, 2019), in order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes a determination on a case-by-case basis. A substantial transformation occurs when an article emerges from a process with a new name, character or use different from that possessed by the article prior to processing. See Ruling N304035 (May 15, 2019).

CBP has previously concluded that PCBAs imported into the United States "as `blank' printed circuit board assemblies with all the elements mounted onto the circuit board but without the necessary programming to make the circuit boards operational" were subsequently substantially transformed in the United States because there they underwent "programming, assembly and packaging." See NY184729 (August 2, 2002). There, it was the programming operation "that results in a fully functional" product that could be labeled as a product of the United States rather than China. See also H301910 (August 5, 2019).

Applying the same reasoning here, the Main PCBA that is assembled in China, but is not yet programmed to perform any particular functions is substantially transformed once that programming is completed. At that point, even if the SMT process were a substantial transformation (as CBP found in HQ302801), a second – the last – substantial transformation occurs when the firmware is programmed into the PCBA's microcontroller. At that point the PCBA is now a new and different article that has a use it did not have prior to programming: once inserted into the product housing, it can control the functions of the hair straightener.

Conclusion

If you contemplate a ruling that is different from the HKPC's position, or if you believe a meeting would be helpful, we request the opportunity to meet with CBP to discuss the issues. Should you have any questions or need additional information regarding this binding ruling request, please contact the undersigned. Thank you.

B. Product Manufacturing Questionnaire

A product manufacturing questionnaire may be submitted as an accompanying exhibit to the ruling request. The questionnaire should information relevant to the manufacturing of the product, such as a list of components or materials, a list of manufacturing processes in order, and a picture of the assembled final product.

The following questionnaire is an example of how the required information can be laid out. Due to confidentiality reasons, certain parts of the questionnaire are redacted. The table is intended only as an example of one way to display the required information, and businesses do not necessarily have to follow this template exactly.

List of Components/materials

No.	Components	Country of Origin	Cost per Unit (HKD)
1	Component A (Product No. 1)	Taiwan	-
2	Component B (Product No. 2)	Mainland China	-
3	Component C (Product No. 3)	Mainland China	-
4	Component D (Product No. 4)	Malaysia	-
5	Component E (Product No. 5)	Mainland China	-

List of Manufacturing Processes (in manufacturing order)

No.	Manufacturing Process	Country of Origin	Cost per Unit (USD)	Processing Time (Hrs)	Complexity
1	Process A	Mainland China	-	-	Medium
2	Process B	Vietnam	-	-	Medium
3	Process C	Vietnam	-	-	Complex

C. COO Ruling Summary

HKPC sought a ruling on the origin of a PCBA destined for the US market as a standalone product, in Ruling Request N30800. The PCBA is intended for use in a hair straightener. HKPC's ruling request included a list of each of the components of the PCBA and their origin, where the PCBA was assembled, where it was tested and where the programming software was installed in the PCBA. In response to HKPC's request, CBP sought additional information. This included a full description of the hair straightener in which the PCBA would be used, whether there would be more than one PCBA in the finished hair straightener, copies of engineering drawings and photographs of the PCBA, a more detailed bill of materials that identifies each component part number (including software), and for each component part a general description, cost, and quantity (in addition to the country of origin). CBP also sought a step-by-step flowchart explaining what operations are completed in each country (such as soldering, assembly, testing and programming) and detailed information regarding the functions performed by the PCBA within the hair straightener, as well as whether the hair straightener would include any additional electrical components, such as fuses or rectifying apparatus.

Factors Determining Origin

Ultimately, for the PCBA it appears that whether the surface mount technology (SMT) process or the programming determines the origin depends on whether the functions added by the programming are considered significant. Generally, the assembly of a PCBA by the SMT process (i.e. soldering the individual components onto the bare board) is considered a substantial transformation and therefore origin-conferring, even if those components are entirely from another country. HKPC's request presented a PCBA assembled in Vietnam from component that were all or predominantly from Mainland China, including a bare PCB. Based on other rulings issued by CBP, it is highly likely that such a PCBA will be considered a product of Vietnam because the PCBA was both assembled and programmed in Vietnam.

While a binding ruling by CBP is still pending, the PCBA may also be considered a product of Vietnam where it was assembled in Mainland China and then programmed, tested and packaged in Vietnam. That is because CBP previously concluded, in Ruling NY I84729 (2 August 2002), that PCBAs imported into the US "as 'blank' printed circuit board assemblies with all the elements mounted onto the circuit board but without the necessary programming to make the circuit boards operational" were subsequently substantially transformed in the US because there they underwent "programming, assembly and packaging." In that ruling, it was the programming operation "that results in a fully functional" product that could be labeled as a product of the US rather than Mainland China. In Ruling HQ H273091 (14 June 2016), CBP noted that "the programming of a device that confers its identity as well as defines its use generally constitutes substantial transformation."

Typically, one of the integrated circuits included in the PCBA will contain the necessary firmware to determine the operations controlled by the PCBA. Whether subsequently programming the PCBA (i.e., the integrated circuit controlling the operations of the PCBA) in another country will be considered a substantial transformation and origin-conferring is a fact-specific determination. In the case of the PCBA for a hair straightener, even if the software is limited to on/off and heat settings, thereby merely permitting the hair straightener to operate, it is possible that a PCBA assembled in China and then programmed in Vietnam will be a product of Vietnam, because the PCBA, and the hair straightener in which it will be installed, are not operational without the programming.

On the other hand, that fact situation may not be as clear-cut as that which was presented in CBP's ruling in HQ H014068 (9 October 2007), which involved a finished product, not just a PCBA. There, the installation of software that converted the function of cell phones into devices that were primarily used to measure and check telecommunications networks (and prevented their use as cell phones without altering settings) conferred origin. In that instance, the software was both developed and installed in a single country and allegedly added USD 2,500 in value to the finished product. Thus, it matters what the PCBA is designed to do and what the software added to a PCBA accomplishes.

III. Car Battery Charger

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a car battery charger.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/4)

Director, National Commodity Specialist Division
Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
201 Varick Street, Suite 501
New York, NY 10014

Re: Request for Binding Ruling on Origin, including Request for Confidential Treatment of Sensitive Commercial Information, for Car Battery Charger

Dear Director Mack:

On behalf of the Hong Kong Productivity Council (HKPC) and collaborating companies, which manufacture products for exportation to and sale in the United States, we respectfully request confirmation of our views regarding the country of origin of a car battery charger for lead-acid batteries, as more fully described below, which will be manufactured in more than one country.

In requesting this ruling, HKPC's objective is to help Hong Kong enterprises accurately identify the country of origin of products destined to the U.S. market in light of multi-country supply chains. The HKPC's mission is to promote and assist the Hong Kong business sector through the introduction of more efficient and updated business and technological methods. Toward that end, HKPC is drafting a guidebook that will address production plans that include inputs from China and other sources which are incorporated into manufacturing operations in any of ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam).

At issue here are production plans under consideration for a car battery charger for lead-acid batteries. The battery charger works by being connected both to the AC power (typically a wall socket) and to the car battery that is being charged. The charger can be connected to the car battery via a clamp cable that is included with the charger. The charger has a four-step charging program, namely initialization, bulk charge, absorption mode and float mode. The charger automatically switches from a full charge to a float/maintenance voltage after the battery is fully charged. If the battery voltage drops too far underload, the full charger output power resumes. A solid-state two color LED indicates the stage of the charger. When the battery is fully charged, the green status indicator light will turn on. Based upon its specifications, as shown in Exhibit 1, the battery charger is classified under HTSUS 8507.20.80.41, which provides for Electric storage batteries, including separators therefor, whether or not rectangular (including square); parts

Sample Letter (Part 2/4)

thereof: Other lead-acid storage batteries: Other: 12 V batteries. See, e.g. Ruling N244362 (August 21, 2013).

Confidential Treatment Request

HKPC respectfully requests confidential treatment for the bill of materials (BOM) and the step-by-step descriptions of the manufacturing processes, which are provided as confidential exhibits to this binding ruling request (Exhibits 2 and 3).

Consistent with 19 CFR § 177.2(b)(7), confidential treatment of these records, including the specific components and quantities and cost of each, identification of the specific parts of the battery charger, and the process flows for the manufacturing steps, is appropriate because disclosure would undermine the competitive position of the manufacturer sharing this information. This is not information normally shared publicly. It is highly proprietary information that is specific to a particular manufacturer, identifying its inputs, its manufacturing processes and its costs of manufacturing.

No Prior Requests for a Ruling

We are not aware of any instances in which this origin request has ever been the subject of review by CBP, the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom. Also, HKPC has not sought any origin advice from CBP on this battery charger.

Facts

This battery charger is comprised of more than 50 different components, including wire, wire harness, electronic parts (such as such as a motherboard and an LED), as well as the inputs necessary to populate a bare printed circuit board (such as resistors, capacitors, fuses, pins, diodes, and software), transformer, plastic housing/case, screws and an output cable. A full list of the bill of materials for each car battery charger is provided, on a confidential basis, as Confidential Exhibit 2. As also shown in Confidential Exhibit 2, the inputs are produced or procured in a wide variety of countries: China, India, Indonesia, Hungary, Czech Republic, Philippines, Israel, Mexico, and Thailand. These inputs or components are generic or subject to further steps, including an SMT process and assembly.

Two production scenarios are under consideration, with the details of the specific steps provided in Confidential Exhibit 3:

In the first production scenario, in China the relevant software for the operation of the battery charger is loaded on to a microcontroller unit (MCU) on an integrated circuit chip that will be included on a printed circuit board assembly. Surface mount technology is then used to load a

Sample Letter (Part 3/4)

bare printed circuit board with the capacitators, resistors, diodes, transistors and integrated circuits, including the integrated circuit chip with the MCU. The inputs for the PCBA are from Israel, China, Mexico, Indonesia, Hungary, the Philippines, Czech Republic, and Thailand. Thereafter, the PCBA is shipped to a manufacturing facility in an ASEAN country to be incorporated into what will be a car battery charger.

