Part C: Present Condition and Detailed Analysis

CHAPTER I: NATIONAL ECONOMIC AND INDUSTRIAL SECTOR

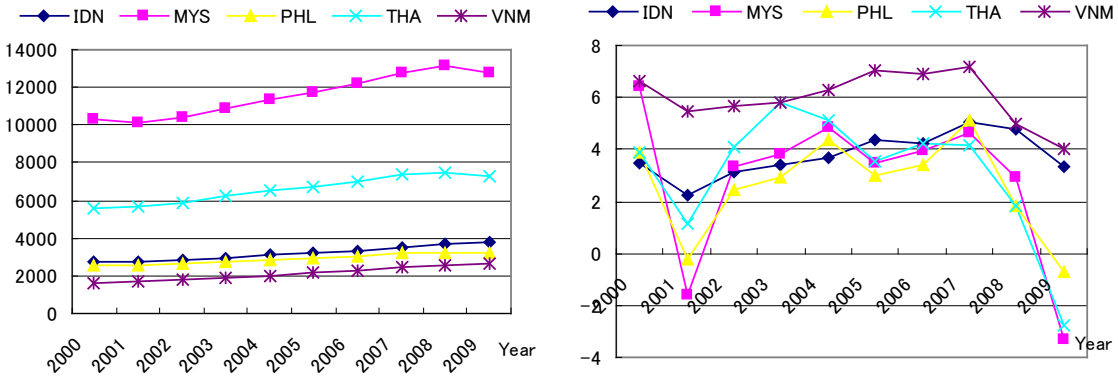
I.1 National Economic and Industrial Development Trend

(1) Indonesia's Recent Economic Trend

Indonesia is a country with vast lands and abundant natural resources. It has the third largest population in Asia with 230 million. Thus, the potential market is big and domestic demand is expected to increase. However, in accordance with global economic changes, the domestic markets in Indonesia are now facing pressure from international competition. The global economies have been changed by the growth of international production networks through the improvement of transportation and logistics, the advancement of technologies, as well as the rise of China and India. The recently implemented ASEAN Free Trade Area (AFTA) and ASEAN-China Free Trade Area (ACFTA) agreements may have adverse impacts on domestic industries.

(2) General Economic Condition

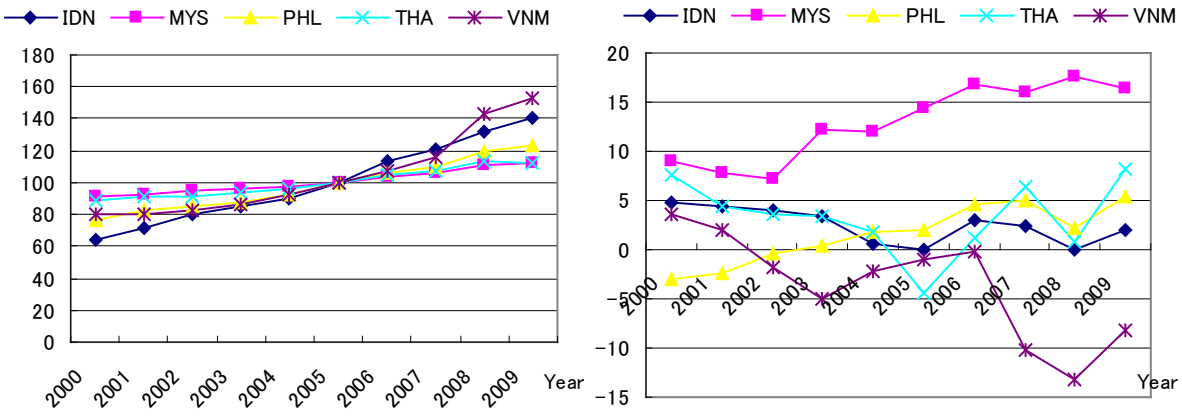
Indonesia's nominal gross domestic product (GDP) in 2009 is Rp 5,613 billion or US$ 2,376 per capita. As shown in Figure I.1.1, Indonesia's GDP has constantly grown after 2001 even during the global financial crisis from around 2007 when those of Malaysia and the Philippines decreased dramatically.



Source: World Bank Index

Figure I.1.1: GDP per Capita (left) and the Growth Rate (right) from 2000 to 2009 of Indonesia and Its Neighboring Countries

The consumer price index (CPI) of Indonesia has been rapidly rising, causing the inflation rate to be more than that of their neighboring countries. With regards to the current-account balance of Indonesia, it has been consistently hovering between 0% and 5% of the national GDP. In addition to the constant GDP growth mentioned before, the economy of Indonesia has been growing steadily but not remarkably.

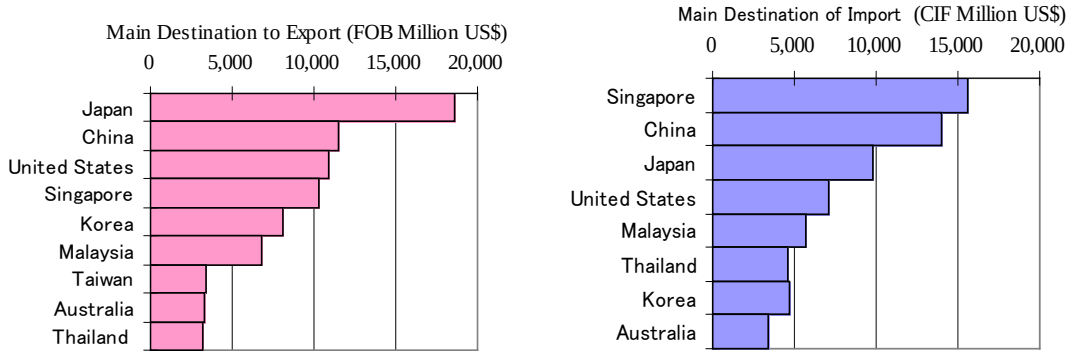


Source: World Bank Index

Figure I.1.2: Consumer Price Index (left) and Balance of Current-Account (% of GDP) (right) from 2000 to 2009 of Indonesia and Its Neighboring Countries

(3) Foreign Trade

In 2009, the total international trade value is US$16,490 million for export (FOB), and US$96,856 million for import (CIF). Looking at the trade value by country, China, Japan, Singapore, and the United States are the four major trade partners of Indonesia for both exports and imports, as shown in Figure I.1.3. China has been increasing its amount of trade; for example, import value from China to Indonesia has increased 2.6 times in three years, increasing from US$5,843 million in 2005 to US$15,247 million in 2008. In accordance with the CAFTA which took effect on January 2010, a significant increase in imports from China was expected.



Source: BPS, 2009

Figure I.1.3: Main Trade Destination of Export and Import in 2009

Table I.1.1 and I.1.2 shows the composition ratio and the growth rate from 2005 to 2009 of exports and imports of main commodities. Fossil fuel, oil and gas still remain as the important exports of Indonesia. Looking at the change in export levels, animal and vegetable fats and fossil fuels drastically boosted the total export value. Animal and vegetable fat exports increased 147% during these four years. The reason behind this is that palm oil started to attract attention as a bio-fuel and the transaction price has increased sharply in the international market.

Fossil fuel exports were increased by 211% while crude oil and gas exports were decreased. As a result, the gas import increased by 17%. This is due to the increasing gas demand caused by the policy change of the Indonesian government that encouraged each domestic industry to decrease the import dependency on oil and change the energy source to gas. Even though Indonesia is a gas exporting country, they have expanded their gas import by 17% in the past few years to satisfy the rising demand from domestic industries.

Import of electrical machinery and equipment has also expanded by 146.9%. This can be linked to exports because of the "added-profit trade", which import intermediate goods from abroad to export them after their assembly in Indonesia.

Table I.1.1: Composition Ratio of Export and its Growth Rate from 2005 to 2009 by Main Commodity

Commodity	Composition Ratio in 2009	Growth Rate from 2005 to 2009
Non-oil and gas	84%	47%
Animal or Vegetal Fat	10%	147%
Electrical Machinery & Equipment	7%	10%
Mineral Fuels, Oils	12%	211%
Rubber and articles thereof	4%	36%
Ores, Slag and Ash	5%	66%
Oil & gas	16%	- 1%
Crude oil	7%	-4%
Petroleum Product	2%	17%
Gas	8%	-2%
Total (FOB)	100%	36%

Source: JICA Survey Team based on data from BPS

Table I.1.2: Composition Ratio of Import and its Growth Rate from 2005 to 2009 by Main Commodity

Commodity	Composition Ratio in 2009	Growth Rate from 2005 to 2009
Non-oil and gas	83.7%	46.7%
Electrical Machinery & Equipment	10.5%	146.9%
Iron and Steel	6.9%	9.6%
Organic Chemistry	12.0%	210.6%
Transportation Machinery and Equipment	4.2%	36.5%
Oil and gas	5.0%	66.0%
Crude Oil	16.3%	-1.1%
Petroleum Product	6.7%	-4.0%
Gas	1.9%	17.0%
Total (CIF)	7.7%	-2.4%

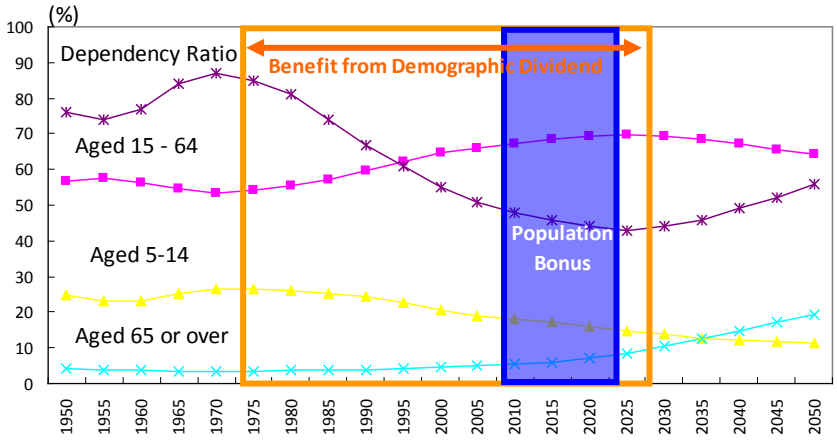
Source: JICA Survey Team based on data from BPS

I.2 Population and Employment

(1) Demography of Indonesia

Indonesia has enjoyed the benefits from its demographic dividend, which is caused by the increase of working age of its population and a decline in fertility after 1970. Figure I.2.1 shows the trend of demographic change after 1950 and its projection until 2050. This demographic dividend steadily

decreased the dependency ratio from over 0.8 in 1974 to 0.5 in 2011. During this period, the country has a highly productive population and low dependency ratio at the same time. Thus, the abundant labor force makes it possible to boost the economy as a whole. However, this demographic window of opportunity will close in the next decade. Sometime between 2020 and 2025, the dependency ratio will begin to rise again.

