







Investment Opportunities in Indonesia: Manufacturing

Prepared by WAVTEQ

WAVTEQ is a global consulting and technology company focused on helping governments worldwide attract foreign direct investment (FDI).

About the TPSA Project

The Canada—Indonesia Trade and Private Sector Assistance (TPSA) Project is a five-year, C\$12-million project funded by the Government of Canada through Global Affairs Canada. The project is executed by The Conference Board of Canada, and the primary implementation partner is the Directorate General for National Export Development, Indonesian Ministry of Trade.

TPSA is designed to provide training, research, and technical assistance to Indonesian government agencies, the private sector (particularly small- and medium-sized enterprises, or SMEs), academics, and civil-society organizations on trade-related information, trade policy analysis, regulatory reforms, and trade and investment promotion by Canadian, Indonesian, and other experts from public and private organizations.

The overall objective of TPSA is to support greater sustainable economic growth and reduce poverty in Indonesia through increased trade and trade-enabling investment between Indonesia and Canada. TPSA is intended to increase sustainable and gender-responsive trade and investment opportunities, particularly for Indonesian SMEs, and to increase the use of trade and investment analysis by Indonesian stakeholders for expanded trade and investment partnerships between Indonesia and Canada.

©2017 TPSA Project

CONTENTS

Executive Summary	4
Indonesia Country Snapshot	5
Indonesia by the Numbers	5
Economic Growth and Performance	5
Population and Skills	6
Foreign Direct Investment in Indonesia	8
FDI Trends	8
FDI in Manufacturing	9
Manufacturing Sector in Indonesia	10
Importance of Manufacturing to Indonesia	10
Size of the Indonesia's Manufacturing Sector	11
Machinery & Equipment	12
Sector size	12
Heavy industry equipment	12
Agricultural machinery	13
Mining and Construction Equipment	13
Investor case studies	14
Chemicals and Life Sciences	14
Sector size	14
Agrochemicals	15
Investor case studies	18
Key Strengths of Indonesia for FDI	18
Key Investment Opportunities	20
Indonesia: Emerging Manufacturing Powerhouse	20
Machinery & Equipment	
Chemicals	22
How to Invest in Indonesia	22
Government Support for your Investments	22
Indonesia's Ease of Doing Business	
Key Contacts	26

EXECUTIVE SUMMARY

The Canada–Indonesia Trade and Private Sector Assistance (TPSA) project has as a key objective to increase investment by Canadian firms in Indonesia. The TPSA project is funded by the Government of Canada through Global Affairs Canada and managed by The Conference Board of Canada (CBoC). The ultimate goal of the TPSA project is to reduce poverty and increase sustainable economic growth in Indonesia through the expansion of Indonesian trade with Canada and the encouragement of Canadian investment in Indonesia.

This report provides a summary of investment opportunities for Canadian companies in Indonesia's manufacturing sector.

Foreign investors across all industries are paying closer attention to the investment opportunities in Indonesia due to the size and growth of the economy, accessibility to the huge ASEAN market of 600 million people, and because Indonesia is becoming more pro-business and actively seeking foreign investment, including in sectors that were until very recently closed or partially closed to foreign investors.

Already the largest economy in ASEAN, Indonesia's GDP is forecast to increase from US\$862 billion in 2015 to US\$2.2 trillion in 2025. By 2025, Indonesia's economy will be nearly the same size as Canada's economy (forecast to be US\$2.6 trillion in 2025) and will be larger than India's economy was in 2015. Indonesia has a population of over 260 million, which is forecast to increase to 308 million by 2030. Just the increase in Indonesia's population is nearly the same size as Thailand's population.

These numbers in themselves demonstrate why foreign investors should be looking at Indonesia and, in fact, FDI into Indonesia is booming, increasing from US\$16.2 billion in 2010 to nearly US\$30 billion annually from 2013 to 2016.

Indonesia is a rapidly industrializing country. The share of industry in the GDP of Indonesia is higher than in China or in the rest of ASEAN and manufacturing growth is forecast to reach nearly 9% per annum in the next three years. Already from 2011 to 2016, foreign companies have invested US\$76 billion into Indonesia's manufacturing sector with a record level of nearly US\$17 billion invested in 2016. The metals, machinery & electronics industry and the chemical & pharmaceuticals industry are the two major manufacturing sectors for FDI and offer strong opportunities for foreign investment.

Foreign investors in Indonesia are very positive about the opportunities. About 90% of existing Canadian investors are planning to re-invest in Indonesia and 85% of Canadian investors would recommend other companies to invest. The time is right to scope out the investment opportunities in Indonesia.

INDONESIA COUNTRY SNAPSHOT

Indonesia by the Numbers

Indonesia is one of largest and fastest growing emerging markets in the world. Indonesia is the largest economy in ASEAN and Indonesia's GDP is forecast to increase from US\$862 billion in 2015 to US\$2.2 trillion in 2025. By 2025, Indonesia's economy will be nearly the same size as Canada's economy (forecast to be US\$2.6 trillion in 2025) and will be larger than India's economy was in 2015, which indicates the size of opportunity.

Indonesia by the Numbers

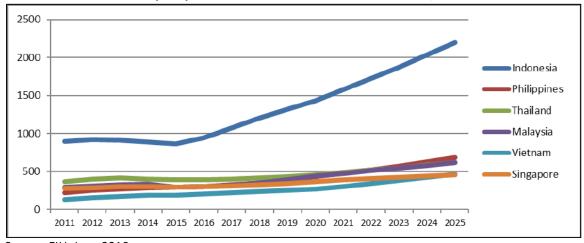


Source: WAVTEQ

Economic Growth and Performance

As the chart below shows, Indonesia's economy started taking off in 2015. Now is the time companies should be considering investing in Indonesia to take advantage of the huge growth forecast in the economy, with almost US\$1 trillion expected to be added to the economy over the next seven years (2017–2024).

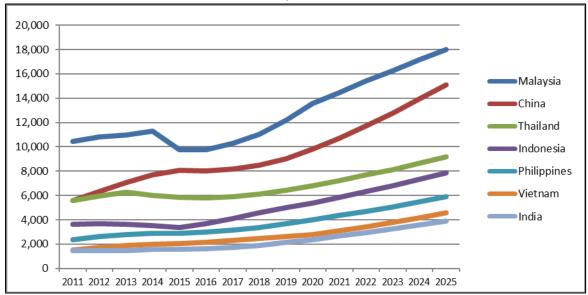
Gross Domestic Product (GDP) at Current Market Prices in US\$ Million, 2011–2025



Source: EIU, June 2016.