Thus, in the ASEAN country, the battery charger is assembled into a plastic housing that was produced in China and the components are welded into place. The charger is calibrated and tested before the surfaces are cleaned and labeled and the charger is again tested and inspected (quality control) before being packaged.

The second production scenario is similar to the first, but the countries are reversed. The loading of the software on to an MCU on an integrated circuit chip that will be included in a PCBA and the SMT process to create the PCBA occurs in a Southeast Asian country. The PCBA is then shipped to China, where the assembly of all of the components of the battery charger into a plastic housing, including welding, as well as testing and inspection, is completed and the charger is packaged.

Legal Analysis

Under CBP's regulations, 19 C.F.R. 134, the country of origin is defined as the "country of manufacture, production, or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the 'country of origin.'" A substantial transformation is said to have occurred when an article emerges from a manufacturing process with a name, character, or use which differs from the original material subjected to the process. United States v. Gibson-Thomsen Co., Inc, 27 C.C.P.A. 267 (C.A.D 98) (1940). See also, Belcrest Linens v. United States, 573 F. Supp. 1149 (Ct. Intl. Tr. 1983), which teaches that in determining whether the combining of parts or materials constitutes a substantial transformation, the determinative issue is the extent of the operations performed and whether the parts lose their identity and become an integral part of the new article.

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes a determination on a case-by-case basis. In Ruling N303008 (March 8, 2019), CBP considered the country of origin for two models of cell phones which were produced in a three-stage process. In the first stage, the PCBA was manufactured, using SMT to load a raw circuit board, and "the overall operating system software that runs the program is also downloaded on to the PCBA." In the second stage, the hardware of the phone was assembled, including the PCBA, housing, screen, keys/keypads, USB connectors, battery, and antenna. In addition, the product was tested for overall functionality. In the third stage, the individual assembled devices were flashed with customer specific software and packed along with relevant accessories. Looking

Sample Letter (Part 4/4)

at the totality of the evidence, CBP concluded that the PCBA, created in the first stage, imparted the essential character to the cell phones and that the two subsequent stages did not result in a substantial transformation of the PCBA.

It is the view of HKPC that the cell phone ruling is instructive here and indicates that where the PCBA is created should determine the origin of the battery charger. Here, both the creation of the PCBA and the loading of the software take place in the same country, with only assembly occurring in the second country. Given that the PCBA determines the essential character of the car battery charger, once that is formed, with the MCU/IC containing relevant software, the operation of the battery charger is determined. The charger assembly operations are relatively simple in comparison to the PCB assembly.

Therefore, under both scenarios, HKPC believes the origin of the car battery charger is the country where the PCBA was created. In the first scenario that is China while in the second it is the Southeast Asian country.

Conclusion

If you contemplate a ruling that is different from the HKPC's position, or you believe a meeting would be helpful, we request the opportunity to meet with CBP to discuss the issues. Should you have any questions or need additional information regarding this binding ruling request, please contact the undersigned. Thank you.

B. Supplemental Exhibits

In addition to the lawyer's letter, businesses will need to submit exhibits that show the parts, critical components, and processes of the product. These will be used by the relevant customs department to determine the COO of the product.

Testing Specifications

Businesses can include testing results of the product to show its performance capabilities and operational capabilities, including:

- Description of what is being tested;
- The testing conditions;
- Target ranges/amounts; and
- Results of different rounds of testing.

Complete Parts List

Businesses should submit a complete list of parts of their product, with details including the following:

- Part number;
- Name/description of the part;
- Amount of the part used, and the unit of measurement for the amount;
- Cost of the part, and the currency used for the cost; and
- Country of origin of the part.

The list can include any other details that will assist the relevant customs department in making a ruling on the COO of the product.

Sample Parts List

The following table is a sample of the parts list submitted to CBP by HKPC. It is an example of categories to include when submitting a parts list, but businesses should note that each parts list can be different depending on different parts used for different products.

For confidentiality reasons, specifications, part numbers and costs have been removed, and other defining characteristics and descriptions have been simplified and the list shortened.

Part No.	Item	Specification	Usage	Cost in HKD	Material Type	COO
-	Electronic copper line	-	0.10	-	Wire/wire harness	Hong Kong
-	Ceramic capacitor	-	2	-	Electronic parts	Czech Republic
-	Resistor	-	1	-	Electronic parts	Mainland China
-	Screw	-	1	-	Metal Parts	Mainland China
-	Patch diode	-	4	-	Electronic parts	Mainland China

Process Flowchart

The process flowchart should include images with each part numbered, a parts list as shown in the example above. The flowchart should at least provide the following information:

- Process name/number;
- Description of the process;
- Steps in the process;
- Parts/materials used in the process, with corresponding numbers or references to the parts list;
- Labour cost and man-hours required to perform and test the process; and
- Any additional notes relevant to the process.

Below is an example of the process flowchart submitted to CBP by HKPC. It is a sample of how the process flowchart can be presented, and should not be taken as a template to be followed exactly.

For confidentiality reasons, various parts of the process flowchart have been redacted, and other defining characteristics and descriptions have been simplified and the flowchart has been shortened.

Sample Discharge Flow Diagram

The sample discharge flow diagram exhibits how each process within the manufacturing and assembly process flows into the next. The discharge flow diagram should include all the processes necessary to produce the product, separated by each stage involved in the process.

Product No.	-	File No.	–	File Ver.	v1.0
Product Name	Smart Charger	Stage	Insertion	Date	201x.x.x

Step	Process Name	No. of Workers	Work HRS (sec)	Standard Work HRS	Version	Equipment/tools
1	Process A	1	-	-	v1.0	Electrostatic belt
2	Process B	1	-	-	v1.0	Parts box
3	Process C	1	-	-	v1.0	Parts box
4	Process D	1	-	-	v1.0	Wave furnace
5	Process E	1	-	-	v1.0	Cutting machine

Sample Operating Instructions

Operating instructions should be given for each process in the discharge flow diagram.

Product No.	-	Process Name	Process A	Process Stage	Insertion

Steps
1. Step 1 2. Step 2 3. Step 3

Precautions (Safety and Operational Requirements)	No.	Equipment/tools
1. Different components are packed separately	1	Electrostatic belt
	2	Processing machine

C. COO Ruling Summary

In another ruling request submitted by HKPC, Ruling Request N308503, the origin of a car battery charger was determined by the origin of its PCBA because CBP found that the PCBA imparted "the essence of the charger." Specifically, the PCBA converts mains power to 12 VDC to be applied to a battery (as mains electricity is the general-purpose alternating current electric power supply).

Factors Determining Origin

For the car battery charger, the assembly of its PCBA in Mainland China by soldering the individual components onto the bare board resulted in a substantial transformation of those components to produce a PCBA of Mainland Chinese origin. The PCBA was then exported to another country to be incorporated into a plastic housing and to have wires attached, a simple assembly process, which resulted in a car battery charger. CBP concluded that the assembly process did not substantially transform the PCBA and other components into a new and different article of commerce with a name, character, and use distinct from the PCBA exported from Mainland China. Therefore, for the car battery charger, the functionality of the charger was determined by the PCBA.

Sample COO Ruling Letter from CBP (Part 1/2)

A sample of the COO ruling letter that CBP may send to a business stating the ruling on its product's COO.

> In your letter dated December 18, 2019 you requested a country of origin ruling on behalf of your client, Hong Kong Productivity Council.
>
> The merchandise under consideration is identified as the Smart Charger PSJ503, which is described as a 12V and 750mA lead-acid battery charger that consists of a plastic enclosure containing a printed circuit board assembly (PCBA), an electrical plug, and a cable with a connector on the end. The battery charger, which is intended to be connected to a vehicle battery via a clamp cable, is programmable and charges the attached battery via three modes: bulk charge, absorption mode, and float mode. In your request, you provide two scenarios detailing where the battery charger is produced and assembled as detailed hereafter.
>
> In the first scenario, you state that the subject battery charger is produced in China by surface mounting more than 50 individual components of various origins, such as resistors, capacitors, diodes, fuses, etc. onto a bare printed circuit board. Once the PCBA is manufactured, it is tested and exported to Vietnam where it is mounted inside a plastic enclosure and the output cable and male connector are attached. Prior to export from Vietnam, the battery charger is tested and packed with two cable assemblies.
>
> In the second scenario, you state that the subject battery charger is produced in Vietnam by surface mounting more than 50 individual components of various origins, such as resistors, capacitors, diodes, fuses, etc. onto a bare printed circuit board. Once the PCBA is manufactured, it is tested and exported to China where it is mounted inside a plastic enclosure and the output

Sample COO Ruling Letter from CBP (Part 2/2)

cable and male connector are attached. Prior to export from China, the battery charger is tested and packed with two cable assemblies.

The marking statute, section 304, Tariff Act of 1930, as amended (19 U.S.C. 1304), provides that, unless excepted, every article of foreign origin (or its container) imported into the U.S. shall be marked in a conspicuous place as legibly, indelibly and permanently as the nature of the article (or its container) will permit, in such a manner as to indicate to the ultimate purchaser in the U.S. the English name of the country of origin of the article.

The "country of origin" is defined in 19 CFR 134.1(b) as "the country of manufacture, production, or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the 'country of origin' within the meaning of this part; however, for a good of a NAFTA country, the NAFTA Marking Rules will determine the country of origin."

The test for determining whether a substantial transformation will occur is whether an article emerges from a process with a new name, character or use, different from that possessed by the article prior to processing. See Texas Instruments Inc. v. United States, 69 C.C.P.A. 151 (1982). This determination is based on the totality of the evidence. See National Hand Tool Corp. v. United States, 16 C.I.T. 308 (1992), aff'd, 989 F.2d 1201 (Fed. Cir. 1993).