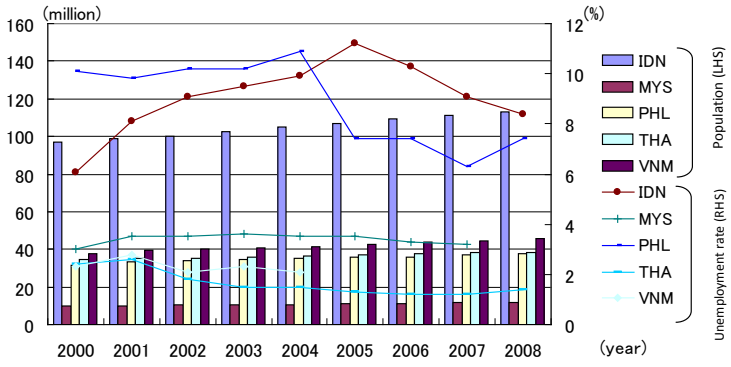


Source: World Population Prospect the 2010 Revision, United Nations

Figure I.2.1: Age Structure and Population Dependency Ratio from 1950 to 2050

(2) Employment

Population in Indonesia reached over 230 million in 2010 and is still rapidly increasing with an annual average growth of 1.49 between 2000 and 2010. The increase of working population and domestic demand are accompanied by this large population. Inexpensive source of labor compared to its neighboring countries is a strong investment destination of Indonesia. On the other hand, high unemployment ratio is one of the most serious problems in Indonesia. Industrial development, especially manufacturing, will contribute to absorb the increasing working population and take the advantages over the benefits from the demographic dividend. This section discusses the three characteristics of the current employment situation in Indonesia: 1) high unemployment ratio, 2) high percentage of low productive labor force, and 3) low labor cost.



Source: World Bank Indicator

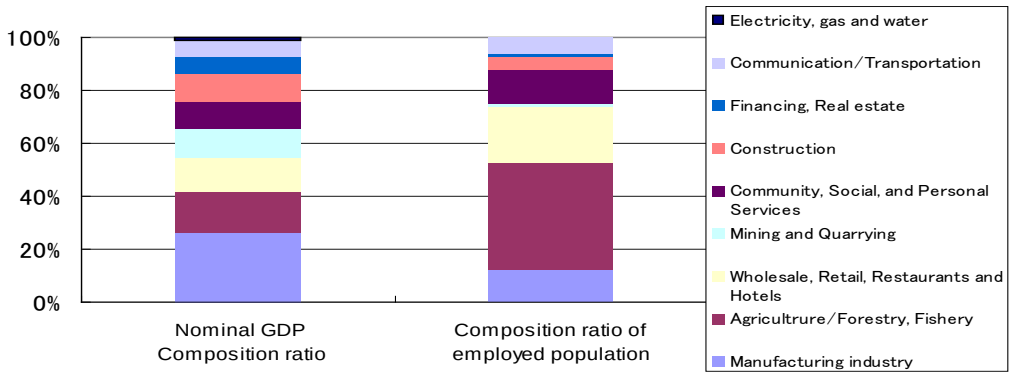
Figure I.2.2: Unemployment Ratio and Population in Five Southeast Asian Countries

1) High Unemployment Ratio

Indonesia's unemployment ratio is the highest among its neighboring countries, between 8% and 12% over the past five years. The economic disparities among regions were not much improved as mentioned in section 2.3. For further economic growth and redress of the disparities, it is necessary to create and secure new jobs for over 100 million unemployed people in the country.

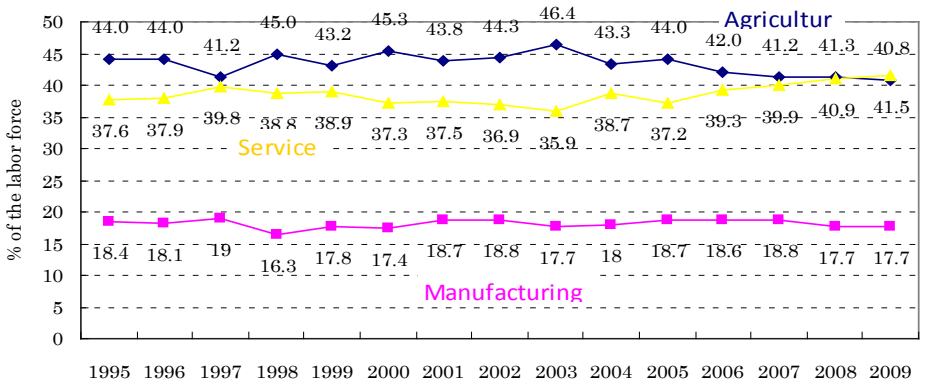
2) High Percentage of Low Productive Labor Force

Over 40% of Indonesia's labor force still earns its livelihood from agriculture and related areas, which has low productivity. Meanwhile, manufacturing comprises 26% of the total nominal GDP but it makes up only 12% of the total labor force. Indonesia has not improved and kept up with its neighboring countries in moving workers out of agriculture for the last few decades.



Source: BPS

Figure I.2.3: Composition Ratio of Nominal GDP and Employed Population by Sector in 2009

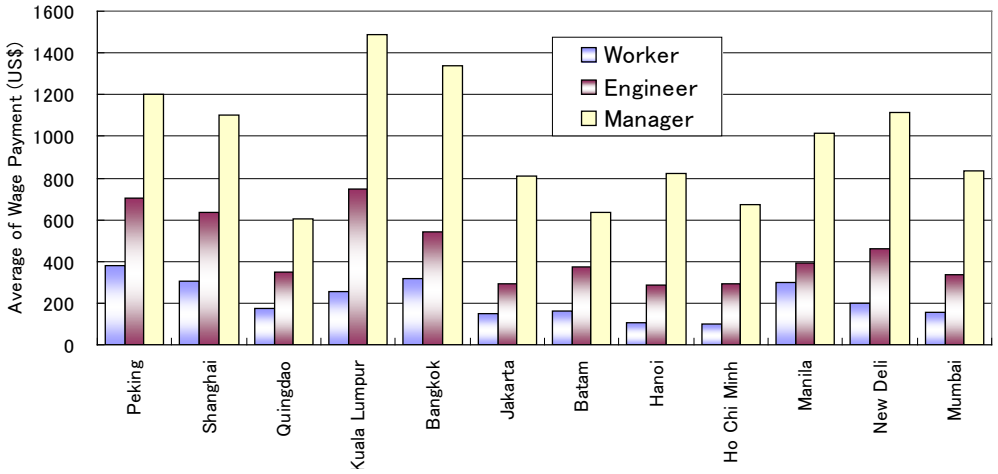


Source: BPS

Figure I.2.4: Composition Ratio of Employed Population from 1995 to 2009

3) Low Labor Cost

Figure I.2.5 shows the average wage price for major cities in Asia.



Source: Investment Related Cost Comparison among Major Cities and Regions in Asia 2010, JETRO

Figure I.2.5: Composition Ratio of Nominal GDP and Employed Population by Sector in 2009

Compared to its neighboring countries, Indonesia has lower labor costs. Labor costs in Jakarta and Batam are low compared to the cities in Vietnam.

I.3 National Development Target (National Midterm Development Plan, Spatial Plan, and Corridor Plan)

(1) National Midterm Development Plan

The 2010-2014 National Midterm Development Plan (RPJMN 2010-2014) is the second phase of the implementation of the 2005-2025 National Long-term Development Plan (RPJPN 2005-2025) promulgated through Law 17/2007. The RPJMN 2010-2014 forms the basis for ministries and government agencies in formulating their respective strategic plans (Renstra-KL). Local governments have their respective regional development plans in consideration of RPJMN 2010-2014. The RPJMN is to be further elaborated into the Annual Government Work Plan (RKP) that will then become the basis for formulating the Draft Government Budget (RAPBN). The basic scale of strategies of the respective RPJMNs is summarized in Figure 1.3.1.1.

RPJM 1 (2005 - 2009)	RPJM 2 (2010 - 2014)	RPJM 3 (2015 - 2019)	RPJM 4 (2020 - 2025)
Reforming and developing an Indonesia that is secure, peaceful, just, and democratic, with enhanced prosperity	Consolidating the reformed Indonesia, increasing quality of human resources, capacity building in science and technology, strengthening economic competitiveness	Consolidating overall development by emphasizing enhancement of economic competitive advantage based on available natural resources, quality human resources, and capability in science and technology	Realizing an Indonesia that is self-reliant, advanced, just, and prosperous, through the acceleration of development in all E31fields, with an economic structure that is solid based on competitive advantage

Source: The 2010-2014 National Medium-term Development Plan (RPJMN 2010-2014)

Figure I.3.1: Strategies for RPJMN

The main national targets for economy, energy and infrastructure in RPJMN are shown in Table I.3.1. In accordance with the main problems faced by Indonesia for the past couple of years, the government continues to accelerate economic development in RPJMN 2010-2014. The highest economic growth rate ever attained before the world financial crisis was around 7%. This is expected to recover before 2014, reducing the open unemployment rate by around 5-6% and increasing the total created employment opportunities from 9.6 million to 10.7 million. At the same time, the combination of economic growth and various government interventions are expected to decelerate the poverty rate to around 8-10%.