Out of the major economies in ASEAN, Indonesia has the fourth highest GDP per capita, which is forecast to more than double from US\$3370 in 2015 to US\$7840 in 2025. Rising income levels and large and growing middle- and high-income families are driving growth in demand across all industries.

Nominal Gross Domestic Product (GDP) Per Capita in US\$, 2011–2025

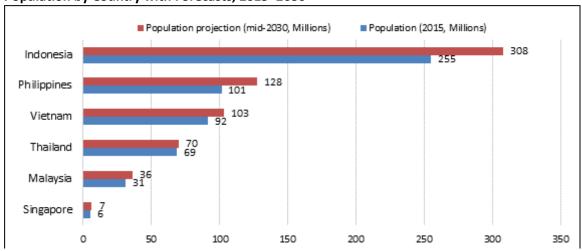


Source: EIU, June 2016.

Population and Skills

Indonesia has a population of over 260 million, which is forecast to increase to 308 million by 2030. Just the increase in Indonesia's population is nearly the same size as Thailand's population and far bigger than Malaysia's. Combined with rising disposable incomes, Indonesia's population size and growth makes Indonesia a highly attractive consumer market.

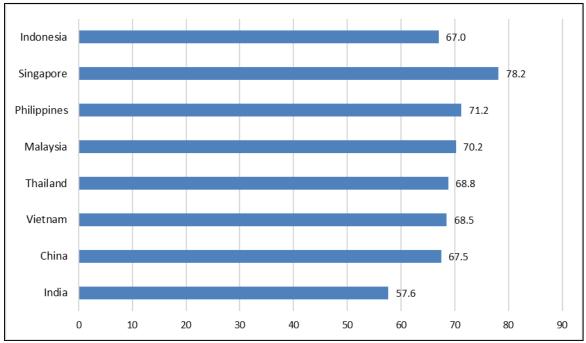
Population by Country with Forecasts, 2015–2030



Source: International Monetary Fund (country); national statistics (sub-national) (fDi Benchmark 2016) & Population Reference Bureau World Population Data Sheet (fDi Benchmark 2016).

In terms of human capital, the following chart shows that Indonesia has a comparable human capital index to other ASEAN countries, China, and India. Indonesia's human capital index is almost the same as China's.

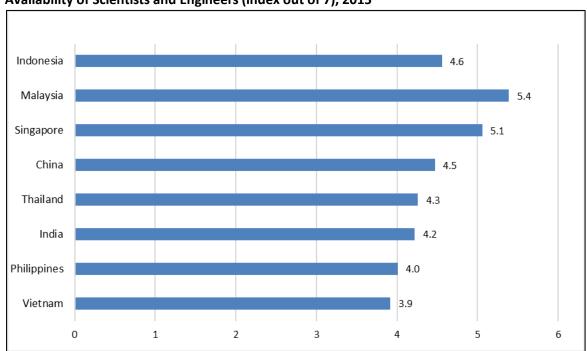
Human Capital Index, 20151



Source: The Human Capital Report, World Economic Forum, Switzerland, 2015.

Indonesia is rated as having a better availability of scientists and engineers than other countries in ASEAN except Malaysia and Singapore. Indonesia is also ranked higher than China and India.

Availability of Scientists and Engineers (index out of 7), 2015²



Source: Global Competitiveness Report, World Economic Forum, Switzerland, 2015-16.

¹ The Human Capital Index covers 46 indicators. Half of these are the result of disaggregating by education indicators and labour market indicators. For more information see: http://reports.weforum.org/human-capital/

² Based on an annual survey of over 14,000 executives.

FOREIGN DIRECT INVESTMENT IN INDONESIA

FDI Trends

FDI into Indonesia has increased significantly from US\$16.2 billion in 2010 to nearly US\$30 billion a year from 2013 to 2016, according to official FDI data from BKPM. Greenfield FDI has also increased rapidly from US\$14.8 billion of announced FDI projects to nearly US\$40 billion in 2015, based on data from the Financial Times.³

39644 40,000 ■ FDI (greenfield only) FDI (capital investment) 35,000 29276 28964 28618 28530 30,000 24685 24565 25,000 2263 1947 **1**9313 18210 20,000 16215 14815 4749 15,000 10,000 5,000 2010 2011 2012 2013 2014 2015

Foreign Direct Investment Trends in Indonesia, 2010–2016

Source: FDI capital investment data from BKPM, and FDI greenfield FDI data from fDi Markets from the Financial Times Limited.

The table below shows FDI into Indonesia by major industry group. The manufacturing sectors have been highlighted. The top 3 manufacturing sectors for total FDI from 2011 to 2015 were "Machinery, Metals, Electronics & related," "Chemicals & Life Sciences," and "Transport Equipment." These were also the top 3 sectors for greenfield FDI.

FDI by Major Industry Group (inward FDI into Indonesia and outward FDI from Canada), 2011–2015

	FDI INTO INDONESIA				
Industry sector grouping	Total FDI (cap	oital investment)	FDI (greenfield only)		
	# Projects	US\$ million	# Projects	US\$ millions	
Energy, Mining, Minerals & Utilities	4607	34629	43	24169	
Agri-Business, Forestry & Wood Products	6287	19086	77	4623	
Transportation & Warehousing	1098	14348	69	4855	
Machinery, Metals, Electronics & Related	3942	13202	134	30563	
Chemicals & Life Sciences	2116	11659	61	13283	
Transport Equipment	1705	10161	89	8391	
Construction & Real Estate	2429	8338	41	7840	
Paper, Printing & Packaging	499	4146	6	262	
Textiles	2079	3459	11	704	
Retail & Wholesale	10159	3408	60	1673	
Plastics & Rubber	1348	2741	31	3884	
Tourism	2335	2636	22	1793	

³ Note that greenfield FDI data is based on announcements of FDI projects, not the actual FDI capital being invested in the year of the announcement. For more information on the different methodologies of measuring FDI see: www.fdiaccounting.com/methodology.cfm.