With regard to the origin of the subject battery charger in Scenario 1, it is the opinion of this office that the assembly of the PCBA in China by soldering the individual components onto the bare board results in a substantial transformation of the components to produce a PCBA of Chinese origin. The PCBA, which is exported to Vietnam to be incorporated into a plastic housing and to have wires attached, is not substantially transformed into a new and different article of commerce with a name, character, and use distinct from the article exported from China. In our view, the PCBA, which converts mains power to 12 VDC to be applied to a battery, imparts the essence of the charger. Thus, the Smart Charger PSJ503 as described in Scenario 1 is considered a product of the China for origin and marking purposes at the time of importation into the United States.

Likewise in Scenario 2, it is the opinion of this office that the assembly of the PCBA in Vietnam by soldering the individual components onto the bare board results in a substantial transformation of the components to produce a PCBA of Vietnamese origin. The PCBA, which is exported to China to be incorporated into a plastic housing and to have wires attached, is not substantially transformed into a new and different article of commerce with a name, character, and use distinct from the article exported from Vietnam. In our view, the PCBA, which converts mains power to 12 VDC to be applied to a battery, imparts the essence of the charger. Thus, the Smart Charger PSJ503 as described in Scenario 2 is considered a product of the Vietnam for origin and marking purposes at the time of importation into the United States.

This ruling is being issued under the provisions of Part 177 of the Customs Regulations (19 C.F.R. 177).

IV. Curling Iron/wand

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a curling iron/wand.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/5)

Commissioner of Customs and Border Protection
Attn: Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
Washington, D.C. 20229

Re: Request for Binding Ruling on Origin, including Request for Confidential Treatment of Sensitive Commercial Information, for Curling Iron/Wand

Dear Commissioner:

On behalf of the Hong Kong Productivity Council (HKPC) and collaborating companies, which manufacture products for exportation to and sale in the United States, we respectfully request confirmation of our view regarding the country of origin of a curling iron, as more fully described below, which will be subject to manufacturing operations in two countries, China and Vietnam.

HKPC, as a multi-disciplinary organization established by statute in 1967, to promote productivity excellence through integrated advanced technologies and innovative service offerings to support Hong Kong enterprises, including export-oriented manufacturers, and responsible for providing small- and medium-sized enterprises with assistance in meeting the requirements of an ever-changing business environment, is an interested party. As such, HKPC is an entity with a direct and demonstrable interest in the question presented in this ruling request. (See, e.g., HQ 959528 (October 1, 1996).)

At issue here are production plans under consideration for an electric curling iron/wand with an 8-ft. electrical cord. A mock-up of the retail packaging (without country of origin information displayed), along with an instruction pamphlet, are provided as Exhibit 1. A photograph of the finished product is provided in Exhibit 2.

The curling iron is classified under HTSUS 8516.32.0020, which provides for "Electric instantaneous or storage water heaters and immersion heaters; electric space heating apparatus and soil heating apparatus; electrothermic hairdressing apparatus (for example, hair dryers, hair curlers, curling tong heaters) and hand dryers; electric flatirons; other electrothermic appliances of a kind used for domestic purposes; electric heating resistors, other than those of heading 8545; parts thereof: Other hairdressing apparatus: curlers." See HQ H157778 (October 1, 2015) and Ruling N222155 (July 13, 2012).

Sample Letter (Part 2/5)

Confidential Treatment Request

HKPC respectfully requests confidential treatment for the bill of materials (BOM) and the step-by-step descriptions of the manufacturing processes, which are provided as confidential exhibits to this binding ruling request (Exhibits 3 and 5).

Consistent with 19 CFR § 177.2(b)(7), confidential treatment of these records, including the specific inputs and quantities and cost of each, and the process flows for the manufacturing steps, is appropriate because disclosure would undermine the competitive position of the manufacturer sharing this information. This is not information normally shared publicly. It is highly proprietary information that is specific to a particular manufacturer, identifying its inputs, its manufacturing processes and costs of manufacturing.

No Prior Requests for a Ruling

Other than returned Ruling N308420, we are not aware of any instances in which this origin request has ever been the subject of review by CBP, the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom. HKPC and the collaborating company are hereby providing further information to permit CBP to advise on the origin of this curling iron.

Facts

This professional grade product is comprised of more than 40 components of multiple types of materials, including molded plastic, metal, mica, Kapton tape, and wire, as well as the inputs necessary to populate the printed circuit board assembly (PCBA). A full list of the bill of materials for each curling iron is provided, on a confidential basis, as Confidential Exhibit 3. Although the country of origin of the input components is not listed in a separate column in Confidential Exhibit 3, all of the inputs are produced in China. These inputs or components are generic or subject to further processing to produce final components, subassemblies and final assemblies. For example, the plastic handle, lamp cover and insulation sleeve are formed and originate in China, as are the bare boards and integrated circuits for the PCBA. As discussed below, the manufacturing operations will be split between a manufacturing facility in China and a factory in Vietnam.

The parts comprising the curling iron are identified in Exhibit 4, with those highlighted in red made of metal and those highlighted in green made of plastic. As shown in Confidential Exhibit 5, which describes the manufacture of parts, sub-assembly and assembly processes, and associated costs, there are multiple manufacturing, subassembly and assembly steps to produce the curling iron, totaling almost 100 steps, including testing and inspections.

Three production scenarios are under consideration.

Sample Letter (Part 3/5)

Production Scenario #1

The China facility manufactures the Hardware portions of the curling iron, as described in Steps L22 through L38. The parts are then sandblasted and painted, as described in Steps L39 through L43. The internal components of these parts are then added, as described in Steps L44 through L62, creating subassemblies. In addition, the bare PCB is populated, as described in Steps L63 through L66, to create a PCBA, and then tested and inspected before being cleaned, as described in Step L67. The PCBA provides simple on/off/high/low heat functionality.

Thereafter, these parts and subassemblies are sent to the manufacturing facility in Vietnam for further manufacture, assembly, testing and packaging. Specifically, in Vietnam the plastic components of the curling iron are created by injection molding from plastic resins. These steps are described in Steps L1 through L13 and include the following parts: the lower handle, the upper handle, the light cover, the one inch cool tip, the PCB insulator, the various rings, the temperature knob, the switch actuator, the swivel sheaf, and the UL plug cover. The rings created by injection molding are electroplated in Vietnam, although not necessarily in the same facility.

The curling iron components are then assembled in Vietnam, as described in Steps L68 through L88, including assembling the barrel adapter with the front locking ring and the PCB insulator, inserting the heater assembly into the barrel, inserting the barrel adapter into the barrel, fastening the cool tip, assembling the flipper, soldering lead wire for the swivel sheath and inserting the lead wire into the PCB insulator, soldering the lead/power wire on the PCBA, assembling the rings, and assembling the lower and upper handles. During this process, the performance of the curling iron is tested at high and low settings. Subsequently, the curling iron is subject to function testing, cleaned, and subjected to further scrutiny for operation and appearance, as described in the subsequent steps before being packaged as described in Step L91.

Production Scenario #2

Under this production scenario, Vietnamese facility, rather than the Chinese facility, is also responsible for building the PCBA, as described in Steps L63 through L 67. All other steps remain as described above. Thus, the China facility is only responsible for Steps L22 through L62, relating to the hardware and subassemblies. All other manufacturing, including creation of the plastic parts, the building of the PCBA, assembly and final cleaning, testing, inspection and packing, occur in Vietnam.

Production Scenario #3

In the third production scenario, the China factory will produce both the plastic parts (by injection molding) and the hardware portions of the curling iron. However, it will not build/populate the PCBA. That will be done in Vietnam, as part of the assembly process. Thus,

Sample Letter (Part 4/5)

the China factory will be responsible for Steps L1 through L62, while the Vietnam facility will be responsible for Steps L63 through L91.

Legal Analysis

Under CBP's regulations, 19 C.F.R. 134, the country of origin is defined as the "country of manufacture, production, or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the 'country of origin.'" A substantial transformation is said to have occurred when an article emerges from a manufacturing process with a name, character, or use which differs from the original material subjected to the process. United States v. Gibson-Thomsen Co., Inc, 27 C.C.P.A. 267 (C.A.D 98) (1940). See also, Belcrest Linens v. United States, 573 F. Supp. 1149 (Ct. Intl. Tr. 1983).

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products or when manufacturing processes occur in multiple countries, CBP considers the totality of the circumstances and makes a determination on a case-by-case basis. Looking at Energizer Battery, Inc. v. United States, 190 F. Supp. 3d 1308 (Ct. Int'l Tr. 2016), the most recent judicial consideration of the rule of origin for products subject to multi-country operations, key considerations in identifying whether there is a substantial transformation, that is, a change in name, character or use from components to finished article, include 1) whether there was a pre-determined end use prior to further processing or assembly and 2) whether manufacturing or assembly operations result in a change in the shape or material composition of any imported component. In Energizer Battery, both CBP and the Court found that where virtually all of the approximately 50 different components of a flashlight were made in China and the assembly of the flashlight in the United States was not complex, there was no substantial transformation in the United States. All of the components, including the shape/exterior of the flashlight, were set before the components reached the United States. CBP also considered the fact that the flashlight was programmed in China with U.S.-developed software, but concluded that the programming was just an "enhancement" that "does not change its fundamental nature" and "is not essential to the basic operation of the flashlight." See HQ H215657 (April 29, 2013). The Court does not appear to have considered the programming relevant.

Applying the principles of Energizer Battery to the facts presented here, it is notable that in the first production scenario under consideration, while the metal components and the PCBA are produced in China, the plastic components, which are key elements of the curling iron, contributing to the shape of the curling iron and making it safe to use by protecting the user from the heat generated by the curling iron, and the assembly operations are performed in Vietnam. That the PCBA, which controls the heating level switches, provides functions which are important but apply to many appliances and are not unique to the curling iron, appears less important by comparison. Moreover, even if the assembly of the PCB into a finished PCBA in China is a

Sample Letter (Part 5/5)

substantial transformation, the fact is that until the plastic components of the curling iron are created in Vietnam, the end use of the components is not pre-determined. The plastic components do not arrive in Vietnam ready for assembly. That is, another, the last, substantial transformation occurs where the plastic components are created by injection molding and the assembly operations are performed. Thus, under the first production scenario, HKPC believes that the country of origin is Vietnam.