Table I.3.1: Main National Targets for Economy, Energy and Infrastructure in RPJMN 2010-2014

Economy	
Economic growth rate	Average of 6.3-6.8% per year Growth of 7% before 2014
Inflation rate	Average of 4-6% per year
Open unemployment rate	5-6% at end of 2014
Poverty rate	8-10% at end of 2014
Energy	
Increased capacity of electricity generating stations	3,000 MW per year
Increased electrification ratio	Reaching 80% in 2014
Increased production of crude oil	Reaching 1.01 million barrel per day in 2014
Increased utilization of geothermal power stations	Reaching 5,000 MW in 2014
Infrastructure	
Construction of the Trans Sumatra, Java, Kalimantan, Sulawesi, West Nusa Tenggara, East Nusa Tenggara, and Papua infrastructure	Reaching a length of 19,370 km by 2014
Construction of an integrated inter-mode and inter-island transportation network, in accordance with the National Transportation System and Multi-mode Transportation Blueprint	Completed in 2014
Completing the construction of the Optic Fiber Network in eastern part of Indonesia	Completed before 2013
Repairing the transportation system and network in four large cities (Jakarta, Bandung, Surabaya, and Medan)	Completed in 2014

Formulating and elaborating the government's mission and vision for 2009 to 2014 in a more operational way, the RPJMN 2010-2014 addresses 11 national priorities to ensure the implementation of the plan and make the outcome measurable. The 11 national priorities are: 1) reform of the bureaucracy and administration; 2) education, 3) health; 4) poverty reduction; 5) food security; 6) infrastructure; 7) investment in the business sector; 8) energy; 9) environment and natural disasters; 10) left-behind, frontline, most outer, and post-conflict regions; and 11) culture, creativity, and technological innovations. As a national priority for the investment and business climates, a core substance of action programs on the development plan is composed of items shown in Table I.3.2.

Table I.3.2: Action Programs for Investment Climate and Business Climate

Action program	Description
Legal Certainty	The gradual reform of regulations at the national and regional levels in order to achieve harmonization of laws and regulations that will avert ambiguities and inconsistencies in their implementation.
Procedure Simplification	Application of the Electronic Information and Licensing Investment Services (SPSIE) at the One Roof Integrated Service Centre (PTSP) in several cities starting in Batam, cancellation of problematic regional government regulations and the reduction of costs for starting a business, such as the TDP (Company Registration Proof) and the SIUP (Trade Permit Document).
National Logistics	Development and application of the National Logistics System that ensures the speedy flow of goods and reduces transaction costs/ high cost economy.
Information System	The full operation of the National Single Window (NSW) for imports (before January 2010) and for exports. Speeding up the realization of the process for settling import duties outside the port through the first phase implementation of the Customs Advanced Trade System (CATS) at the Cikarang dry port.
Special Economic Zones	Development of five (5) Special Economic Zones through the Public Private Partnership (PPP) scheme before 2012.
Manpower Policies	Synchronization of policies on manpower and business climate in the context of expanding the creation of employment opportunities.

Source: Appendices Regulation of the President of the Republic of Indonesia Number 5 of 2010 regarding the National Medium-Term Development Plan (RPJMN) 2010-2014

The program targeted the development of five special economic zones (SEZs) through public-private partnership (PPP) before 2012. However the target was changed to approve a minimum of two SEZs in 2011 and a minimum of five SEZs in 2014.

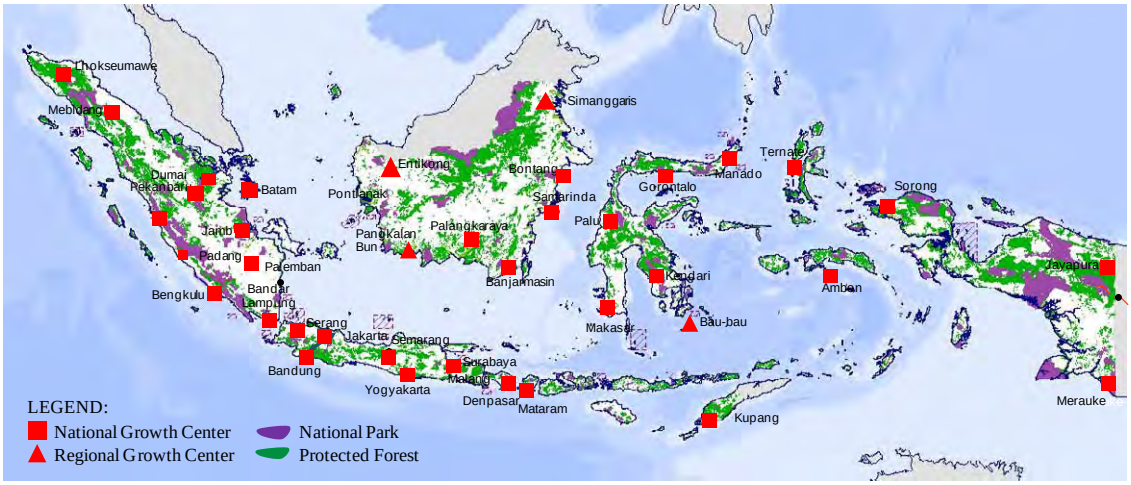
For the “procedure simplification” and “national logistics” action programs, the performance of procedure and logistics for international trade in Indonesia is being monitored by World Bank using the “Logistics Performance Index” and “Doing Business” indicators. The performance of Indonesia has been ranked low compared to its neighboring countries. On the other hand, it was reported that performance has greatly improved in recent years. Each region in Indonesia is expected to push forward with further improvement following, for example, Batam in which the most advanced systems mentioned in Table I.3.2 have been piloted and consequently succeeded.

(2) National Spatial Plan

The National Spatial Plan in Indonesia was initially instituted by the Spatial Planning Law 24/1992, enacted to respond to the growing need for coordinating the management of natural resources. The law stipulated the hierarchical spatial planning consisting of the national spatial plan (RTRW Nasional), the provincial spatial plans (RTRW Propinsi) and the district spatial plans (RTRW Kabupaten and RTRW Kotamadya). All levels of government were required to make spatial plans for directing the development in their respective regions.

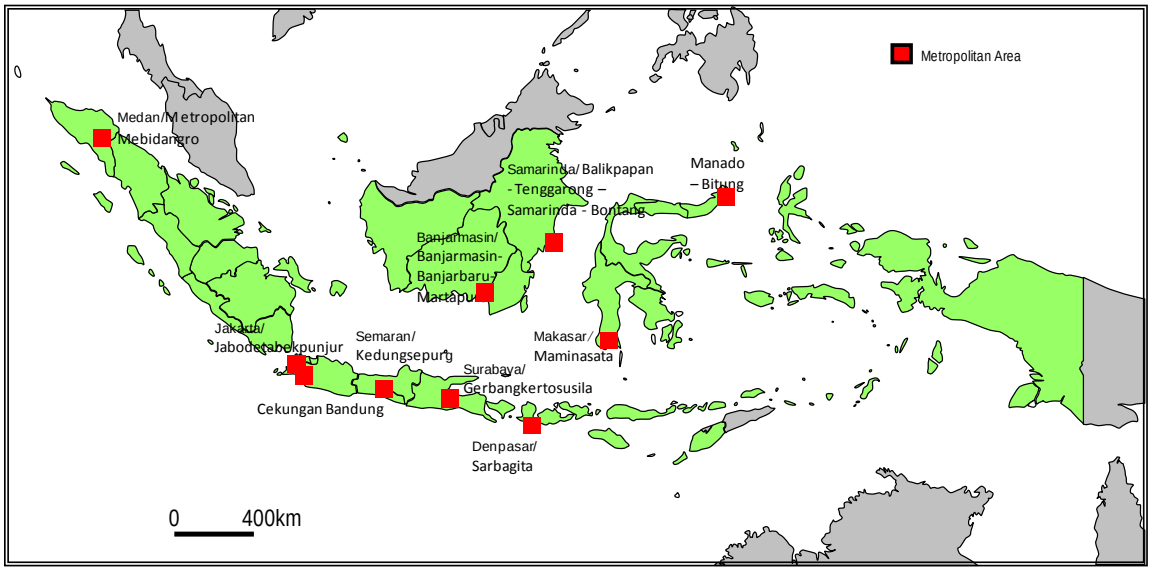
The current national spatial plan was enacted into Spatial Planning Law No. 26/2008 covering a period of 20 years. This is to be reviewed every five years and includes guidelines for effective and efficient planning processes. There is a strategic development framework for the purposes of creating a national land strategy. The organization responsible for drafting the plan was the National Spatial Planning Coordination Board, which was chaired by the Coordinating Ministry for Economic Affairs of Indonesia (CMEA).

Ten metropolitan areas and 32 national growth centers are defined in RTRWN and the economic corridors are supposed to connect the centers as shown Figures I.3.2 and I.3.3. Table I.3.3 shows the coverage of the ten metropolitan areas.