_

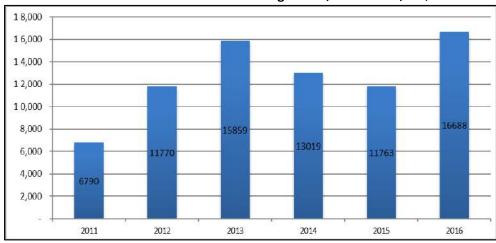
TOTAL	45156	130462	912	112424
Other Industry	933	512	47	5246
Other Services	5619	2137	221	5137

Source: WAVTEQ, based on $\underline{www.fdimarkets.com}$ and $\underline{http://www2.bkpm.go.id/en/investing-inindonesia/statistic}$.

FDI in Manufacturing

FDI in Indonesian manufacturing sectors more than doubled from just under US\$7 billion in 2011 to a record level of nearly US\$17 billion in 2016. The strong growth in manufacturing FDI shows the growing investment opportunities and attractiveness of Indonesia for manufacturing FDI.

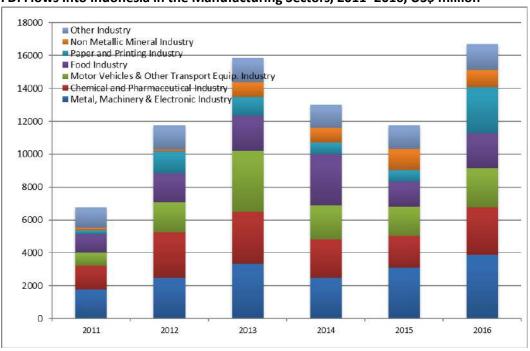
FDI Flows Into Indonesia in the Manufacturing Sector, 2011–2016, US\$ million



Source: WAVTEQ, based on BKPM data.

The following chart shows the breakdown of FDI in Indonesia across manufacturing sectors.

FDI Flows Into Indonesia in the Manufacturing Sectors, 2011–2016, US\$ million



Source: WAVTEQ, based on BKPM data.

MANUFACTURING SECTOR IN INDONESIA

Importance of Manufacturing to Indonesia

Manufacturing is a key sector of Indonesia's economy. In 2014, according to the Indonesian Ministry of Industry, the contribution of the manufacturing industry to GDP was 21.02%--the highest proportion of any sector. Of the 21.02%, 17.87% was non-oil & gas industry-related and 3.15% was derived from the oil & gas industry. The table below shows the contribution of each sector to GDP from 2011 to 2014.

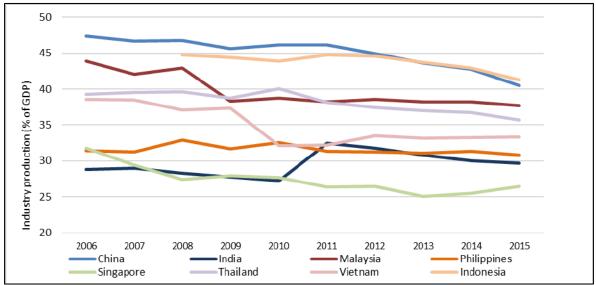
Sector Contribution to GDP, Indonesia, in percentage, 2011–2014

Contain	Contribution	n of each s	sector to G	iDP (%)
Sectors	2011	2012	2013	2014
Manufacturing Industry	21.76	21.45	20.98	21.02
a. Non-Oil & Gas Industry	18.13	17.99	17.72	17.87
b. Oil & Gas Industry	3.63	3.46	3.26	3.15
Agriculture, Forestry, and Fishing	13.51	13.37	13.39	13.38
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	13.61	13.21	13.27	13.38
Construction	9.09	9.35	9.51	9.88
Mining and Quarrying	11.81	11.61	10.95	9.82
Transportation and Storage	3.53	3.63	3.87	4.27
Financial and Insurance Activities	3.46	3.72	3.87	3.88
Public Administration and Defense; Compulsory Social Security	3.89	3.95	3.9	3.84
Information and Communication	3.6	3.61	3.58	3.5
Education Services	2.97	3.14	3.25	3.29
Accommodation and Food Service Activities	2.86	2.93	3.04	3.14
Real Estate Activities	2.79	2.76	2.77	2.79
Business Services	1.46	1.48	1.52	1.57
Other Service Activities	1.44	1.42	1.47	1.55
Electricity and Gas Supply	1.17	1.11	1.04	1.08
Health Services and Social Work Activities	0.98	1	1.01	1.03
Water Supply, Sewerage, Waste Management and Remediation Activities	0.08	0.08	0.08	0.07
GROSS DOMESTIC PRODUCT	100	100	100	100

Source: Indonesian Ministry of Industry, Facts and Figures 2015.

The following chart shows industry production (which includes mining, quarrying, manufacturing, construction, and utilities value-added) as a percentage of nominal GDP at factor cost (GDP at market prices, less indirect taxes, plus subsidies) between 2006 and 2015. By 2015, Indonesia's industry production as a percentage of its GDP totalled 41.31%. This is a higher proportion of industry production to GDP than China (40.53%), Malaysia (37.70%), Vietnam (33.30%), Thailand (35.72%), Philippines (30.77%), India (29.72%) and Singapore (26.44).

Industry Production as Percentage of GDP, Selected Economies, 2006–2015



Source: Economist Intelligence Unit: Country Data.

Size of the Indonesia's Manufacturing Sector

In 2015, Indonesia's manufacturing sector employed 15.25 million people (or 13.28% of total employment), an increase of 3.36 million people from 2006. The table below shows manufacturing growth at a higher rate than total GDP growth from 2011 to 2014. Indonesia's manufacturing industry grew by 5.61% in 2014. Food & beverages (+9.54%), tobacco (+8.85%), and machinery and equipment industry (+8.80%) were the highest growth sub-sectors within manufacturing.