HKPC also believes that Vietnam is the country of origin in the second production scenario. In that instance, the Vietnamese facility is responsible for manufacturing the plastic parts and populating the PCBA, as well as the final assembly operations. The China facility is responsible only for the manufacture and finishing of the metal parts. The end use of the components is not pre-determined before the inputs are sent to Vietnam and the plastic parts are manufactured, the PCBA is assembled and the final assembly is completed. These steps clearly constitute a substantial transformation, creating a new and different article in Vietnam.

Finally, HKPC believes that the third production scenario, in which the Vietnamese facility is responsible for the production of the PCBA, which controls the on/off/high/low heat functions, and the final assembly, is most akin to the facts presented in the Energizer battery case. Unless the PCBA is essential to the operation of the curling iron as a curling iron, the fact that all of the plastic and metal parts are fully formed in China before being shipped to Vietnam means that the end use of the parts as a curling iron is pre-determined and the country of origin is China.

Conclusion

If you contemplate a ruling that is different from the HKPC's position, or you believe a meeting would be helpful, we request the opportunity to meet with CBP to discuss the issues. Should you have any questions or need additional information regarding this binding ruling request, please contact the undersigned. Thank you.

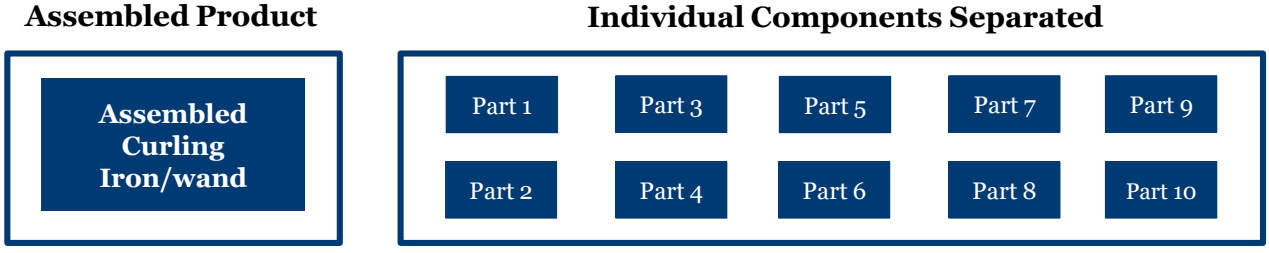
B. Supplemental Exhibits

Product Packaging

For products with crucial safety requirements such as a curling iron/wand, businesses may send an image of the packaging with the required safety instructions to demonstrate how the curling iron/wand operates. This will assist CBP in determining which components are critical to the safe operation of the product.

Images

Applicants may include different labeled views of the product, to assist CBP in understanding how each component and process fits into the final product:



Complete Parts List

Businesses should submit a complete list of parts of their product, with details including the following:

- Part number;
- Name/description of the part;
- Amount of the part used, and the unit of measurement for the amount;
- Cost of the part, and the currency used for the cost; and
- Country of origin of the part.

The list can include any other details that will assist the relevant customs department in making a ruling on the COO of the product.

Sample Parts List

The following table is a sample of the parts list submitted to CBP by HKPC. It is an example of categories to include when submitting a parts list, but businesses should note that each parts list can be different depending on different parts used for different products.

For confidentiality reasons, specifications, part numbers and costs have been removed, and other defining characteristics and descriptions have been simplified and the list shortened.

Part No.	Part Type	Description	Usage	Unit	Material Cost	Processing Cost
-	Plastic	Handle	1	PCS	-	-
-	Metal	Screw	1	PCS	-	-
-	Misc	Decorating ring	4	PCS	-	-
-	Misc	Solder	0.01	KG	-	-
-	Socket	Socket	1	PCS	-	-

Process Flowchart

The process flowchart should include images with each part numbered, a parts list as shown in the example above. The flowchart should at least provide the following information:

- Process name/number;
- Description of the process;
- Steps in the process;
- Parts/materials used in the process, with corresponding numbers or references to the parts list;
- Labour cost and man-hours required to perform and test the process; and
- Any additional notes relevant to the process.

Sample Process Flowchart

Model No.	-	Ver.	0	Stage	Assembling
Product Name	Curling Iron	Doc. No.	-	Date	201x.x.x

Step	Process Description	Daily Capacity	Dept.	Labour Needs	Productivity /12Hrs	Remarks
L1	Process A	6000	Injection	1	-	-
L2	Process B	6000	Injection	1	-	-
L3	Process C	6000	Spray	12	-	-
L4	Process D	6000	Hardware	1	-	-
L5	Process E	6000	Hardware	1	-	-

C. COO Ruling Summary

HKPC requested a binding ruling from CBP on a curling iron which included a PCBA. In Ruling Request N308420, the PCBA was manufactured by SMT processes in one country and then was among the components assembled together in a second country to produce the curling iron.

Factors Determining Origin

The PCBA for the curling iron provides simple on/off/high/low heat functionality and is not viewed as origin-conferring by CBP. Instead, where the various components of that curling iron, and particularly the metal components, are formed and shaped is determinative of the origin of the finished product. In one production scenario, the metal parts were produced in one country and the plastic parts were produced in the second country. CBP's ruling indicates that where the plastic components are shaped by injection molding is less significant than where the metal components are manufactured. The fact that the plastic components are wrapped around or encase the metal components may be a factor for CBP. In addition, CBP saw the assembly process as simple, not complex, and not origin-conferring because the metal components predetermined the final product.

This conclusion matches the terms of a court case CBP has been relying upon in issuing many of its origin rulings, Energizer Battery, Inc. v. United States, 190 F. Supp. 3d 1308 (Ct. Int'l Trade 2016). In that case, the Court considered the origin of an LED flashlight assembled in the US and containing approximately 50 different components. All but two of the components were manufactured in Mainland China. The Court ruled that the assembly operation in the US did not constitute a substantial transformation. Instead, the Court viewed the assembly as simple, with the imported components, some of which were partially pre-assembled, having "a predetermined end use" as a flashlight. Therefore, the Court ruled that the flashlight was a product of Mainland China, where the components were manufactured, and did not even address where the flashlight was programmed, apparently viewing that as not relevant.

V. Bluetooth Wireless Boombox with FM Radio

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a Bluetooth wireless boombox with FM radio.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/4)

Director, National Commodity Specialist Division
Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
201 Varick Street, Suite 501
New York, NY 10014

Re: Request for Binding Ruling on Origin of a Bluetooth Wireless Boombox with FM Radio

Dear Director Mack:

On behalf of the Hong Kong Productivity Council (HKPC) and collaborating companies which manufacture products for exportation to and sale in the United States, we respectfully request confirmation of our view that a Bluetooth wireless boombox, as more fully described below, is a product of Vietnam, where it will be manufactured from components sourced from China and Taiwan.

In requesting this ruling, HKPC's objective is to help Hong Kong enterprises accurately identify the country of origin of products destined to the U.S. market in light of multi-country supply chains. HKPC's mission is to promote and assist the Hong Kong business sector through the introduction of more efficient and updated business and technological methods. Toward that end, HKPC is drafting a guidebook that will address production plans that include inputs from China and other sources which are incorporated into manufacturing operations in any of ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam).

It is the view of HKPC that the Bluetooth Wireless Boombox with FM radio, Model G-750, is classified under HTSUS 8527.13.6080, which provides for "Reception apparatus for radio-broadcasting, whether or not combined, in the same housing, with sound recording or reproducing apparatus or a clock: Radiobroadcast receivers capable of operating without an external source of power: Other apparatus combined with sound recording or reproducing apparatus: Other: Other: Other. See, e.g., Ruling N302198 (December 18, 2018). A copy of the specifications of the boombox is provided as Exhibit 1.

Sample Letter (Part 2/4)

No Prior Requests for a Ruling

We are not aware of any instances in which this origin request has ever been the subject of review by CBP, the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom. Also, HKPC has not sought any origin advice from CBP on this product.

Facts

The Bluetooth boombox with FM radio was designed in the United States and is produced in accordance with that U.S. design. Under the production plan being considered, the inputs and manufacturing steps would be as follows:

In China:

1. All of the electrical components, including blank printed circuit boards, the integrated circuits, speaker drivers, cables and wires, lithium battery, display and other such electronic components, are generic and are sourced in China. In addition, a metal speaker grille also is sourced in China.
2. The surface-mount technology (SMT) process and manual insertion of the electronic components on to the PCBs are performed in China, with the microcontroller units (MCU) programmed with the appropriate software, to create complete PCB assemblies. Each boombox will include two PCBAs. One PCBA, referred to as the Key PCBA, controls the function keys and LCD display. The other PCBA is identified as the Main PCBA and controls the main circuitry, including the Bluetooth functionality. See Exhibit 2 for a diagram showing the location of the two PCBAs in the finished boombox.
3. The PCBAs, along with plastic resins purchased from Taiwan and all other components procured from China, are shipped to Vietnam.