Source: JICA Survey Team based on National Spatial Plan

Figure I.3.2: National Growth Center



Source: JICA Survey Team based on RTRWN

Figure I.3.3: Metropolitan Area

Table I.3.3: Coverage of Ten Metropolitan Areas

No.	Metropolitan	Province	Coverage Regions	Capital	Extent of Area
1	Kawasan Perkotaan Metropolitan Mebidangro	North Sumatra	Medan-Binjai-Deli Serdang-Karo	Medan	3,471 km^2
2	Kawasan Perkotaan Jabodetabek punjur	DKI Jakarta - West Java - Banten	DKI Jakarta (Jakarta Pusat, West Jakarta, East Jakarta, South Jakarta, North Jakarta)	Jakarta	6,026 km^2
			West Java (Kab. Bekasi, Kota Bekasi, Kota Depok, Kab. Bogor, Kota Bogor, Kab. Cianjur)		-
			Banten (Kab. Tangerang, Kota Tangerang, Kab. Tangerang Selatan)		-

No.	Metropolitan	Province	Coverage Regions	Capital	Extent of Area
3	Kawasan Perkotaan Cekungan Bandung	West Java	Kota Bandung, Kab. Bandung dan sebagian wilayah Kab. Sumedang Kota Cimahi	Bandung	3,384 km^2
4	Kawasan Perkotaan Kedungsepur	Central Java	Semarang-Kendal-Demak-Ungaran-Purwodadi	Semarang	5,257 km^2
5	Kawasan Perkotaan Gerbangkertosusila	East Java	Gresik - Bangkalan - Mojokerto -Surabaya - Sidoarjo - Lamongan	Surabaya	-
6	Kawasan Perkotaan Sarbagita	Bali	Denpasar-Bangli-Gianyar-Tabanan	Denpasar	724 km^2
7	Kawasan Perkotaan Balikpapan - Tenggarong – Samarinda - Bontang	East Kalimantan	Balikpapan -Tenggarong –Samarinda - Bontang	Samarinda	-
8	Kawasan Perkotaan Manado – Bitung	North Sulawesi	Kota Manado, Kota Bitung, Kota Kotamubagu dan sebagian Kab. Minahasa	Manado	-
9	Kawasan Perkotaan Maminasata	South Sulawesi	Kota Makassar, Kab. Takalar, sebagian Kab. Gowa dan sebagian Kab. Maros	Makassar	2,462 km^2
10	Kawasan Perkotaan Banjarmasin-Banjarbaru-Martapura	South Kalimantan	Kota Banjarmasin, Kota Banjarbaru dan Kab. Barito Kuala	Banjarmasin	-

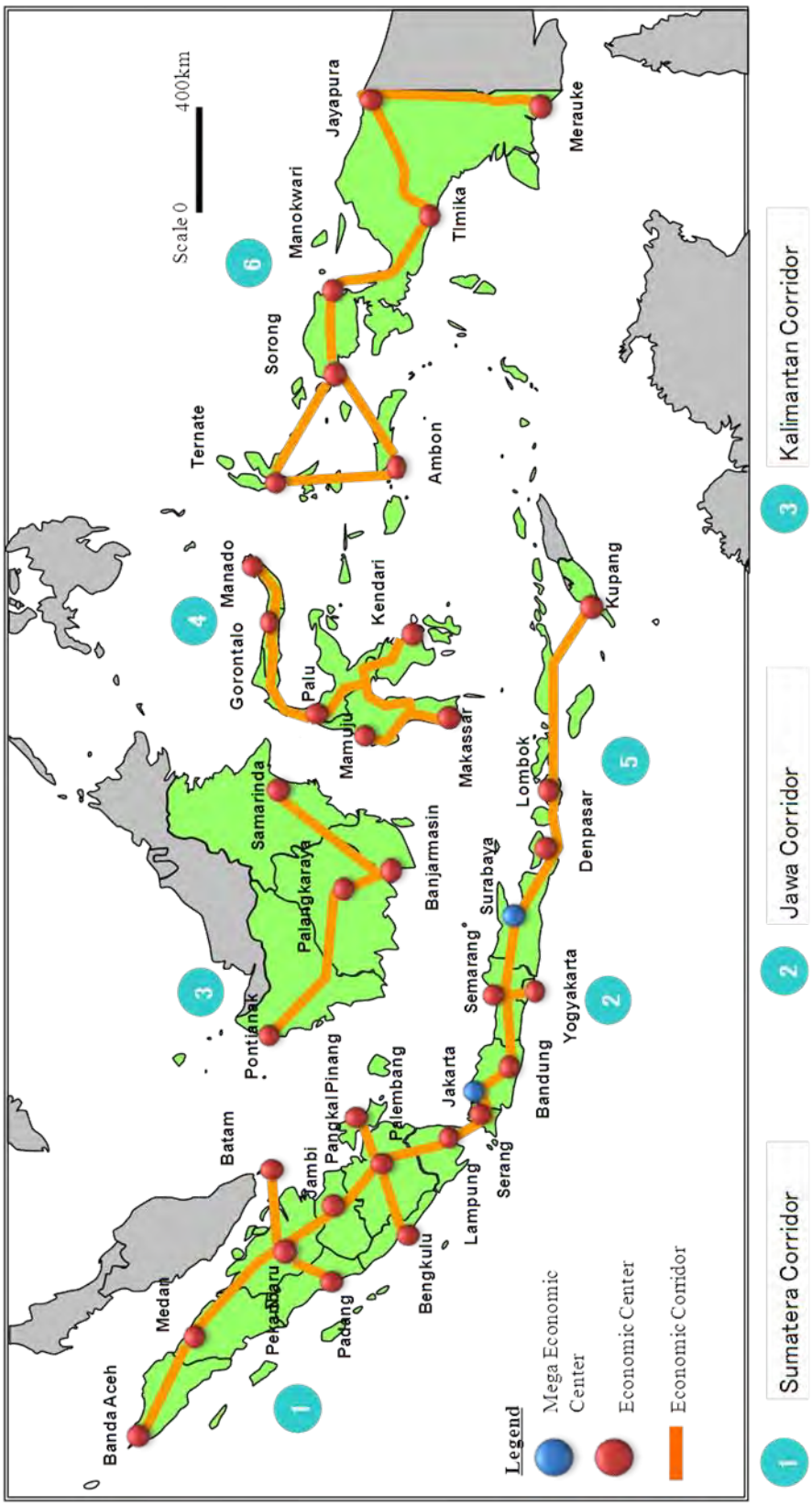
Source: National Spatial Plan

(3) Master Plan for Acceleration and Expansion of Indonesia Economic Development (MP3EI)

Indonesia Economic Development Corridors (IEDCs) are areas for targeted policies, development initiatives and infrastructure projects aimed at creating and empowering an integrated and competitive economic base to achieve sustainable development in Indonesia.

The corridor development master plan, named MP3EI, was released on June 2011. It consists of corridor development plans for six regions, which are; 1) Sumatra and North-West Java, 2) Northern Java, 3) East Java and Bali-Nusa Tenggara, 4) Kalimantan, 5) Sulawesi, and 6) Papua (both Papua Province and West Papua Province). Each region is developed rigorously and has its own strategic framework.

Sumatra and Java are connected by frequent sea traffic across the Sunda Strait and considered as one sequenced corridor line. Designated economical havens on each corridor are almost equally distributed on each island. Only three islands, Batam, Bintan, and Karimun, are designated as free trade zones (FTZs) in Indonesia as part of the Sijori Growth Triangle which includes Singapore, Johor in Malaysia, and Riau Islands.



Source: Master Plan for Acceleration and Expansion of Indonesia Economic Development

Figure I.3.4: Map of Master Plan for Acceleration and Expansion of Indonesia Economic Development (MP3EI)

I.4 Legal System

The laws and regulations shown in Table I.4.1 are the major legal bases for the development of SEZs. They are made up of three components, namely: (i) investment promotion, (ii) SEZ development itself, and (iii) income tax from the point of provision of fiscal incentives.

Table I.4.1: Current Laws and Regulations for SEZ Development

	Investment Promotion	SEZ Development	Income Tax/Incentives
Laws	Law No. 25/2007 on Investment	Law No. 39/2009 on Special Economic Zone	Law No. 7/1983 on Tax Law No. 36/2008 on Tax
Regulations on the concerning laws	(1) Presidential Regulation No. 76/2007 regarding the Criteria and Establishment of Closed Business Line and Open Business with Conditions in respect of Capital Investment (2) Presidential Regulation No. 36/2010 regarding List of Investment Sectors	(1) Presidential Regulation No. 2/2011 concerning Implementation of Special Economic Zones (2) Presidential Regulation No. 8/2010 concerning National Council of SEZ (3) Presidential Regulation No. 33/2010 concerning National Council and Regional Council for SEZ (4) Government Regulation No. 2/2011 regarding Implementation of SEZ	(1) Government Regulation No. 1/2007 concerning to Income Tax Facilities (2) Government Regulation No. 62/2008 concerning to Amendment of the Government Regulation No. 1/2007 (3) Government Regulation No. 94/2010 on Calculation of Non Taxable Income and Payment of Income Tax in Current Year (4) Ministerial Regulation No. 130/ PMK.011/2011 on Provision of Exemption or Reduction of Corporate Income Tax by MOF
Responsible government authority	The Investment Coordinating Board (BKPM)	Coordinating Ministry for Economic Affairs (CMEA)	Ministry of Finance (MOF)

Source: JICA Survey Team

(1) Law No. 25/2007 on Investment

This law came into effect in April 2007. The objective of this law is to create a national business environment conducive for investment in order to strengthen the competitiveness of the national economy. This law combined the Law on Foreign Investment and the Law on Domestic Investment as shown in the Table I.4.2.