Growth of Main Manufacturing Subsectors, in percentage, 2011–2014

Manufacturing subsectors	Growth of main manufacturing subsectors (%)			
	2011	2012	2013	2014
Food & Beverages Industry	10.98	10.33	4.07	9.54
Tobacco Products Industry	-0.23	8.82	-0.27	8.85
Machinery and Equipment Industry	8.53	-1.39	-5.00	8.80
Other Industry; Repair and Installation of Machinery and Equipment	-1.09	-0.38	-0.70	7.30
Wood, Wood & Cork Products, and Bamboo & Rattan Plaiting Products Industry	-2.72	-0.80	6.19	6.07
Basic Metals Industry	13.56	-1.57	11.63	5.89
Leather, Leather Products, and Footwear Industry	10.94	-5.43	5.23	5.51
Transport Equipment Industry	6.37	4.26	14.95	3.94
Chemical, Pharmaceuticals, and Traditional Medicine Industry	8.66	12.78	5.10	3.89
Furniture Industry	9.93	-2.15	3.64	3.58
Paper and Paper Products Industry; Printing and Reproduction of Recorded Media	3.89	-2.89	-0.53	3.43
Fabricated Metal Products Industry; Computer, Electronic and Optical Products Industry; and Electrical Equipment Industry	8.79	11.64	9.22	2.92
Non-Metallic Mineral Industry	7.78	7.91	3.34	2.39
Textile and Apparel Industry	6.49	6.04	6.58	1.53
Rubber, Rubber Products, and Plastics Industry	2.08	7.56	-1.86	1.16
Total manufacturing growth	7.46	6.98	5.45	5.61
GDP Growth	6.17	6.03	5.58	5.02

Source: Indonesian Ministry of Industry, Facts and Figures 2015.

^{*}No data available for Indonesia 2006-2008.

Indonesia's manufacturing industry is forecast to exhibit increased year-on-year growth. In 2015, manufacturing is forecast to grow by 6.1% and by 2019 it is forecast to grow by 8.6%. Manufacturing growth is forecast to outstrip GDP growth. The manufacturing industry is also predicted to account for a higher proportion of GDP by 2019 (21.6%).

Forecast Economic Indicators, Indonesia, 2015–2019

Economic indicators	2015	2016	2017	2018	2019
Manufacturing industry growth (%)	6.1	6.9	7.4	8.1	8.6
Manufacturing industry contribution toward GDP (%)	20.8	21	21.1	21.3	21.6
GDP growth (%)	5.8	6.6	7.1	7.5	8

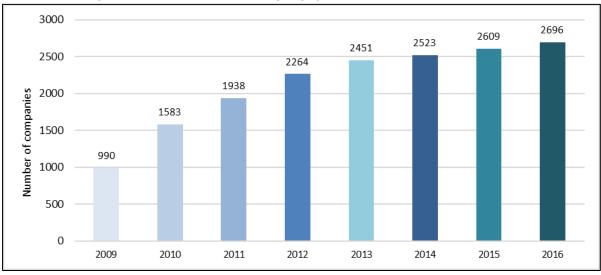
Source: Indonesian Ministry of Industry, Facts and Figures 2015.

Machinery & Equipment

Sector size

According to Dun & Bradstreet's Global Reference Solution database there are around 2700 machinery & equipment-related companies in Indonesia in 2016, compared to only 990 in 2009.

Number of Companies in Industrial Machinery, Equipment and Tools*, Indonesia, 2009–2016



*SIC codes 352, 353, 354, 355, 356, 358, 359, 361, 382.

Source: fDi Intelligence based on Dun & Bradstreet Global Reference Solution.

Heavy industry equipment

The major demand of heavy equipment (HE) is concentrated in three sectors: mining, agriculture and construction. The local market is dominated by four key players:

- PT Komatsu Indonesia;
- PT Caterpillar Indonesia;
- PT Hitachi Construction Machinery of Indonesia; and
- PT Kobelco.

According to United Tractors, Komatsu accounted for 36% of the heavy equipment industry in 2015, followed by Caterpillar (22%), Hitachi (18%), and Kobelco (10%), with other companies making up 14% of the market. Key production segments are: excavator (80%), bulldozer (18%), and mining truck (2%).

Agricultural machinery

According to the Ministry of Agriculture, the Indonesian large and medium-sized agriculture machinery sector is comprised of component and spare part and assembly of four-wheel tractors, combine harvesters, transplanters, engines, and other equipment. Local manufacturers mainly produce: tillers, power weeders, water pumps, threshers, chopper, shredder, and dryers. The table below shows the number of the medium-scale agricultural machinery companies in Indonesia in 2014.

Medium-Scale Agricultural Machinery Manufacturers, 2014

Agricultural machinery	Number of companies
Irrigation Pumps	18
Thresher	16
Agricultural Tractors	14
Rice Milling Unit	11
Polisher	5
Power Sprayer	3
Husker	3

Source: Indonesian Ministry of Agriculture, Country Report Indonesia 2014.

Mining and Construction Equipment

Indonesia is an important global mining hub and is one of the world's largest producers of tin, nickel, ignite, and copper, and a leading exporter of coal. Mining is a key sector in Indonesia's economy. The table below shows the production of main mining materials in Indonesia between 2011 and 2015.

Production of Main Mining Materials in Indonesia, 2011–2015

Production of Main Mining Material							
Mining Material	Unit	2011	2012	2013	2014	2015	
Crude oil	000 barrel/barrel	329265	314666	301192	287902	286706	
Natural gas	MMSCF	3256379	2982754	2969211	2999524	2957230	
Tin ore	ton	89600	44202	59412	51801	52195	
Coal	000 ton	415765	452318	458463	435743	429964	
Bauxite	000 ton	24175	31443	57024	2539	472	
Nickel ore	000 ton	15973	48449	65047	39034	1870	
Gold	Kg	76763	69291	59804	69349	92414	
Copper concentrate	000 ton	2236	2385	1910	1572	2425	

Source: Indonesian National Statistics Yearbook 2016

The construction sector of Indonesia has high growth, with data from Indonesia's National Statistics showing that gross domestic product by construction grew up from IDR 626,905 billion in 2010 to IDR 1,193,346 billion in 2015 at current prices. Indonesia's inward FDI in construction was US\$1.38 billion in 2015 and US\$0.96 billion in 2015. The locally and foreign-owned construction sector is leading to growing demand for construction equipment.

More than half of total demand for heavy equipment in Indonesia comes from the mining sector, in particular for large units, such as giant excavators. According to the chairman of Heavy Equipment Manufacturer Association of Indonesia (HINABI), sales of construction and mining equipment could rise up to 5000 units in 2016 with the government support. Without this additional support, the association expects Indonesia's heavy equipment sales at 4000 units, a similar figure to 2015.

United Tractors has a mining contracting business line with PT Pamapersada Nusantara ("PAMA"). This company is a wholly-owned subsidiary of PT United Tractors Tbk, a major distributor of Komatsu heavy equipment in Indonesia (Komatsu company is the market leader in heavy equipment). In

2015, PAMA provided 295 bulldozers, 322 excavators/shovels, 2142 dump trucks, 161 prime movers, 238 wheel- loaders and motor graders.⁴

Investor case studies

General Electric

- In October 2015, GE announced that it will invest up to US\$1 billion in the power, oil and gas, and healthcare sectors to support Indonesia's accelerated economic growth; and
- These commitments will result in the creation of over 6,000 jobs, technology transfer, training of over 1,000 people a year, and the expansion of local supply chains.