In Vietnam:

4. The Taiwanese-origin plastic resins are subjected to injection molding in Vietnam to create the plastic casing or cabinet and handle for the boombox. The internal details of the cabinet are apparent from Exhibit 2.
5. Also sourced in Vietnam are an A/C adaptor, an instruction manual, a warranty card, and all packaging materials.
6. The main unit is assembled and tested in Vietnam, a process involving 39 steps, not including any packing related steps. The main unit includes the front and rear cabinet (which were produced in Vietnam by injection molding as described above) as well as the speakers, etc. Assembly is as follows:
    a. For the front cabinet, 1) the rubber key pad is assembled, 2) ethylene-vinyl acetate (EVA) is attached to the front cabinet, 3) the speaker grille is incorporated into the

Sample Letter (Part 3/4)

cabinet/case, 4) the speaker grille hooks are bent, 5) using EVA and glue, the battery is assembled, 6) speaker wires are soldered to the speaker drivers, 7) the tweeter is assembled and fastened, 8) the main speakers are assembled and fastened to the case/cabinet, 9) EVA is attached to the main PCBA, which is also tested, 10) the main PCBA is checked, the flat cable is inserted along with the FM antenna, 11) the main PCBA is assembled and fastened, 12) speaker wires are soldered to the main speakers, 13) EVA is added to the left speaker wires, 14) EVA is added to the right speaker wires, 15) EVA is added on the antenna wires, 16) EVA is added on the flat cable, 17) EVA is added on the handle, 18) the logo badge is assembled, 19) the key PCBA is tested and a hotmelt is added on it, 20) EVA is added on the key PCBA and the flat cable from the front cabinet is soldered to the key PCBA, 21) the key PCBA is fastened, 22) the semi-finished unit is checked, 23) the front and rear cabinet is assembled, 24) screws are fastened on the rear cabinet, 25) external charging is checked, and 27) the lens is assembled.

b. For the rear cabinet, 28 and 29) port tubes for left and right are each assembled, 30) the USB rubber is assembled, 31) the right port tube is fastened on the rear cabinet, 32) the left port tube is fastened on the rear cabinet, and 33) a hole is drilled in the cabinet.

c. Thereafter, 34) the front and rear cabinets are assembled, 35 and 36) screws are fastened on the rear cabinet (on the right and left air tubes), 37) the FM radio is checked, 38) AUX is checked, and 39) the Bluetooth is checked. See Exhibit 3 for photographs of the assembled cabinet, including the grill.

7. Following assembly, the finished product is packaged in Vietnam, including the following steps: a) the four rubber pads ("feet") are attached to the bottom of the cabinet/unit, b) the Bluetooth speaker is checked for cosmetic flaws, c) the serial number label is applied and a customer support card is prepared, d) the main unit is placed in a polybag and sealed with tape, e) a security tag is applied and the gift box in which the Bluetooth speaker will be packaged is folded, e) the left and right paper tray is packed and the Bluetooth speaker is placed in the gift box, f) the accessories are packed, g) the AC adaptor is tested, h) the magnetic ring is buckled, i) the AC adaptor is packed, j) the user manual is packed, k) the gift box handle is installed and the gift box is closed, l) transparent circle tape is applied in three places, m) the bottom of the outer carton is sealed and the outer carton is packed, n) the carton is marked with a number, o) a battery label is applied, and p) the top of the outer carton is sealed.

Legal Analysis

It is the view of HKPC that the Bluetooth boombox with FM radio is a product of Vietnam, notwithstanding the Chinese origin of many of the components, including the PCBAs, and programming in China, because the subsequent manufacture in Vietnam is substantial, creating a new and different product, and constituting a substantial transformation. It includes 1) the manufacture from Taiwanese resins of the parts forming the plastic cabinet (through injection

Sample Letter (Part 4/4)

molding), which is then used to house the components and determine the shape of the final product and 2) a substantial assembly process.

Under CBP's regulations, 19 C.F.R. 134, the country of origin is defined as the "country of manufacture, production, or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the 'country of origin.'" A substantial transformation is said to have occurred when an article emerges from a manufacturing process with a name, character, or use which differs from the original material subjected to the process. United States v. Gibson-Thomsen Co., Inc, 27 C.C.P.A. 267 (C.A.D 98) (1940).

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes a determination on a case-by-case basis.

HKPC has considered the decision of the U.S. Court of International Trade in Energizer Battery v. United States, 190 F. Supp. 3d 1308 (Ct. Int'l Tr. 2016) in reaching its view that Vietnam is the country of origin. In Energizer Battery, the Court considered the country of origin of a flashlight for which all of the components arrived in the United States ready for assembly into the finished flashlight. "[T]he post-importation assembly processes did not result in a change in the shape or material composition of any imported component" and therefore "there is no change in character as a result of the Energizer's assembly operations." Id. at 1321.

Here, however, besides a 39-step assembly and testing process in Vietnam, there also was the creation of key components in Vietnam: the Taiwanese origin resins were subjected to injection molding to create the pieces of the cabinet, that is, the boombox in which the assembled components are held, to which the metal grille was attached, and the handles, which permit a user to hold and carry the boombox. In contrast, in Energizer Battery, fully formed "Chinese-origin flashlight body components" were shipped to the U.S. to serve as the housing. See HQ H215657 (April 29, 2013). In this instance, that the final article would be a boombox was not pre-determined at the time the inputs and components were shipped from China to Vietnam. These materials, and the Vietnamese injection molding equipment, could have been used to create any number of products with Bluetooth and FM radio capabilities. Therefore, the manufacture of the cabinet and the assembly operations then performed to build the boombox within that cabinet constitute an origin-conferring substantial transformation in Vietnam.

B. Supplemental Exhibits

In addition to the lawyer's letter, businesses will need to submit exhibits that show the parts, critical components, and processes of the product. These will be used by the relevant customs department to determine the COO of the product.

Images

Product Images

Applicants may include different labeled views of the product, to assist CBP in understanding how each component and process fits into the final product:

C. COO Ruling Summary

A similar result to that of the curling iron (in the previous subsection) was reached by CBP when it considered HKPC's request for a ruling on a Bluetooth wireless boombox with FM radio, Ruling Request N308363. The boombox included two PCBAs, speakers, a metal grille, a radio, cables and wires, lithium battery, display and other such generic electronic components, as well as an injection molded housing.

Factors Determining Origin

CBP viewed the PCBAs as controlling only basic functions and therefore not origin-conferring. All of the other components were produced in Mainland China, other than the housing, which was injection molded from plastic resins in a second country, which also was the site of the final assembly process. CBP concluded that the country in which the radio and speakers were produced (i.e. Mainland China) determined the origin of the finished product, because they were most important to the operation of the boombox. The assembly process was deemed simple.

VI. Smart Toaster Oven

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a 'smart' toaster oven.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/4)

Commissioner of Customs and Border Protection
Attn: Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
Washington, D.C. 20229

Re: Request for Binding Ruling on Origin, including Request for Confidential Treatment of Sensitive Commercial Information, for Smart Toaster Oven

Dear Commissioner:

On behalf of the Hong Kong Productivity Council (HKPC) and collaborating companies which manufacture products for exportation to and sale in the United States, we respectfully request confirmation of our view that a "smart oven," as more fully described below, is a product of Vietnam, where it will be manufactured from components produced in a variety of countries, including China.

HKPC, as a multi-disciplinary organization established by statute in 1967, to promote productivity excellence through integrated advanced technologies and innovative service offerings to support Hong Kong enterprises, including export-oriented manufacturers, and responsible for providing small- and medium-sized enterprises with assistance in meeting the requirements of an ever-changing business environment, is an interested party. As such, HKPC is an entity with a direct and demonstrable interest in the question presented in this ruling request. (See, e.g., HQ 959528 (October 1, 1996).)

Sample Letter (Part 2/4)

At issue here is a production plan under consideration for a stainless steel toaster countertop convection oven. The oven performs the following functions: broil, bake, roast, reheat, warm, slow cook, toast, bagel, pizza and cookies. The functions are provided by technology that adjusts the power of the heating elements. The effectiveness of the function is also determined by the shelf on which the food is placed (bottom, middle or top). Each of the oven's functions is preset with recommended settings, but a user also may customize the settings, and that customization will remain in the memory of the oven until changed or the oven is unplugged from the power outlet. The product includes the following accessories: a broil rack, a baking pan, a pizza tray and a crumb tray.

The smart oven is classified under HTSUS 8516.60.4070, which provides for electric instantaneous or storage water heaters and immersion heaters; electric space heating apparatus and soil heating apparatus; electrothermic hairdressing apparatus (for example, hair dryers, hair curlers, curling tong heaters) and hand dryers; electric flatirons; other electrothermic appliances of a kind used for domestic purposes; electric heating resistors, other than those of heading 8545; parts thereof, other ovens; cooking stoves, ranges, cooking plates, boiling rings, grillers and roasters, cooking stoves, ranges and ovens, other, portable. See, e.g., Ruling N281843 December 30, 2016).

Confidential Treatment Request

HKPC respectfully requests confidential treatment for the bill of materials (BOM) and the manufacturing processes data, including the working hours and cost statistics, which are provided as confidential exhibits to this binding ruling request (Exhibits 1 and 2).

Consistent with 19 CFR § 177.2(b)(7), confidential treatment of these records, including the specific components, quantities of each and cost of each, and the labor time and cost for each manufacturing step, is appropriate because disclosure would undermine the competitive position of the manufacturer sharing this information. This is not information normally shared publicly. It is highly proprietary information that is specific to a particular manufacturer, identifying its inputs, its manufacturing processes and its costs of manufacturing. As is apparent from rulings on toaster ovens issued to other companies, such as Ruling N302544 (February 28, 2019) and Ruling N308302 (December 27, 2019), there is substantial competition in this product group, with many manufacturers and brands serving the U.S. market. It is appropriate to accord such data confidential treatment.

Prior Requests for a Ruling

CBP previously returned ruling request N308104, which covered this product, for more information. In this request, HKPC identifies its role and interest and includes identification of the specific country, other than China, in which manufacturing is planned. We are not aware of any other instances in which this origin request has been the subject of review by CBP, the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom.

Sample Letter (Part 3/4)

Facts

This complex product is comprised of hundreds of components consisting of more than 100 different types of materials and inputs, which are used to produce a control panel, including a printed circuit board, a main motor, a heater, inner case and exterior housing. A full list of the bill of materials for each smart oven is provided, on a confidential basis, as Confidential Exhibit 1. While the software and most of the raw materials, including for packaging the completed smart oven, are produced in China, other inputs are made in Taiwan, South Korea, Spain, the United States, Canada, and Thailand. These components are generic or subject to further processing to produce final components, subassemblies and final assemblies. For example, aluminum sheets and PBT TRIBIT (an advanced polymer) are sourced from South Korea, while ceramic blocks, various wires, various steels, rivets, screws and a power printed circuit board are sourced from China, Taiwan is the source of some steel, and Thailand is the origin of a thermofuse and Zener diodes.