Table I.4.2: The Recent Movement of Formulation of Law on Investment and Related Regulations

1967	Law on Foreign Investment (No. 1/1967)
1968	Law on Domestic Investment (No. 6/1968)
1970	Law on Foreign Investment concerning Amendment and Supplement to the Law Number: 1 of 1967 (No. 11/1970)
1970	Law on Domestic Investment concerning Amendment and Supplement to the Law Number: 6 of 1968 (No. 12/1970)
2007	Law on Investment (No. 25/2007) This Law includes all direct investment activities in all sectors, and provides equal treatment for both domestic and foreign investments.
2007	Presidential Regulation regarding the Criteria and Establishment of Closed Business Line and Open Business with Conditions in respect of Capital Investment (No.76/2007)
2010	Presidential Regulation regarding List of Investment Sectors (No. 36/2010)

Source: JICA Survey Team

1) General Provisions

This law defines investment as “any kind of financing activity by both domestic and foreign investors running a business in the country”. The law states the definition of terms such as “domestic investment,” “foreign investment,” “investor,” “capital,” and “one-stop integrated services”.

2) Treatment of Investment

The government shall provide the same treatment to any investor originating from any country making an investment in Indonesia pursuant to the rules of law. The government shall neither nationalize nor take over the ownership right of any investor, except through the law.

3) Business Fields

All business fields or types are open for investment, except for those declared as closed and open with certain conditions. Business fields closed to foreign investment are: (a) production of weapons, ammunition, explosive equipment, and warfare equipment; and (b) any business sector explicitly declared closed by law.

4) Investment Incentives (Facilities)

Government is to provide incentives to all investors. Investment incentives may be given to investors that: (a) expand its business; and (b) make new investment under one of the following criteria: (i) will employ plenty of workers; (ii) belonging to high priority scale; (iii) belonging to infrastructure development; (iv) pioneering new industry; (v) domiciling in remote areas, deserted areas, border areas, etc.

Incentives given to investors may be in the form of: (a) net income tax deduction up to a certain level of investment made within a certain period; (b) import duty holiday or reduction for imported capital goods, machinery, or equipment domestically unavailable for production; (c) import duty holiday or reduction for raw materials or support materials for production within a certain period and with certain conditions; (d) value added tax holiday or postponement for imported capital goods or machinery or equipment domestically unavailable for production within a certain period; (e) accelerated depreciation or amortization; and (f) property tax reduction, especially for certain business fields in a certain region, area, or zone.

Further provisions on fiscal incentives shall be stipulated through the regulations of the Ministry of Finance. In addition, the Government of Indonesia will provide licensing convenience to investors in obtaining (a) land rights, (b) immigration service facility, and (c) import licensing facility.

5) Coordination and Implementation of Investment Policy

Government is to coordinate investment policy among government agencies, between any government agency and the central bank (Bank Indonesia), between the central and regional governments, and also among regional governments themselves. Coordination for the

implementation of investment shall be done by the Investment Coordinating Board, which shall be led by a chairman who will report directly to the President of Indonesia.

6) Organization of Investment

The central government and/or regional governments shall provide business certainty and security in the implementation of investment. Regional governments are to organize investment affairs under their authority, except for those organized by the central government. Regional governments are to organize investment affairs under their authority based on the criteria of externality, accountability, and efficiency. On the other hand, the central government is to organize cross-province investment. Regional governments are to organize cross-regency investment.

7) Special Economic Zone

SEZs may be specified and developed to accelerate economic development in certain regions whose nature is essential for national economic development as well as maintaining balance of regional progress. The government shall have the authority to stipulate a separate investment policy in such special economic zones. Provisions on special economic zones shall be governed by law.

(2) Law No.39/2009 on Special Economic Zone

This law came into effect on October 2009. The objective of this law is to accelerate economic development in specific regions and maintain regional balance in the national economy through the development of SEZ.

1) General Provisions

The law defines SEZ as “a zone with specific borders that is established to carry out economic functions”. The law stipulates the establishment of the National Council for SEZ in the national level and the Regional Council in the provincial level.

2) Form and Criteria

SEZs can contain several specific zones within its boundaries such as (a) export processing, (b) logistics, (c) industry, (d) research and development (technology advancement), (e) tourism, (f) energy, and (g) other economic activities.

On the other hand, the location of any proposed SEZ shall meet such criteria that: (a) it shall correspond with the Spatial Planning and shall not have any potential to disturb protected areas; (b) the relevant provincial, regency, or municipal government shall support the SEZ; (c) it shall be located in a position close to international trade and logistics routes, international shipping routes or in a preeminent resource potential area; and (d) it shall have clear borders.

3) Establishment of SEZ

Establishment of SEZ shall be proposed to the National Council by: (a) business entity or company[1]; (b) regency/municipal government; or (c) provincial government. The National Council may approve or reject a proposal for SEZ establishment after carefully reviewing the proposal. If the National Council approves the establishment of SEZ, the National Council may submit recommendations to the President of Indonesia for the establishment of SEZ.

4) Development and Operation of SEZ

Provincial, regency, and municipal governments shall determine the business entity that will establish the SEZ in accordance with existing laws and regulations. The determination shall be implemented by: (a) the provincial government if the SEZ is located in cross-border of regency or municipality; and (b) by the regency or municipal government if the SEZ is located in one regency or municipality. SEZ shall be ready for operation within a maximum of three (3) years after its determination.

Funding for construction and maintenance of infrastructure in SEZ may come from: (a) the central government and/or regional government; (b) private sector; (c) partnership between the central government, regional government, and private sector; or (d) other sources in accordance with existing laws and regulations.

5) Institution

On implementing SEZ development, the National Council and the Regional Council shall be established. The National Council shall consist of ministers and heads of non-ministerial government institutions. On the other hand, the Regional Council shall consist of representatives of the central and regional governments.

The National Council shall be responsible for: (a) preparing the National Master Plan of SEZ; (b) stipulating of the general policy and strategic steps to accelerate establishment and development of SEZ; and (c) formulating standards of infrastructure and minimum service in SEZ.

On the other hand, the Regional Council shall be responsible for: (a) implementing the general policy which has been stipulated by the National Council to manage and develop SEZ in the corresponding area; (b) establishing an administrator in each SEZ; (c) and supervising, controlling, evaluating, and coordinating the implementation of tasks of the SEZ Administrator in the provision of a one-stop integrated service system and operation of SEZ.

The SEZ Administrator shall be responsible for (a) granting business license and other licenses required for investors that establish and operate businesses in SEZ; (b) supervising and controlling SEZ operation; and (c) submitting periodic and incidental SEZ operational reports to the Regional

[1] A business entity is defined as a state-owned company, a local-owned company, cooperative, private company, or a joint venture of them.

Council. Operation of business activities in SEZ shall be managed by a business entity designated as the SEZ Administrator.

6) Investment Incentives (Facilities)

Investment incentives on income tax are stipulated in Article 30 of Law No.39/2009, although details shall be shown in a new regulation. Other articles in Chapter VI of this law states that the provisions of tax incentives on import duties, land and building tax, value added tax (VAT), sales tax on luxury goods, and regional tax, as well as non-fiscal incentives such as land right.

7) Labor

License to employ foreign workers as directors or commissioners shall be granted. In SEZ, a Special Tripartite Partnership Body and Wage Board shall be established by the governor with the following tasks: (a) to communicate and consult on labor affairs; (b) to make early detection for potential labor issues; (c) to provide suggestions and considerations on problem settlement measures; and (d) to discuss wage issues.

(3) Government Regulation No.2/2011 Regarding Implementation of SEZ

In accordance with SEZ Law, Government Regulation No. 2/2011 regarding the Implementation of SEZ has been prepared to clarify the procedures for the establishment, implementation and management of SEZ.

1) General Provisions

This regulation defines the terms such as SEZ, National Council, Regional Council, Administrator, and Business Entity. The steps in the implementation of SEZ are as follows: (a) proposal; (b) stipulation; (c) development; (d) management; and (e) evaluation of SEZ management.

2) SEZ Proposal and Stipulation

The proposal for an SEZ can come from any business entity, regency/city government, provincial government, ministry/non-ministerial government agency to the National Council. The Regulation explains the contents and conditions of the proposals by the business entity, city or regency government, provincial government, ministerial or non-ministerial government agency. SEZ approval process includes the regulation on the assessment of proposal for the establishment of SEZ, approval or disapproval of the SEZ proposal, and recommendation for establishment of SEZ.

3) SEZ Development

SEZ development shall cover the following activities: (a) land acquisition for SEZ location; and (b) implementation of physical development of SEZ. SEZ development shall be financed by: (a) state budget and/or local budget; (b) business entity; (c) cooperation between central government, provincial, and regency/city governments and business entities; and/or (d) other legal sources.

4) SEZ Management

SEZ management shall be conducted by the (a) administrator and (b) managing business entity.

The SEZ Administrator shall be responsible for: (a) issuing business license and other permits necessary for investors to establish and operate the business in SEZ; (b) supervising and controlling the operation of SEZ which is conducted by SEZ Managing Business Entity; and (c) submitting periodical and incidental reports on SEZ operation to the Regional Council.

One Stop Services (PTSP) in SEZ is organized by the administrator. The SEZ Administrator shall receive Authority Delegation from the minister or head of non-ministerial government agency, governor, regent or mayor that has the authority in license and amenities. On the other hand, the SEZ Managing Business Entity shall have the duty to organize the SEZ business activities.

5) Evaluation of SEZ Management

Based on the report by the Administrator, the Regional Council shall evaluate the management of SEZ. The results of the evaluation shall be submitted to the Administrator and the National Council.

(4) Government Regulation No. 62/2008 regarding Income Tax Incentive on Investment and Ministerial Regulation (MPF) No. 130/ PMK.011/2011 Regarding Provision of Exemption or Reduction of Corporate Income Tax

According to Government Regulation No. 62/2008, the following incentives will be provided for investors corresponding to the 23 specific industrial sectors and investors located in the designated regions under some conditions such as: (a) new investment in the industrial, economic or bonded zones; (b) employment of more than 500 persons for 5 years, and so on:

i) For investment allowance, corporate income tax base is deducted by 30% of investment realization. The total deduction of 30% will be given in six years (5% deduction per annum).

ii) Accelerated amortization and depreciation will be applicable up to 10 years.

iii) Reduction from 20% to 10% income tax charged for overseas taxpayers on dividend bill or lower tariff according to the Double Taxation Agreement.

iv) Loss compensation will be extended from 5 to 10 years.