Saint-Gobain

- France-based Saint-Gobain, a glass and building materials supplier, has opened a plasterboard plant near Jakarta;
- The facility will have an annual capacity of 30 million sq. m and serves the Indonesian plasterboard market;
- The company plans to have six plants in the country for its abrasives, industrial mortars, and performance plastics businesses; and
- Its automotive glass business has also started construction of a plant in the country.

Knauf

- Germany-based Knauf, a supplier of building materials, plans to establish its third plant in Indonesia;
- The firm has recently completed acquiring its second gypsum-board factory in Indonesia; and
- The company is establishing plants in Vietnam, Thailand, Indonesia, and the Philippines in a move that will increase its total production capacity in the ASEAN to 190 million sq. m per year by early 2017.

Chemicals and Life Sciences

Sector size

The chemicals industry is one of the largest contributors to the manufacturing sector in Indonesia. The table below shows the gross domestic product by subsector in 2014. Fertilizers, chemicals and rubber products industry account for 12.39% of total non-oil and gas manufacturing, contributing IDR86,531 to the nation's GDP. The subsector is one of Indonesia's most dynamic growth sectors, with 4.58% average annual growth from 2011 to 2014.

Gross Domestic Product at Year 2000 Constant Market Prices, by industrial origin, IDR bn, 2014

Subsector	GDP	% of total non-oil &
Subsector	(IDR bn)	gas manufacturing
Transport Equip., Machinery & Apparatus Industries	254564	36.46
Food, Beverages and Tobacco Industries	208105	29.81
Fertilizers, Chemical and Rubber Products Industries	86531	12.39
Textile, Leather Products and Footwear Industries	63536	9.10
Paper and Printing Products Industries	29495	4.22
Wood and Other Products Industries	21446	3.07
Cement, and Non-Metallic Quart Products Industries	19640	2.81
Iron and Steel Basic Metal Industries	10516	1.51
Other Manufacturing Products	4362	0.62
Non-Oil & Gas Manufacturing Industry	698196	100

Source: Statistics Indonesia.

⁴ United Tractors, Annual Report 2015

The chemicals sector is forecast to grow by over 10% per year with strong demand from end-user industries in Indonesia including agri-business and automotive. Chemicals demand will increase from the infrastructure and real estate sectors. Indonesia also has abundant raw materials to support the chemicals sector, in particular crude palm oil and rubber, where Indonesia is the world's first and second largest producer respectively.

The health services markets in Indonesia is forecast to grow from US\$14 billion in 2015 to over US\$20 billion by 2020 with pharmaceutical sales increasing from US\$7.5 billion to over US\$12 billion, according to the EIU. The Indonesian government in 2016 opened-up healthcare sectors for the first-time, such as medical instruments, restricted to a maximum of 67% foreign ownership.

Agrochemicals

One of the key subsectors is the agrochemical industry. It consists of chemicals used in agriculture, including pesticides, fertilizers, herbicides, and insecticides.

In 2016, total market demand for food & beverages in Indonesia is expected to reach nearly US\$230 billion and is projected to reach around US\$330 billion by 2020. According to the Economist Intelligence Unit, the value of the food demand is expected to grow at a compound average growth rate of 9.93% per year between 2016 and 2020. This will increase demand for agricultural fertilisers and chemicals.

Indonesia's total agricultural area is 54 million hectares. The area is still steadily expanding, with an annual average growth rate of nearly 12% between 2001 and 2011. This expansion of agricultural land is directly increasing the demand for fertilizers. The table below shows the five-year trend in fertilizer consumption among ASEAN countries and its corresponding growth rate. Indonesia grew by 3.02% per year between 2009 and 2013, the third largest growth of selected ASEAN economies and India and China.

Fertilizer Consumption, Selected Countries, kilograms per hectare of arable land, 2009–2013

- crime or contain parent, concerns countries, innegrante per nectaire or arabic land, 2000 2020							
Country	2009	2010	2011	2012	2013	% Growth (2009-2013) *	
Thailand	122	162	160	151	168	8.26	
Malaysia	1528	2003	1870	1637	1727	3.11	
Indonesia	182	182	198	205	205	3.02	
China	343	349	357	373	364	1.54	
India	167	179	181	165	158	-1.52	
Vietnam	408	323	311	296	374	-2.15	
Singapore	4663	3131	4373	3375	2760	-12.29	

Source: The World Bank, World Development Indicators.

Fertilizer consumption in Indonesia is divided by different kinds of fertilizers. According to the Indonesian Association of Fertilizer Producers (APPI), urea fertilizer accounts for just over half (51%) of total fertilizer consumption, followed by NPK fertilizers⁵ (25%) in 2015. Organic fertilizers, which account for 7% of total fertilizer consumption, grew at an average rate of 20% per year between 2011 and 2015.

From 2011 to 2015, NPK fertilizers increased by a compound average annual growth rate of 6%. The growing preference for fertilizers that provide nutrients such as nitrogen, phosphorous and calcium.

^{*}Compound average annual growth rate.

⁵ NPK fertilizers are three-component fertilizers providing nitrogen, phosphorus, and potassium.

There is considerable scope for international companies to fill the gap in domestic production of compound fertilizers and establish operations in Indonesia.⁶

The table below shows Indonesian fertilizer consumption by product. Urea fertilizer is the only fertilizer type that is being exported (13% of the total urea sales). The major utilization of urea fertilizer is in agriculture (60%) followed by estate crops (16%).