As shown in Confidential Exhibit 2, which describes the assembly and sub-assembly processes, working time per step (in seconds), number of employees and cost statistics, there are multiple manufacturing, subassembly and assembly steps to produce the smart oven. Under the contemplated production plan, all materials and inputs will be shipped to a factory in Vietnam to be manufactured into finished parts, subassemblies and finally assembled together to create the toaster oven.

Starting with a bare printed circuit board, the electronic components for the control panel PCB will be inserted, via surface mounted technology (SMT), to create the control panel PCBA in Vietnam. The software to operate the toaster oven will be installed there as well.

The manufacturing and assembly processes in Vietnam will include both the plastic and metal components of the smart oven. Thus, plastic injection molding will be used to create various parts, such as brackets, tray handles and wire racks as well as spacers. All of the plastic components for the smart oven are therefore formed in Vietnam. Manufacturing processes in Vietnam also will include stamping the metal components to create the hardware, such as the door front, the control panel, a crumb tray, a door lock and a motor plate. Various parts, such as the inner case, also will be cured, sand-blasted, cleaned, polished and spray painted in Vietnam. The plastic and metal components will then be assembled in Vietnam to form the smart oven.

The main motor is also assembled in Vietnam, along with the heater. As shown in Confidential Exhibit 2, quality inspection and testing are performed at each step of the manufacturing and assembly processes. The smart ovens also will be packaged and boxed for export to the United States in Vietnam. Product images, including of the assemblies and critical parts, are provided as Exhibit 3.

Sample Letter (Part 4/4)

Legal Analysis

As in Ruling N302544, which found that a toaster oven assembled in India from parts originating in multiple countries was substantially transformed in India because the parts were assembled and emerged with a new name, character and use that is different from what they possessed prior to processing, the manufacturing and assembly steps that will be performed in Vietnam to create the toaster oven here constitute a substantial transformation. Similarly, we note that in Ruling N308302, CBP concluded that a toaster oven assembled in Thailand from components predominantly sourced from China was a product of Thailand, where the metal parts were manufactured via processes that included stamping, bending and degreasing the metal to form finished components and where assembly occurred, with the use of spot-welding machines, rivet drivers and machines, and manual screwdrivers.

Although the origin of the PCBA was not discussed in Ruling N308302, the production plan here also includes the assembly of the PCBA in Vietnam. The SMT manufacturing process of the PCBA, including the installation of the software on to an integrated circuit, in Vietnam is another significant manufacturing process, one that substantially transforms the individual electrical components and bare PCB into a new article with a country of origin of Vietnam. See Ruling N304035 (May 15, 2019). To the extent the PCBA imparts the essential character of the smart oven, that alone could determine the origin of the smart oven, even in the unlikely event the manufacturing, subassembly and assembly processes were not also considered substantial or complex.

That said, as in Ruling N308302, the substantial manufacturing and assembly processes in Vietnam clearly transform the components that originate in China and elsewhere to produce the finished smart oven. The smart oven is a new and different article of commerce with a distinct character and use that is not inherent in the components that are being shipped to Vietnam. Therefore, a substantial transformation occurs in Vietnam, rendering the smart oven a product of Vietnam.

Conclusion

If you contemplate a ruling that is different from the HKPC's position, or you believe a meeting would be helpful, we request the opportunity to meet with CBP to discuss the issues. Should you have any questions or need additional information regarding this binding ruling request, please contact the undersigned. Thank you.

B. Supplemental Exhibits

In addition to the lawyer's letter, businesses will need to submit exhibits that show the parts, critical components, and processes of the product. These will be used by the relevant customs department to determine the COO of the product.

Complete Parts List

Businesses should submit a complete list of parts of their product, with details including the following:

- Part number;
- Name/description of the part;
- Amount of the part used, and the unit of measurement for the amount;
- Cost of the part, and the currency used for the cost; and
- Country of origin of the part.

The list can include any other details that will assist the relevant customs department in making a ruling on the COO of the product.

Sample Parts List

The following table is a sample of the parts list submitted to CBP by HKPC. It is an example of categories to include when submitting a parts list, but businesses should note that each parts list can be different depending on different parts used for different products.

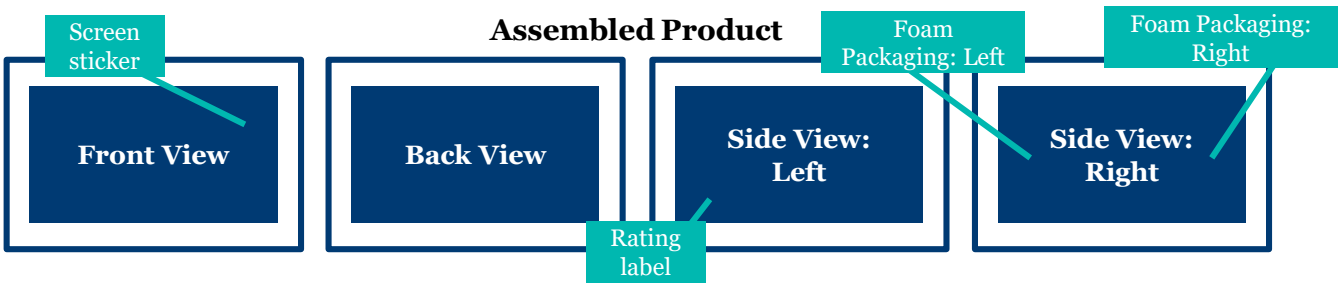
For confidentiality reasons, specifications, part numbers and costs have been removed, and other defining characteristics and descriptions have been simplified and the list shortened.

Part No.	Description	Usage	Unit of Measurement	Currency	Cost	COO
-	Aluminium Sheet	-	Kilogram (kg)	HKD	-	Hong Kong
-	Bracket	-	Pieces (pcs)	RMB	-	Mainland China
-	Connector	-	Pieces (pcs)	RMB	-	Mainland China
-	Polyfoam	-	Pieces (pcs)	RMB	-	Mainland China
-	Diode	-	Pieces (pcs)	HKD	-	South Korea

Images

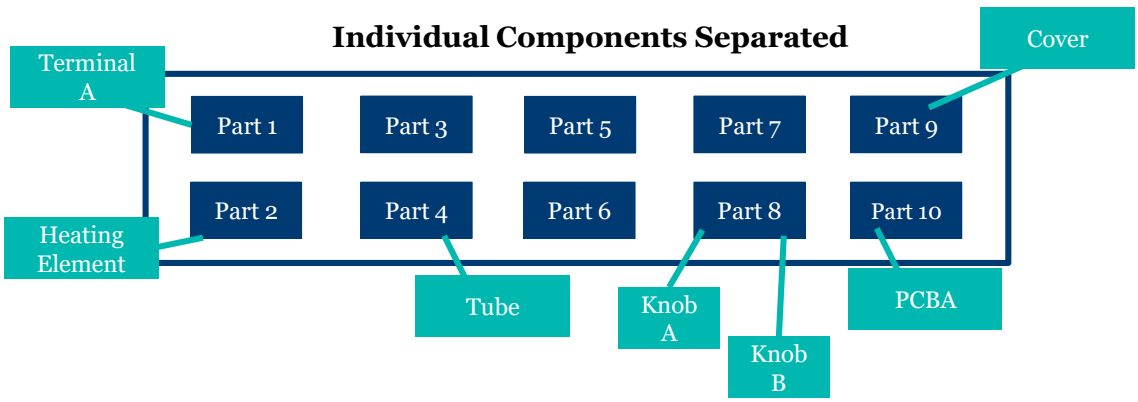
Product Images

Applicants may include different labeled views of the product, to assist CBP in understanding how each component and process fits into the final product:



Critical Parts and Components

Businesses should also provide labeled images of critical parts and components that make up the product, such as heating elements, tubes, terminals, control panels, insulation boards, and fans, among other components.



C. COO Ruling Summary

HKPC sought an origin ruling for a stainless-steel toaster countertop convection oven, in Ruling Request N308104. The oven broils, bakes, roasts, reheats, warms, slow cooks, toasts, and can also be used to bake pizza and cookies. The functions are provided by technology that adjusts the power of the heating elements. Each of the oven's functions is preset with recommended settings, but a user also may customise the settings. The product includes a number of accessories, such as a broil rack, a baking pan, a pizza tray and a crumb tray.

Factors Determining Origin

While a final ruling in response to HKPC's request is still pending, CBP recently issued another highly instructive ruling on a similar product, Ruling N308032 (27 December 2019). There, a toaster oven was assembled in Thailand, with components from Mainland China and Thailand. While the bulk of the parts were from Mainland China, the front plate, control panel, control panel face, the upper and lower glass holders, the u-plate, right heat insulator, back plate, baking tray, crumb tray and upper and lower cushions were manufactured in Thailand, with the manufacturing process including stamping, bending, and degreasing the metal from Mainland China to form the finished components. Many of the Mainland Chinese parts were used to form subassemblies in Thailand and then assembled into the toaster oven in Thailand using spot-welding machines, rivet-drivers and machines, and manual screwdrivers.

CBP ruled that Thailand was the country of origin because the Mainland Chinese parts underwent enough of a change in Thailand to "emerge with a new name, character and use that is different from what they possessed prior to processing, thus completing a substantial transformation." Further, CBP noted, "essential parts of the toaster oven's housing were manufactured in Thailand." Those housing parts were metal, which requires manipulation, arguably distinguishing them from plastic parts formed by injection molding. One implication of this ruling is that the assembly operation by itself might not have been considered complex enough to be considered a substantial transformation, but when added to the manipulation of the metal components in the same country, the processes together constitute a substantial transformation and are origin-conferring.

VII. Car Backup Camera System

This section is intended to show a sample of the material that businesses may need to submit along with their ruling request for a car backup camera system.

A. Ruling Request Letter

It is recommended that COO ruling requests to the CBP should be made with advice from professionals with prior relevant experience in dealing with ruling requests, such as US lawyers. The professionals will assist businesses in preparing and submitting the materials necessary for the COO ruling request. A sample of the letter that the lawyer will submit to the CBP on behalf of businesses can be found below.