In addition, the Ministry of Finance has issued Ministerial Regulation No. 130/ PMK. 011/2011 regarding the provision of exemption or reduction of corporate income tax for pioneer industries in August 2011. This regulation will be in effect for three (3) years (August 2011 to August 2014).

The pioneer industries are defined as: (a) basic metal industries, (b) petroleum refinery and basic chemical or organic with sources from petroleum and natural gas, (c) machinery, (d) industries in the renewable resources and energy sector, and (e) telecommunication equipment industries.

If companies will eventually have a minimum investment value of Rp1 trillion in compliance with the required criteria and will be recognized as pioneer industries, the Ministry of Finance shall grant

tax holidays or income tax (PPh) exemption within a period of 5 to10 years followed by a two (2) year tax reduction of 50% from the start of company operation.

(5) Laws and Regulations on Industrial Economic Zones such as Industrial Zone, Bonded Area (KB), KAPET and FTZ

Table I.4.3 shows the legal basis, definition, function and other aspects of Industrial Zone, Bonded Area (KB), Integrated Economic Development Area (KAPET), FTZ and SEZ. The legal basis is different from each other, although roles and functions of these areas are partially overlapping. According to SEZ Law, only FTZ can be transformed to SEZ.

Table I.4.3: Legal Basis for the Existing Economic Zones Similar to SEZ

	Industrial Zone/ Industrial Estate	Bonded Area	Integrated Economic Development Zone	Free Trade Zone	Special Economic Zone
Legal Basis	Law No. 5/ 1984 Article 20 Government Regulation No. 24/ 2009 regarding Industrial Estate	Law No. 17/ 2006 Article 1	Presidential Decree No. 89/ 1996 Presidential Decree No. 150/ 2000 Government Regulation No. 20/ 2000	Law No. 36/2000 Law No. 44/2007 Government Regulation No. 46 - No. 48/ 2007, and other acts	Law No. 25/ 2007 Law No. 39/2009 Government Regulation No. 2/ 2011
Definition	Industrial Zone/ Estate: the centralized area for industrial activities with supporting facilities and infrastructure which is developed and managed by Industrial Estate Company that has the permit for Industrial Estate Business.	Bonded Area (KB) is the building, place, or area within a certain boundary where the business activities are performed.	Integrated Economic Development Zone (KAPET) is the geographical area with acceptable certain boundaries having the potential for fast growth and/or have prominent sector.	Area free from import duties, sales tax for luxury goods and levies.	Area with certain boundaries for implementation of economic functions and given the firm incentives.
Function	Development of Industrial Zone/ Estate is aiming for: (1) control of spatial utilization, (2) intensification of efforts for industrial development, (3) accelerate the industrial growth in the region; and (4) giving location certainty for infrastructure planning and development.	KB is aiming for business activities in processing industrial goods and material, design activity, engineering, sorting, initial inspection, final inspection and packing of imported goods and materials especially for export purposes.	Encourage the establishment of an area to play the role as prime engines for regional development.	A place to develop the business in the field of trading, services, industry, mining and energy, transportation, maritime and fishery, post and telecomm, banking, insurance, tourism and other sectors.	Developed by preparing an area with prominent geo-economical and geostrategic advantages. Its function is to accommodate activities on: industry, energy, R&D, export processing, logistics, tourism, other economic activities with high economic value and high international competitiveness.

	Industrial Zone/ Industrial Estate	Bonded Area	Integrated Economic Development Zone	Free Trade Zone	Special Economic Zone
Forms	Industrial Activities	Activity in processing industry of goods and materials, design activities, engineering, sorting, initial inspection, final inspection, and packing of imported goods and materials or goods from other custom areas in Indonesia.		Activity in manufacturing, design, engineering, sorting, initial inspection, final inspection, packing, re-packaging of raw materials both local and imported, service, repair or official reconditioning, and quality improvement.	Consisting of a single or multiple zones: processing, export, logistics, industry, technology development, tourism, energy, economy, others. In the SEZ, support facilities and housing for labor can be constructed.
Establish-ment	(1) Minimum covering area of Industrial Estate is fifty (50) hectares in one plot (2) Total area of a certain Industrial Zone for Micro, Small and Medium Enterprises minimum is 5 (five) hectares in one plot. Industrial Estate Companies are legal entities under Indonesian Law.	Determination of an area or place as KB and approval for Implementation of KB shall be made by the issuance of a decree from the Minister of Finance.	Proposed to the President by the concerned Governor	Free Trade and Free Port Zone (FTZ) is under the legal authority of the Unitary State of the Republic of Indonesia and established by Government Regulation. The effective period of an FTZ is 70 years from the date of establishment as an FTZ.	Proposed to National Council by: a) Company b) Regency/city government c) Provincial government under a mechanism regulated under the Law on SEZ. Establishment of SEZ is stipulated under government regulations.
Licensing/ Permit	(1) Environmental Permits is a prerequisite for obtaining a business and/or licensed activity (2) Principle Approval (3) Location Permit (4) Business Permit for Industrial Estate (5) Building Right (HGB)	Business Permit and other business permits shall be issued by BKPM or Regional BKPM	Business permit or other permits shall be delegated to the Governor or assigned to the Regent/Mayor in conformity with Regional One Stop Services (PTSP).	Business permits and other permits shall be issued by Operation Agency through the delegation of authority according to the existing legislation.	Provision of business permit and other permits required by stakeholders in SEZ shall be implemented by SEZ Administrator through PTSP.
Financing	Investor and Industrial Estate Company	Source of financing for implementation of Bonded Area can be from: a) Domestic Capital Investment (PMDN) b) Foreign Investment (PMA), either partly or wholly capital owned by foreign shareholders c) Non - PMA/PMDN which is in a Company Limited (PT) form d) Cooperative in the form of a legal body; or e) Foundation	Management and development in KAPET shall be borne by National Budget (APBN), Provincial APBD, APBD of regency/city, and other legal fund sources in conformity with existing legislations.	Fund sources for Operational Agency can come from: a) fund source from self- management, b) APBN, APBD, other sources which are not violating the Law FTZ can receive loans from domestic and foreign sources with the approval of the regional council or the provincial house through the central government'.	Government and/or regional government Other sources that are not violating the Law

	Industrial Zone/ Industrial Estate	Bonded Area	Integrated Economic Development Zone	Free Trade Zone	Special Economic Zone
Incentives	Shall be given according to PP 1 of 2007 and PP 62 of 2008 Providing ready to build land lots, standard factory buildings and special facilities such as employee housing, office space, conference room, fiber optic telecommunication cables, special transport services	Shall be given according to PP 1 of 2007 and PP 62 of 2008	Shall be given according to PP 1 of 2007 and PP 62 of 2008	Shall be given according to PP 1 of 2007 and PP 62 of 2008	Can be given additional income tax (PPh) facilities according to zone characteristics. Granting of facilities according to legislation

Source: JICA Survey Team based on information from the Investment Coordinating Board

CHAPTER II: ASSESSMENT OF INDONESIAN COMPETITIVENESS AND POTENTIAL AS AN INVESTMENT DESTINATION

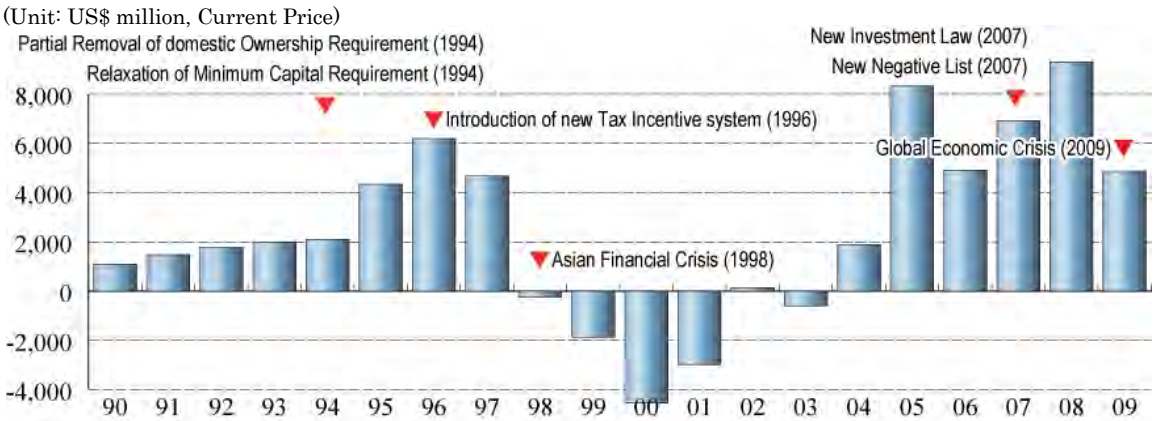
II.1 Trend of Net FDI Inflow to Indonesia

(1) Historical Change in Net FDI

Foreign Direct Investment (FDI) is a key pillar of sustainable economic growth and offers positive direct and indirect impacts such as employment creation, productivity gains, export promotion and knowledge transfers.

In the 1990s, the Government of Indonesia introduced a number of deregulation measures to liberalize its domestic market as well as to provide several fiscal incentives to accelerate FDI inflow in the manufacturing and services sectors to reduce the country's dependency on the primary sector. Since then, the secondary and tertiary sectors have attracted the bulk of foreign investment in Indonesia. FDI inflow to the country has increased favorably during the 1990s owing to the introduction of various deregulation packages to promote FDI. These deregulation packages include partial removal of domestic ownership requirement in 1994, relaxation of minimum capital requirement in 1994, and introduction of new tax incentive system in 1996.