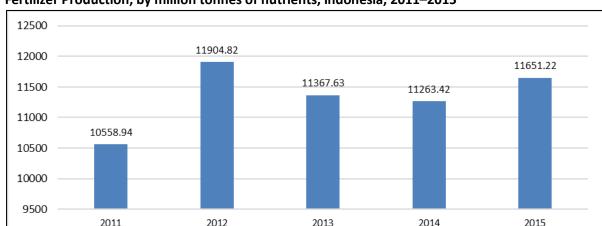
Fertilizer Consumption on Domestic Market and Export Market by Type, tonnes of nutrients, Indonesia, 2011–2015

Consumption/Export	2011	2012	2013	2014	2015
Urea					
Total Urea Sales	6495161	6536504	6575906	6697364	6322409
Exports	750430	989612	1359109	1107880	831894
Total Domestic Consumption	5744731	5546892	5216797	5589484	5490515
Agriculture	4584986	4155567	3893004	4001225	3795596
Estate Crops	660507	963566	878066	991835	995334
Industry	499238	427759	445727	596424	699585
Fosfat/SP-36					
Total Domestic Consumption	723177	858719	830638	798816	829134
Agriculture	721179	855808	823629	796006	825142
Estate Crops	1998	2911	7009	2248	3992
Industry	-	-	-	562	-
ZA/AS					
Total Domestic Consumption	969344	1051281	1106362	1011141	996645
Agriculture	942692	1028907	1070118	972410	978585
Estate Crops	20278	20991	24624	36115	16174
Industry	6374	1383	11620	2616	1886
NPK					
Total Domestic Consumption	2124474	2478399	2443456	2672052	2705807
Organic					
Total Domestic Consumption	386063	742198	766691	753761	794409
Agriculture	375341	742173	766616	753740	794409
Estate Crops	10722	25	75	21	-

Source: Indonesian Association of Fertilizer Producers (APPI). http://www.appi.or.id/?statistic.

With the implementation of government initiatives to achieve food security and promote agribusiness opportunities, the production of major commodities has been increased. As a result, the fertilizer manufacturing industry in Indonesia has experienced solid growth. The following chart shows the five-year trends in fertilizer production. From 2011 to 2015, production increased by 10.34%, reaching over 11.5 million tonnes of nutrients in 2015.

 $^{{}^6\}text{http://www.gbgindonesia.com/en/main/business_updates/2014/upd_harvest_time_for_indonesia_s_fertiliser_industry.php.}$



Fertilizer Production, by million tonnes of nutrients, Indonesia, 2011–2015

Source: Indonesian Association of Fertilizer Producers (APPI). http://www.appi.or.id/?statistic.

Through subsidies granted to five state-owned enterprises (Petrokimia Gresik, Pupuk Kujang, Pupuk Kalimantan Timur, Pupuk Iskandar Muda and Pupuk Sriwidjaja Palembang, which now operate under strategic holding company Pupuk Indonesia) government involvement has been a constant feature of the fertilizer industry since 1971. However, the pressing need to boost agricultural yields has changed the industry landscape and opened the door to other companies.

Having enjoyed a monopoly over the production of fertilizers, the state-owned enterprise chose to focus on the manufacturing of fertilizers made from inputs accessible in Indonesia, such as ammonia derived from natural gas, to produce urea fertilizer in huge quantities. This has resulted in a gap in the market, whereby productivity-driven plantation owners and farmers have sought to implement mixed compound fertilizers such as NPK but find that the domestic supply of this product in both subsidized and unsubsidized form is limited.⁷

As shown in the table below, Indonesia fertilizer plants produce different kinds of fertilizers; in 2015 urea accounts for 59.37% of total fertilizer production, while NPK represent 25.76%. However, NPK and organic fertilizer is showing greater growth than urea in terms of production. Therefore, numerous opportunities exist for foreign companies to satisfy the demand.

Fertilizer Production by Type as a Proportion of Total Fertilizer Production, Indonesia, 2011–2015

Fertilizer	2011	2015	Change*			
NPK	20.96%	25.76%	+4.79%			
Organic	3.23%	6.43%	+3.19%			
ZK (K2SO4)	0.03%	0.07%	+0.04%			
Fosfat/SP-36	4.18%	2.42%	-1.76%			
ZA/AS	7.73%	5.96%	-1.77%			
Urea	63.86%	59.37%	-4.49%			

^{*} Percentage point change.

Source: Indonesian Association of Fertilizer Producers (APPI). http://www.appi.or.id/?statistic

⁷http://www.gbgindonesia.com/en/main/business_updates/2014/upd_harvest_time_for_indonesia_s_fertilise r_industry.php.

Investor case studies

Cargill

Sorini Agro Asia Corporindo, a chemicals company and a subsidiary of U.S.-based Cargill, is
investing US\$46 million to establish a new starch sweetener plant in Cikande, Indonesia with
capacity of 100,000 tonnes per year.

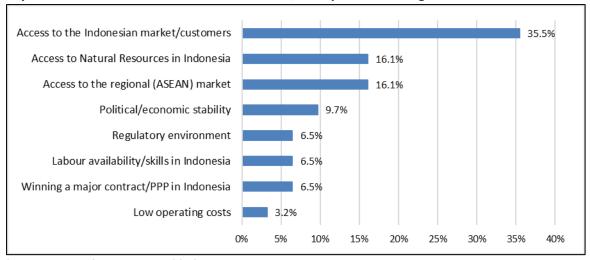
Elevance Renewable Sciences

A U.S.-based chemical company has opened a bio-feedstocks plant in Gresik, Indonesia. The
investment is a joint venture project with Wilmar International, an agribusiness group based in
Indonesia. The plant initially will operate using palm oil, but also can run on soybean, mustard,
or other bio-feeds.

KEY STRENGTHS OF INDONESIA FOR FDI

A field trip to Indonesia was conducted in June 2016 to meet with Canadian and other investors and key stakeholders. Interviewees were asked to identify the three most important location determinants for FDI into Indonesia. The following chart shows that access to the Indonesian market and customers is considered the most important location determinant, with over 35% of respondents citing this factor as one of the top three location determinants. The next most important factors were access to the regional ASEAN market and access to natural resources.

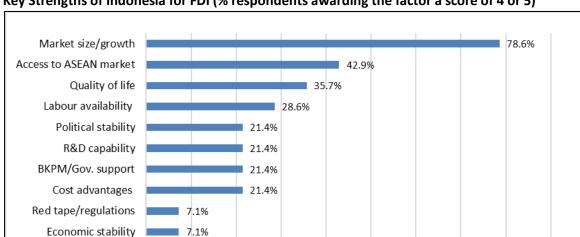
Key Location Determinants for FDI in Indonesia, % respondents citing factor



Source: WAVTEQ survey, June 2016.

Respondents emphasized the size and growth of the Indonesian and ASEAN market and that the high-growth economy offers a good return on investment and new sources of revenue independent of global markets, especially related to infrastructure and energy demand in Indonesia. Finding a good local partner is seen as key to navigating the regulatory climate and getting operations up and running. When forming a local partnership, investors recommend extensive due diligence and putting arbitration offshore.