Sample Letter (Part 1/6)

Director, National Commodity Specialist Division
Regulations and Rulings, Office of Trade
U.S. Customs and Border Protection
201 Varick Street, Suite 501
New York, NY 10014

Re: Request for Binding Ruling on Origin, including Request for Confidential Treatment of Sensitive Commercial Information, for Solar Energy Car Backup Camera System

Dear Director Mack:

On behalf of the Hong Kong Productivity Council (HKPC) and collaborating companies, which manufacture products for exportation to and sale in the United States, we respectfully request confirmation of our views regarding the country of origin of a solar energy car backup camera system, as more fully described below, that is subject to processing in both a South East Asian country and China.

In requesting this ruling, HKPC's objective is to help Hong Kong enterprises accurately identify the country of origin of products destined to the U.S. market in light of multi-country supply chains. HKPC's mission is to promote and assist the Hong Kong business sector through the introduction of more efficient and updated business and technological methods. Toward that end, HKPC is drafting a guidebook that will address production plans that include inputs from China and other sources which are incorporated into manufacturing operations in any of ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam).

At issue here are production plans for a solar energy car backup camera system for incorporation by consumers into vehicles that do not have a backup camera as original equipment. The system includes both a camera to be attached to the rear of a vehicle and a monitor to be mounted inside the vehicle for viewing by the driver. The product also includes the following generic accessories: a monitor power cable, a USB cable, a suction cup and a needle. A full description of the solar backup camera system is provided by the user manual that is included with the product. A copy of the manual, including the specifications for the system, is provided as Exhibit 1 to this request.

Sample Letter (Part 2/6)

It is the view of HKPC that the solar energy car backup camera system is classified under HTSUS 8528.59.2500, which provides for:

> Monitors and projectors, not incorporating television reception apparatus; reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus: Other: Other: With a video display diagonal not exceeding 34.29 cm.

See, e.g., Ruling N053184 (March 11, 2009). In that instance, the classification of an automotive wireless back-up camera system with similar components and accessories, imported in "retail-packed condition," was determined to be classifiable pursuant to General Rule of Interpretation 3(c) because the camera and monitor have equal roles in the functioning of the system. With the classification of the monitor falling last in the Harmonized Tariff Schedule, the entire system as imported was therefore classified under HTSUS 8528.59.2500.

Confidential Treatment Request

HKPC respectfully requests confidential treatment for Exhibit 2, the bill of materials (BOM) and country of origin of those materials, Exhibit 3, production process flow charts and the manufacturing processes, and Exhibit 4, a man hour summary, which are provided with this binding ruling request.

Consistent with 19 CFR § 177.2(b)(7), confidential treatment of these records, including the specific components, quantities of each and cost of each, and the labor time, cost and equipment for each manufacturing step, and identification of each step in the manufacturing process, is appropriate because disclosure would undermine the competitive position of the manufacturer sharing this information. This is information not normally shared publicly. It is highly proprietary information that is specific to a particular manufacturer, identifying its inputs, its manufacturing processes and its costs of manufacturing. It is appropriate to accord such data confidential treatment.

No Prior Requests for a Ruling

We are not aware of any instances in which this origin request has ever been the subject of review by CBP, the United States Court of International Trade, the U.S. Court of Appeals for the Federal Circuit or any court of appeal therefrom. Also, HKPC has not sought any origin advice from CBP on this solar energy car backup camera system.

Facts

This complex product is comprised of approximately 500 generic components consisting of more than 200 different types of materials and inputs, which are used to produce the camera

Sample Letter (Part 3/6)

and monitor, and the components of each, including printed circuit boards; transmitters, lenses, a digital wireless reversing rear view receiver motherboard, and a launch board. A full list of the bill of materials for each solar energy car backup camera system is provided, on a confidential basis, as Confidential Exhibit 2. (As shown in the BOM, the generic accessory items are procured as finished articles.) While most of the materials, including for packaging the completed system, are produced in China, other inputs, particularly integrated circuits, are made in Taiwan and the United States. These components are subject to further processing to produce final components, subassemblies and final assemblies. As described in the scenarios below, raw materials, inputs and components will be shipped to a factory in an ASEAN country to be manufactured into finished parts, subassemblies and finally assembled together to create the solar energy car backup camera system.

Confidential Exhibit 3 summarizes the manufacturing processes, including the production of the PCBAs with appropriate software for the monitor and camera (a surface mount technology process), the soldering of the monitor, main camera, camera module and camera battery PCB components, the testing of the monitor and camera at that point, then assembly followed by testing of the monitor and camera before they are packaged and subjected to final testing and quality control inspections. Also provided in Confidential Exhibit 3 are flow charts for these processes while Confidential Exhibit 4 provides a man hour summary and identification of equipment,

Under consideration are three possible multi-country production scenarios:

Production Scenario #1

Under the first production scenario being considered, the SMT processes, including manual plug in (building) of the PCBAs with crucial integrated circuits, and the "burning" of software, plus soldering (Steps 1 and 2, as shown in the table below) and initial testing of those components (Step 3), for both the monitor and the camera, are completed in China.

Thereafter, all components, including the PCBAs, are to be shipped to a manufacturing facility in an ASEAN country. In the ASEAN country facility, the components will be subject to substantial post-welding processes to create subassemblies, and then assembled into the monitor and camera, tested, packaged and subjected to final quality control testing.

Production Scenario #2

Under the second production scenario, only the SMT process, including manual plug in of the PCB components and software (Step 1), is performed in China.

Thereafter, the PCBAs and all other components are shipped to a manufacturing facility in an ASEAN country. In the ASEAN country facility, the soldering and post welding processes will be performed to create subassemblies for the monitor, the main camera, the camera module and

Sample Letter (Part 4/6)

the camera PCB. Then, those subassemblies are tested. The monitor and camera will then be assembled from the subassemblies and other components, and tested, packaged and subjected to final quality control testing.

Production Scenario #3

The third production scenario is the reverse of the second production scenario. Thus, the SMT process, including manual plug in of the PCB components and software (Step 1), is performed in the ASEAN facility.

Thereafter, the PCBAs are shipped to the manufacturing facility in China. In China, the soldering and post welding processes will be performed to create subassemblies for the monitor, the main camera, the camera module and the camera PCB. Then, those subassemblies are tested. The monitor and camera will then be assembled from the subassemblies and other components, and tested, packaged and subjected to final quality control testing.

In evaluating these various steps in the production process, it is worth noting both the time and number of employees required to complete each step:

Production Process	Time Required	Number of Workers
1) SMT		
2) Soldering		
3) Testing		
4) Assembly		
5) Testing		
6) Packaging, Testing, QA & IPOC		
TOTAL		

These steps and the equipment required are provided in greater detail in Confidential Exhibit 4.

Legal Analysis

It is the view of HKPC that under the first two scenarios, the solar energy car backup camera system is a product of the ASEAN country, notwithstanding the Chinese origin of many of the components (but U.S. and Taiwanese integrated circuits) and the SMT and soldering (the first scenario) or SMT process alone (the second scenario) being performed in China. This is because the subsequent manufacturing operations in the ASEAN facility are the most labor-intensive and are complex and meaningful, creating a new and different article from those which were produced in China, with the individual components losing their identity. The assembly processes to be performed in the ASEAN facility, resulting in a camera and a monitor that work

Sample Letter (Part 5/6)

together to permit a driver to monitor the rear of the vehicle, are neither minimal nor simple. For the same reason, HKPC believes that for the third scenario, China would be the country of origin.

Under CBP's regulations, 19 C.F.R. 134, the country of origin is defined as the "country of manufacture, production, or growth of any article of foreign origin entering the United States. Further work or material added to an article in another country must effect a substantial transformation in order to render such other country the 'country of origin.'" A substantial transformation is said to have occurred when an article emerges from a manufacturing process with a name, character, or use which differs from the original material subjected to the process. United States v. Gibson-Thomsen Co., Inc., 27 C.C.P.A. 267 (C.A.D 98) (1940). See also, Belcrest Linens v. United States, 573 F. Supp. 1149 (Ct. Intl. Tr. 1983). As CBP noted in HQ 563294 (September 9, 2005), "the determinative issue is the extent of the operations performed and whether the parts lose their identity and become an integral part of the new article."

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes a determination on a case-by-case basis. Looking at Energizer Battery, Inc. v. United States, 190 F. Supp. 3d 1308 (Ct. Int'l Tr. 2016), the most recent judicial consideration of the rule of origin for products subject to multi-country operations, key considerations in identifying whether there is a substantial transformation, that is, a change in name, character or use from components to finished article, may include 1) whether there was a pre-determined end use prior to further processing or assembly and 2) whether manufacturing or assembly operations result in a change in the shape or material composition of any imported component. In Energizer Battery, both CBP and the Court found that where virtually all of the approximately 50 different components of a flashlight were made in China and the assembly of the flashlight in the United States was not complex, there was no substantial transformation in the United States. All of the components, including the shape/exterior of the flashlight, were set before the components reached the United States.

The product and the manufacturing steps here are distinguishable from those identified for the Energizer military flashlight. The backup camera system has far more components, with those components originating in China as well as other countries (particularly the integrated circuits), and more steps to create the finished product. While, like the flashlight, the housings for the camera and the monitor will arrive at the assembly facility already formed, the more numerous components and the more numerous manufacturing/assembly processes to be performed within each of those articles (the camera and the monitor) mean that these manufacturing or assembly operations do result in a change in the material composition of the components. The assembly of the camera is particularly sophisticated and labor intensive, as shown in Confidential Exhibits 3 and 4.