Figure II.1.1 shows the historical change in the net FDI inflow in Indonesia.



Source: World Bank Database

Figure II.1.1: Historical Change in the Net FDI Inflow to Indonesia

The Asian economic and financial crisis in 1997-1998 placed Indonesia into a deep economic recession. The Indonesian economy started to recover in 1999, while the country experienced continuous net FDI outflows, which was also caused by uncertainties arising from the collapse of the

Suharto administration in 1998[2], and subsequent rapid and excessive decentralization process[3] commenced in 1999. As a result, the country experienced negative net FDI inflow from 1998 to 2003, where FDI outflow exceeded FDI inflow.

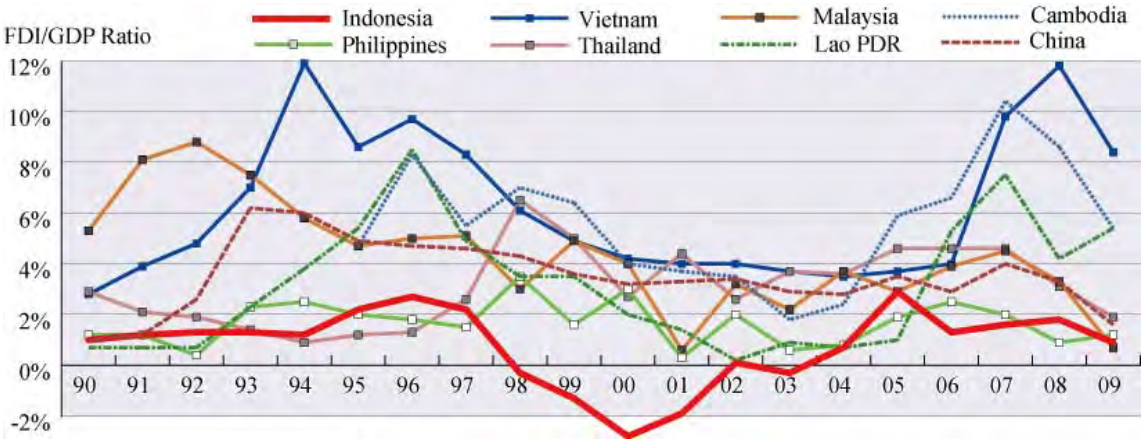
Since 2004, FDI inflow to Indonesia has been recovering along with the favorable economic development in the country. In recent years, FDI inflow was exceeding pre-financial crisis era. FDI inflow continued to increase until 2008 and then dropped in 2009, which was partially caused by the worldwide downturn in demand due to the global economic crisis.

(2) Share of FDI in the Country's GDP

Figure II.1.2 illustrates the historical change in the share of FDI in GDP in Indonesia and other major Asian countries.

The share of net FDI in Indonesia has been increasing favorably in recent years, ranging from -3% to +3% for the past two decades. Recent values are merely at the same level as in the pre-crisis era.

On the other hand, Figure II.1.2 illustrates that Indonesia's share of FDI in GDP is obviously low compared to other ASEAN countries, such as Cambodia, Laos, Vietnam, China and Thailand.



Source: World Bank Database

Figure II.1.2: Share of FDI in GDP Ratio in Asian Countries

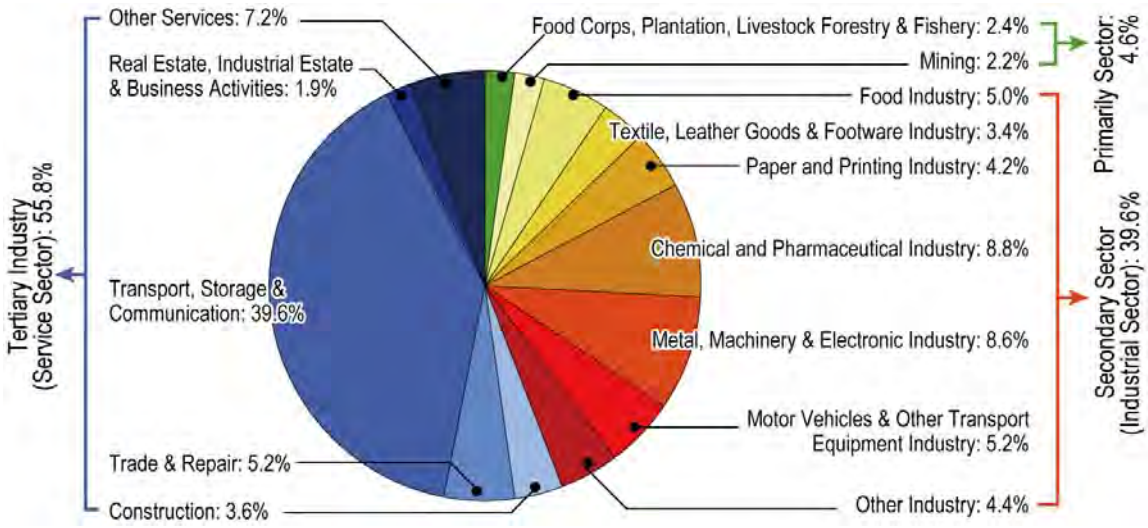
(3) Sector-wise FDI Data

Recently (from 2006 to 2009), FDI projects in Indonesia are evidently concentrated in several sectors, including transportation and communications (39.6%), chemical and pharmaceutical industries (8.8%), metal, machinery and electronic industries (8.6%), motor vehicles and other transport equipment industries (5.2%), and food industry (5.0%), as shown in Figure II.1.3.

[2] World Investment Report 2002: Transnational Corporations and Export Competitiveness (United Nations, 2002)

[3] BKPM's FDI Strategy Paper 2010 mentioned reasons of negative net FDI as follows; *"The spasm of turmoil that accompanied the transition from a long‐standing centralized system to vibrant democratic rule, the jurisdictional uncertainties that has arisen from an unprecedented devolution of power to regional governments and the uneasy feeling towards foreign investors (as gleaned from the clauses inserted into sectoral regulations and the high profile disputes involving multinational enterprises) have all conspired to discourage FDI"*.

FDI in Indonesia has obviously been going towards the manufacturing and services sectors. Within the services sector, transport, storage and communications were the most important targets for FDI, accounting for almost 40% of the total FDI during 2006-2009. The increasing importance of these sub-sectors can be explained by the numerous merger and acquisition (M&A) projects and large-scale privatization projects by foreign companies that took place soon after the Asian crisis (see Table II.1.1 for recent M&A deals of foreign firms). Two major projects took place from 2007 to 2009, namely: i) Qtel of Qatar acquired a 65% stake in Indosat (the most popular Indonesian telephone company) for US$2,683 million, and ii) TM International of Malaysia and ETISALAT of UAE acquired 40.2% of Excelcomindo Pratama for US$992 million.



Source: Investment Coordinating Board

Figure II.1.3: Realized FDI by Sector from 2006-2009

From 2006 to 2009, manufacturing industries shared another 40% of FDI in the country. Within the manufacturing sector, three industries accounted for the bulk of total inward FDI stock in all sectors: chemical and pharmaceutical industry (8.8%), metal machinery and electronics industry (8.6%), and motor vehicles and other transport equipment industry (5.2%). Overseas investors are keener in the above-mentioned capital-intensive industries. They also made substantial investment in labor-intensive industries, such as food (5.0%) and textile (3.4%). The recent increase in the relative importance of manufacturing has been due to large green-field investments in these sectors (see Table II.1.1).

Large scale M&A project for the manufacturing sector includes: i) British American Tobacco PLC of the United Kingdom acquired the cigarette company of Bentoel Intl Investama Tbk PT for US$645 million in 2009; and ii) Taisho Pharmaceutical Co., Ltd of Japan acquired the pharmaceutical company of Bristol-Myers Squibb Indonesia for US$310 million in 2009.

On the other hand, the primary sector absorbed only 4.6% of the total FDI during 2005-2009. While the mining sub-sector, including coal, gold, oil, and natural gas industries, received merely 2.2% of

the total FDI, the sub-sector remains a key FDI sector. In 2007, Japanese and Kuwaiti companies acquired gas fields for investment amounting to US$360 million and US$330 million, respectively.

Recently, FDI inflow for agriculture in the country is marginal, which accounted for only 2.0% of the total FDI. Within the agriculture sub-sector, food crops and plantations together accounted for 83% of the total inward FDI of the sub-sector. Among the food crops and plantations sub-sector, palm oil is deemed the most important industry for FDI, driven by a growing world demand for Indonesian exports of crude palm oil (CPO).