Respondents were asked to rank location factors on a scale of 1 to 5 (1=Indonesia is very weak, 5=Indonesia is excellent). The chart below shows the key strengths of Indonesia for FDI. Over three-quarters of respondents saw market size and growth as a key strength and over 40% of respondents saw access to ASEAN as a key strength. The quality of life in Indonesia was cited as a key strength by over one-third of respondents and labour availability by over one-quarter of respondents.



Key Strengths of Indonesia for FDI (% respondents awarding the factor a score of 4 or 5)

Source: WAVTEQ survey, June 2016.

Indonesia's overall political stability is evaluated as 2.13 out of a maximum of 4, which is below Singapore, Malaysia, and Vietnam but higher than China, Philippines, Thailand, and India.

30%

40%

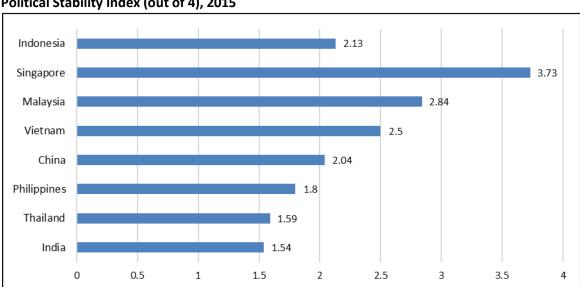
50%

60%

70%

80%

90%



Political Stability Index (out of 4), 2015

0%

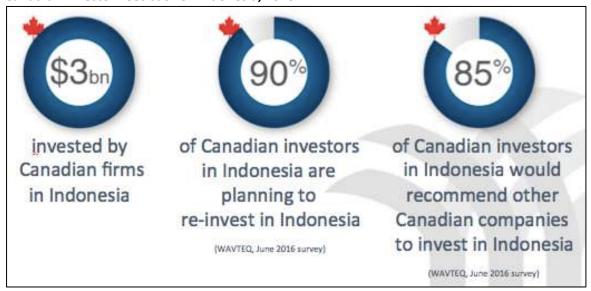
10%

20%

Source: fDi Benchmark (Based on Worldwide Governance Indicators 2016).

Canadian companies that have already invested in Indonesia are very positive about the investment opportunities, as shown in the feedback below. Investors highlighted the importance of understanding the local business culture and being in the market to succeed. They noted that the Indonesian culture is very welcoming and integrative and that there is easy access to government.

Canadian Investor Feedback on Indonesia, 2016



Source: WAVTEQ survey, June 2016.

KEY INVESTMENT OPPORTUNITIES

Indonesia: Emerging Manufacturing Powerhouse

Indonesia is experiencing a transformation in its manufacturing sector with rapid growth, driven by growing levels of FDI in the sector. Already, Indonesia is highly focused on industry with a higher proportion of GDP from industry than China and other ASEAN countries.

Why Invest in Indonesia's Manufacturing Sector?



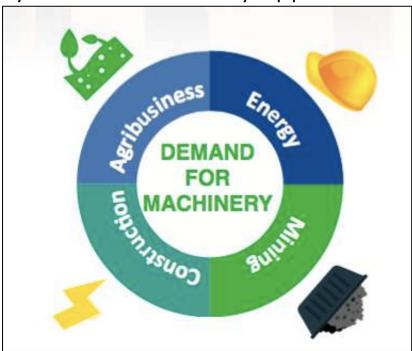
Source: WAVTEQ

Key opportunities for Canadian FDI in Indonesia are in the machinery and equipment and chemicals sectors, which are the two biggest manufacturing sectors for FDI into Indonesia.

Machinery & Equipment

The machinery and equipment sector in Indonesia is forecast to growth at 8% per year driven by demand from the agribusiness, energy, mining, and construction sectors.





Source: WAVTEQ

Energy

The Electricity Supply Business Plan (RUPTL) indicates at least 80.5 GW of power plants will need to be constructed by 2025, with around 50 GW coming from independent power producers (IPPs) and a very strong focus on renewable energy. The growth in energy capacity will lead to growing demand for all related machinery and equipment.

Mining

One of the world's largest producers of tin, nickel, ignite, copper, and coal. More than half of total demand for heavy equipment in Indonesia comes from the mining sector. Sales of construction and mining equipment could rise up to 5000 units in 2016

Agribusiness

Total market demand for food is expected to reach nearly US\$230 billion in 2016 and US\$330 billion by 2020; 10% growth per year. Dairy products and fisheries are two key growth areas. The growth in the agribusiness sector will lead to growing demand for all related machinery and equipment.

Construction

Indonesia's construction sector is growing by 7% to 8% per year. There is a backlog of some 15 million residential units. International tourism receipts are forecast by EIU to grow from US\$9.5 billion in 2015 to US\$13.7 billion in 2020. Around US\$14 billion of investment is needed for tourism development. Some 50 locations in Indonesia are available for tourism development. There has been over US\$8 billon of FDI in Indonesia's construction sector from 2011 to 2015. The growth in construction will lead to growing demand for all related machinery and equipment.

Chemicals

Chemicals and Pharmaceuticals is the second largest manufacturing sector for FDI into Indonesia with nearly US\$15 billion FDI from 2011 to 2016, just behind the machinery and related sector.

Key subsectors for inward investment into Indonesia include: paints, coatings and adhesives; agricultural chemicals; basic chemicals; and pharmaceutical preparations.

The Indonesian government in 2016 opened up healthcare sectors such as medical instruments for the first-time, restricted to a maximum 67% foreign ownership, which should encourage life sciences FDI.

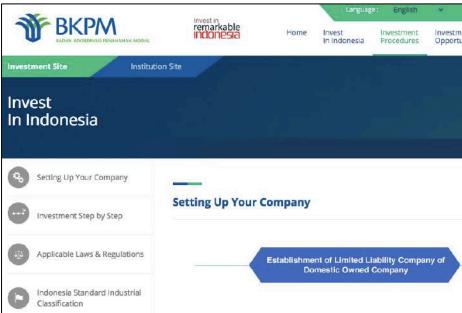
The strongest opportunity for Canadian investors is likely to be pesticides, fertilizers and other agricultural chemicals. This is a major growth segment and is a subsector where Canada is a leading global player and has a track record of FDI being the fourth-largest source of FDI projects worldwide in the last decade.