Further, while the incorporation of software will occur in China under the first two scenarios, the subsequent steps in which subassemblies are produced and assembled to completion

Sample Letter (Part 6/6)

in the ASEAN facility are meaningful processes involving far more than the 40 or so parts used to produce the Energizer flashlight. HKPC also notes that "CBP has consistently held that the downloading of software or firmware is not a substantial transformation." See Ruling H306349 (November 26, 2019). Further, specialized equipment is used to test these assemblies. Thus, even if the "programming" in China under the first two scenarios could be considered a substantial transformation, the subsequent subassemblies and assemblies are also a substantial transformation and constitute the last substantial transformation. See. e.g., HQ H241177 (December 3, 2013), in which the country of origin was determined to be in Malaysia, where major assembly processes were performed, because that is where the last substantial transformation occurred.

Conclusion

If you contemplate a ruling that is different from the HKPC's position, or you believe a meeting would be helpful, we request the opportunity to meet with CBP to discuss the issues. Should you have any questions or need additional information regarding this binding ruling request, please contact the undersigned. Thank you.

B. Supplemental Exhibits

Companies applying for a COO ruling request can provide additional exhibits to assist the relevant customs department in providing a ruling. These supplemental exhibits will provide information as to the critical processes, components and parts, which will help in identifying the country of origin.

Operational Manual

An operational manual can be provided as a supplemental exhibit. The operational manual should at least include sections such as:

- Safety instructions;
- Parts of the product;
- Installation process;
- How to operate the product; and
- Technical specifications.

This will assist the ruling authorities in assessing which parts and processes of the camera is most important to the product. The origins of these parts and processes will then be important in determining the country of origin of the camera.

Complete Parts List

Businesses should submit a complete list of parts of their product, with details including the following:

- Part number;
- Name/description of the part;
- Amount of the part used, and the unit of measurement for the amount;
- Cost of the part, and the currency used for the cost; and
- Country of origin of the part.

The list can include any other details that will assist the relevant customs department in making a ruling on the COO of the product.

Sample Parts List

The following table is a sample of the parts list submitted to CBP by HKPC. It is an example of categories to include when submitting a parts list, but businesses should note that each parts list can be different depending on different parts used for different products.

For confidentiality reasons, specifications, part numbers and costs have been removed, and other defining characteristics and descriptions have been simplified and the list shortened.

Category	Part	Detail Spec.	Unit	Quantity	Cost in HKD	COO
PCBA1	DC Connector	-	Pieces (pcs)	1	-	Mainland China
PCBA1	Capacitor	-	Pieces (pcs)	5	-	Mainland China
PCBA2	Resistor	-	Pieces (pcs)	1	-	Mainland China
PCBA2	Button	-	Pieces (pcs)	1	-	Mainland China
PCBA3	Diode	-	Pieces (pcs)	1	-	Mainland China

Process Flowchart

The process flowchart should include images with each part numbered, a parts list as shown in the example above. The flowchart should at least provide the following information:

- Process name/number;
- Description of the process;
- Steps in the process;
- Parts/materials used in the process, with corresponding numbers or references to the parts list;
- Labour cost and man-hours required to perform and test the process; and
- Any additional notes relevant to the process.

Sample Discharge Process Diagram

The sample discharge flow diagram exhibits how each process within the manufacturing and assembly process flows into the next. The discharge flow diagram should include all the processes necessary to produce the product, separated by each stage involved in the process.

Product No.	-	File No.	–		File Ver.	v1.0
Product Name	Smart Charger	Stage	Assembly		Date	201x.x.x
Step	**Process Name**	**No. of Workers**	**Work HRS (sec)**	**Standard Work HRS**	**Version**	**Equipment/tools**
1	Process A	1	-	-	v1.0	Power/test stand
2	Process B	1	-	-	v1.0	Light box/battery
3	Process C	3	-	-	v1.0	Spectrum analyser

Sample Operating Instructions

Operating instructions should be given for each process in the discharge flow diagram.

Product No.	-	Process Name	Process A	Process Stage	Assembly
Steps				Equipment 1 Image	Equipment 2 Image
Test Debugging 1. Step 1 2. Step 2 3. Step 3					
Precautions (Safety and Operational Requirements)				**No.**	**Equipment/tools**
1. During testing, it is necessary to cut out defective products				1	Power supply
				2	Test stand

C. COO Ruling Summary

The final ruling request submitted by HKPC, Ruling Request N308598, involves a complex product, a solar energy car backup camera system intended as an after-market option for vehicles in which a backup camera is not installed as original equipment. The product is comprised of approximately 500 generic components consisting of more than 200 different types of materials and inputs, which are used to produce the camera and the monitor, and the components of each, including printed circuit boards, transmitters, lenses, a digital wireless reversing rear view receiver motherboard, and a launch board. While most of the input materials are produced in Mainland China, the integrated circuits are made in Taiwan and the US. Moreover, the components of Mainland Chinese origin are subject to further processing to produce final components, including four PCBAs, subassemblies and final assemblies in Vietnam.

Factors Determining Origin

Among the production scenarios presented to CBP was one in which the SMT processes, including manual plug-in (building) of the four PCBAs with crucial integrated circuits, and the “burning” of software, plus soldering and initial testing of those components, for both the monitor and the camera was completed in Mainland China. Thereafter, all components, including the four PCBAs, are shipped to a manufacturing facility in Vietnam where the components are subject to substantial post-welding processes to create subassemblies, and then assembled into the monitor and camera, subjected to final quality control testing, and packaged as a single retail product. A second scenario differs from the first only in that the Mainland China manufacturing is limited to the SMT process, including manual plug-in of the PCB components and software, with all other manufacturing completed in Vietnam; that is, the soldering and initial testing and all subsequent processes take place in Vietnam.

Given how labour intensive the processes performed in Vietnam are, and the complexity of the assembly processes, HKPC expects a ruling concluding that those steps create a new and different article from those which were produced in Mainland China, with the individual components losing their identity. Thus, resulting in the product’s origin being Vietnam.

This would be consistent with a ruling CBP issued for a robotic vacuum, Ruling N305154 (31 July 31 2019). In that case, involving approximately one thousand components, many of which are first fabricated into module subassemblies in Malaysia. These modules are then fabricated into a chassis and connected to and programmed with the Main Printed Circuit Board which contains all the required operational software, resulting in the finished vacuum. The Main PCBA is soldered in Malaysia, where the software programming and testing are performed. The manufacturing process includes the production of four separate key module subassemblies in Malaysia, each of which is a significant component of the finished vacuum. The modules will consist of components of several origins, with the majority being Malaysia content. Three of the modules will be manufactured in Mainland China and shipped to Malaysia.

CBP concluded that the processing performed in Malaysia with respect to vacuum constitutes a substantial transformation of the imported materials/components into a product of Malaysia because those manufacturing processes transform the Mainland Chinese originating components/materials to produce the finished product, creating a new and different article of commerce with a distinct character and use that is not inherent in the components imported into Malaysia.

Appendix

Appendix 1 *Comments and Rulings by CBP on the Six Sample Products*

Comments and Rulings by CBP on the Six Sample Products (Part 1/2)

Product	Ruling No.	CBP Response/Comments and Status
PCBA for Hair Straightener	N30800	CBP commented on 6 December 2019. More information required including: 1) Specific part or model number, or similar identifier that clearly articulates the PCBA; 2) Complete descriptive information on the hair straightener that the PCBA is used with; 3) Labeled, exploded view diagram of the completed hair straightener; 4) Engineering drawings of the PCBA that depicts both sides along with its components; 5) Photographs of the PCBA from all sides; 6) Step-by-step flowchart explaining what is completed in each country; 7) Specific country each process is completed in and country where the programming of the PCBA occurs; 8) Function(s) the PCBA performs within the hair straightener; 9) How the installed firmware alters the functionality of the device; 10) Operations controlled by the installed firmware; 11) Whether there a PCBA mainboard and any additional PCBAs; and 12) Whether there are any additional electrical components in the hair straightener. Revised COO Ruling Request has been submitted to CBP.
Bluetooth Wireless Boombox with FM Radio	N308363	CBP commented production processes in Vietnam as described are not sufficient to confer origin based on CBP's assumption that the PCBAs control only basic functions, such as on/off, and therefore are not as important as the speakers and radio. Ruling request withdrawn on 19 December 2019 pending further information from manufacturer for revised submission.
Curling Iron/wand	N308420	CBP commented on 30 December 2019 that HKPC needs to present more direct and demonstrable interest in the ruling request and specific country should be identified rather than "ASEAN". Revised COO Ruling Request has been submitted to CBP.
Car Battery Charger	N308503	Ruling issued, dated 13 January 2020. CBP concludes that the assembly of the PCBA by soldering the individual components onto the bare board results in a substantial transformation of the components to produce a PCBA and is therefore the country of origin.

Comments and Rulings by CBP on the Six Sample Products (Part 2/2)

Product	Ruling No.	CBP Response/Comments and Status
Smart Toaster Oven	N308104	• CBP commented on 30 December 2019 that HKPC needs to present more direct and demonstrable interest in the ruling request and specific country should be identified rather than "ASEAN". Revised COO Ruling Request has been submitted to CBP. • CBP also noted issuance of 27 December 2019 ruling to Toshiba for a seemingly identical product, **N308032**, and urged HKPC counsel to consider whether that ruling provides sufficient guidance to collaborating companies. **Ruling N308032 (27 December 2019)**: Toaster oven composed of metal originally manufactured in Mainland China was determined to be a product of Thailand because the metal was stamped, bended, and degreased in Thailand to form the finished components, which were then used to form subassemblies in Thailand and those subassemblies were later assembled into the toaster oven. Mainland Chinese parts underwent enough of a change to afterwards emerge with a new name, character, and use that is different from what they possessed prior to processing, thus completing a substantial transformation. In addition, essential parts of the toaster oven's housing were manufactured in Thailand.
Car Backup Camera System	N308598	CBP commented on 15 January 2020 with extensive list of questions, requesting items including: 1) Complete listing of all components used in the assembly along with their specific country of origin and value; 2) Detailed explanation of the step-by-step assembly process for both the camera and the monitor that takes place in each country; 3) Explanation of the SMT process in writing; 4) Country that the SMT process takes place; and 5) Country that the SMT machines are located in. CBP also challenges confidentiality of provided information.

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