How to Invest in Indonesia

Government Support for your Investments

The Investment Coordinating Board of the Republic of Indonesia (BKPM) is the Indonesian government agency established to assist foreign companies to invest in Indonesia. BKPM offers a one-stop shop and online service to help foreign investors, with targets for approval times. BKPM should be contacted to obtain the latest information on how to make manufacturing investments in Indonesia and on possible fast-track investment set-up and financial incentives available.

BKPM Helps Foreign Companies to Invest in Indonesia



Source: http://www4.bkpm.go.id/en/investment-procedures /.

Online Licensing—National Single Window for Investment



Source: https://online-spipise.bkpm.go.id/.

For major investment projects, BKPM offers a fast-track service to help foreign investors get the approvals they need to set-up operations in Indonesia.

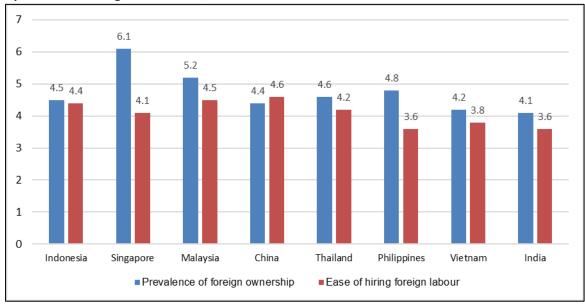
Fast Track Service for Major Projects



Indonesia's Ease of Doing Business

The chart below shows that the prevalence of foreign ownership in Indonesia is higher than in China, Vietnam, and India and around the same level as Thailand. Indonesia is also one of highest ranked countries when it comes to ease of hiring foreign labour, performing better than Singapore, Thailand, Vietnam, and India.

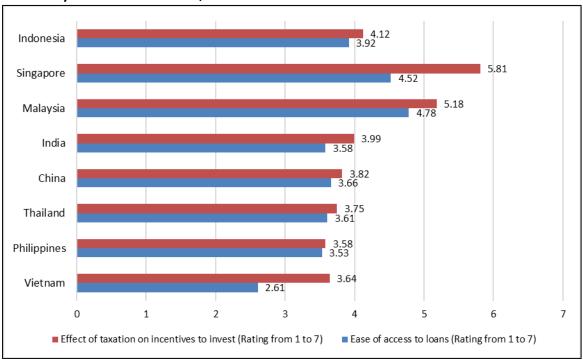
Openness to Foreign Investment, 2015



Source: World Economic Forum, The Global Enabling Trade Report; Travel and Tourism Competitiveness Report 2014 & Global Competitiveness Report, World Economic Forum, Switzerland, 2015-16.

In terms of availability of finance, Indonesia performs relatively well compared to most ASEAN countries, China, and India. Indonesia scores 4.12 out of 7 for the effect of taxation on incentives to invest and 3.92 out of 7 for ease of access to loans, higher than China and India and ASEAN countries except Singapore and Malaysia.

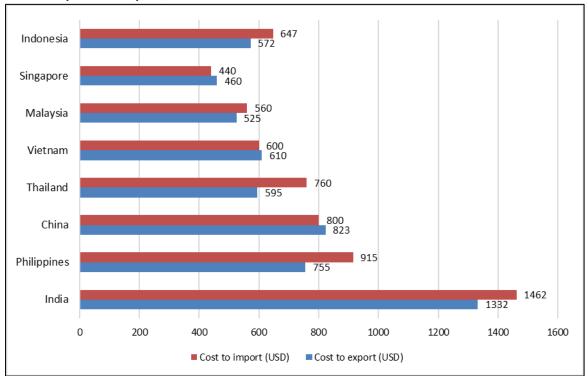
Availability of Finance Indicators, 2015



Source: Global Competitiveness Report, World Economic Forum, Switzerland, 2015-16.

Indonesia performs relatively well in terms of the cost to import and export, with costs much lower than India, Philippines, China, and Thailand.

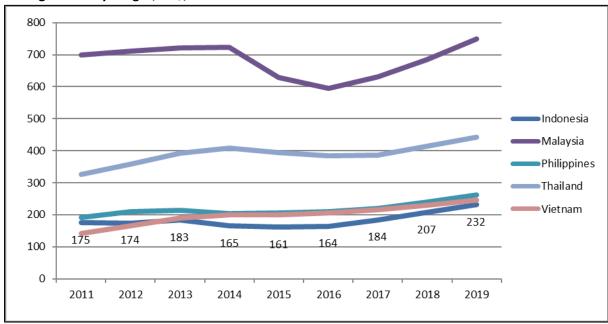
Cost to Import and Export, 2015



Source: fDi Benchmark 2016 (The World Bank: Doing Business 2015).

Indonesia is very cost effective—the average monthly wage is US\$161 and is forecast remain the lowest in ASEAN.

Average Monthly Wages, US\$, 2011–2020



Source: EIU

Indonesia's total tax rate as a percentage of profit is competitive with only Singapore's significantly lower.

Indonesia 30% Singapore 18% Thailand 28% Vietnam 39% Malaysia 40% Philippines 43% China 68% India 61% 0% 10% 20% 30% 40% 50% 60% 70% 80%

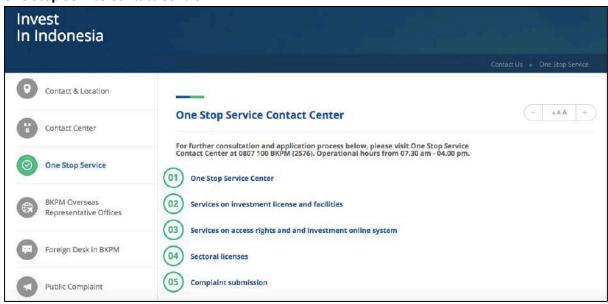
Total Corporate Tax Rate as a Percentage of Profit, 20168

Source: World Bank Doing Business 2016, & Deloitte 2016.

KEY CONTACTS

BKPM provides a one-stop service contact centre for foreign investors.

One Stop Service Contact Centre



Source: http://www4.bkpm.go.id/en/contact-us-investment/one-stop-service-contact-center-investment#

⁸ Total tax rate as a % of profit provides a comprehensive measure of the cost of all the taxes a business bears. It measures the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions as a share of commercial profits. Taxes withheld (such as personal income tax) or collected and remitted to tax authorities (such as value added taxes, sales taxes or goods and service taxes) are excluded.