Table II.1.1: Major M&A Deals, by Inward Investing Firm, 2007-2009

Acquiring company	Source Economy	Target Company	Target industry	Share Acquired (%)	Transaction Value (US$100 million)
2007					
Investor Group	Japan	BP PLC-Kangean Gas Block	Crude petroleum and natural gas	50.0	360.0
Tata Power Co Ltd	India	Kaltim Prima Coal PT	Bituminous coal and lignite surface mining	30.0	1,300.0
Althem BV	Virgin Islands	Natrindo Telepon Seluler PT	Radiotelephone communications	44.0	123.9
TM International Sdn Bhdi	Malaysia	Excelcomindo Pratama Tbk PT	Radiotelephone communications	7.4	113.0
Investor Group	Singapore	Lon Sum	Forest nurseries and gathering of forest products	56.4	570.2
KUFPEC	Kwait	Ujung Pangkah Gas Field	Crude petroleum and natural gas		330.0
ETISALAT	UAE	Excelcomindo Pratama Tbk PT	Radiotelephone communications	16.0	438.0
2008					
Temasek Holdings Ltd	Singapore	Sorak Finl Holdings Pte Ltd	Investors, nec	20.0	147.7
Titan Intl Corp Sdn Bhd	Malaysia	Fatrapolindo Nusa Industri Tbk	Unsupported plastics film and sheet	92.6	195.7
TPG Capital LP	USA	Bank BTPN PT	Banks	71.6	195.0
TM International Sdn Bhd	Malaysia	Excelcomindo Pratama Tbk PT	Radiotelephone communications	16.8	440.8
Maybank	Malaysia	Bank International Indonesia	Banks	25.3	670.0
Qtel	Qatar	Indosat	Tele-communications, except radio-telephone	40.8	1,800.0
UOB	Singapore	Bank UOB Buana Tbk PT	Banks	37.9	449.8
Lotte Shopping Co Ltd	Rep. Korea	Makro Indonesia PT	Grocery stores	16.3	357.9
Avenue Luxembourg Sarl	Luxem-Bourg	Bank Internasional Indonesia	Banks	100.0	290.2
2009					
ANZ Banking Group Ltd	Australia	Panin Bank	Banks	8.4	114.0
Qtel	Qatar	Indosat	Tele-communications, except radio-telephone	24.4	883.7
HSBC Asia Pac Hldg (UK)Ltd	UK	Bank Ekonomi Raharja Tbk PT	Banks	88.9	607.5
British American Tobacco PLC	UK	Bentoel Intl Investama Tbk PT	Cigarettes	85.1	644.9
Taisho Pharmaceutical Co Ltd	Japan	Bristol-Myers Squibb Indonesia	Biological products, except diagnostic substances	98.0	310.0

Source: Thomson ONE Banker. Thomson Reuters.

Table II.1.2: Major Greenfield Projects by Inward FDI, 2007-2009 (1/2)

Investing Company	Source Economy	Investment (US$ million)	Sector	Business Activity
2009				
Arrow Energy	Australia	(1,051)	Coal, oil and natural gas	Extraction
Trimex Group	UAE	2,000	Metals	Manufacturing
Hess Corporation	USA	1,000	Coal, oil and natural gas	Extraction
Trimex Group	UAE	1,000	Coal, oil and natural gas	Extraction
Energy World	Australia	590	Coal, oil and natural gas	Manufacturing
Samsung	Rep. of Korea	250	Chemicals	Manufacturing
Mitsubishi Corporation	Japan	2,300	Metals	Manufacturing
Banpu	Thailand	(1,808)	Coal, oil and natural gas	Electricity
Lotte Group	Rep. of Korea	402	Food and tobacco	Retail
SASOL	South Africa	2,000	Coal, oil and natural gas	Manufacturing

Source: fDi Intelligence, a service from the Financial Times Ltd.

Note: Figures in ( ) are based on estimates

Table II.1.3: Major Greenfield Projects, by Inward FDI, 2007-2009 (2/2)

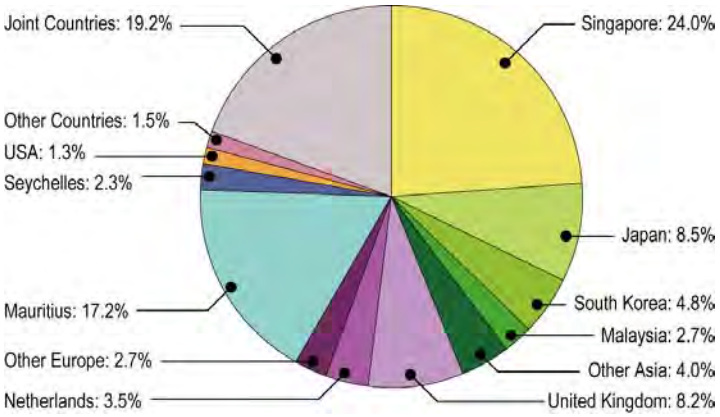
Investing Company	Source Economy	Investment (US$ million)	Sector	Business Activity
2008				
National Aluminum Company	India	1,500	Coal, oil & natural gas	Electricity
EGAT	Thailand	(1,313)	Coal, oil & natural gas	Electricity
Islamic Development Bank	Saudi Arabia	1,020	Warehousing & storage	Logistics, distribution & Transportation
Korea Electric Power (KEPCO)	Rep. of Korea	1,000	Coal, oil & natural gas	Electricity
Dubai World	UAE	850	Real estate	Construction
Chevron Corporation	USA	(7,520)	Coal, oil & natural gas	Extraction
Tokyo Electric Power (TEPCO)	Japan	1,400	Coal, oil & natural gas	Electricity
Emaar Properties		410	Hotels & tourism	Construction
Lafarge	France	(1,313)	Coal, oil & natural gas	Electricity
Jindal Organization	India	350	Metals	Manufacturing
Transpower Link	Malaysia	2,170	Coal, oil & natural gas	Electricity
International Paper	United States	2,000	Paper, print & package	Manufacturing
Energy World	Australia	(1,313)	Coal, oil & natural gas	Electricity
2007				
BHP Billiton	Australia	1,000	Metals	Manufacturing
Nanjing Iron and Steel	China	250	Metals	Manufacturing
Renault	France	300	Automotive OEM	Manufacturing
National Iranian Oil Engineering and Construction (NIOEC)	Iran	5.600	Coal, oil & natural gas	Manufacturing
Genting	Malaysia	1,500	Alternative/Renewable Energy	Electricity

Source: fDi Intelligence, a service from the Financial Times Ltd.

Note: Figures in ( ) are based on estimates

(4) Origin Country-wise FDI

Asia has been the major source region of FDI in Indonesia. During 2006-2009, about 44% of Indonesia's inward FDI originated from Asian countries. FDI inflows to Indonesia from the region increased from US$2.7 billion in 2006 to US$6.0 billion in 2009. From 2006 to 2009, Singapore (24.0%) and Malaysia (2.7%) are the main Southeast Asian investors in Indonesia, with investments in various sectors, including manufacturing, plantations and real estate.



Source: Investment Coordinating Board

Figure II.1.4: Realized FDI by Country from 2006 - 2009

From the rest of Asia, Japan (8.5%, 2006-2009) remains the key investor in Indonesia, mainly focusing on manufacturing, including automotive, metal, and electronics industries. Other than manufacturing, Japan also invests in natural resource extraction and electricity. Over the same period, Japan is followed by the Republic of Korea (4.8%), Taiwan (1.5%), Hong Kong (1.2%), and China (0.6%).

Although Australia is Indonesia's direct neighbor, its investments in Indonesia have always been small, its share in Indonesia's FDI was only 0.8% during 2006-2009.

Mauritius and Seychelles accounted for 17.2% and 2.3% of FDI in Indonesia. Since these countries offer tax havens, some international investors incorporate their firms in these offshore countries, while operations are carried out in Indonesia.

II.2 Competitiveness of Investment Climate of Indonesia

Indonesia is endowed with abundant natural resources, a large and young demographic base, geostrategic location, and massive and rapidly growing domestic market. Taking economic scale into consideration, FDI inflow to the country is smaller than to other ASEAN countries.

The relatively low FDI inflow to Indonesia is due to i) low tax incentives for investors, ii) insufficient basic infrastructure, and iii) government bureaucracy and corruption.

Low Tax Incentives for Investors	Inadequate Supply of Infrastructure	Corruption & Insufficient Bureaucracy
· Insufficient fiscal and non- fiscal incentives for investors in Industrial Zones	· Insufficient supply of transport infrastructure and poor logistics performance · Unstable electricity supply	· Opaque application of law and regulation · Corruption further aggravated after the decentralization

Source: JICA Survey Team

Figure II.2.1: Major Constraints on Investment in Indonesia

Details of these obstacles are explained as follows:

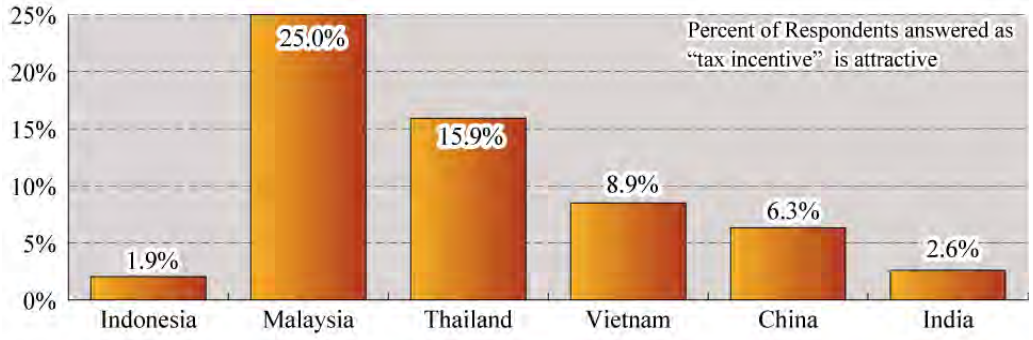
(1) Low Tax Incentives for Investors

Tax incentives given to investors in Indonesia are generally insufficient compared with those in other countries. Review of tax incentive given to investors doing business in Indonesia and comparative analysis with other countries were made in detail in section III.2.1 in Part A of this report. This section reviews only the perception of investors towards tax incentives in Indonesia by reviewing the existing "Survey on Japanese Manufacturers' Overseas Business Operations 2010" by Japan Bank for International Cooperation (JBIC). This survey sought to identify current trends and future outlook of overseas business operations of Japanese manufacturing companies engaged in business operations abroad.

Survey results show that China continue to be the preferred foreign destination of investment, given that about 80% of the respondents have production bases in that country. Japanese firms acknowledged the importance of India, Vietnam and Thailand (second, third and fourth in the survey's ranking) for overseas investments as well. On the other hand, Indonesia was ranked sixth among the 20 countries surveyed, which was an improvement from being eighth in the 2009 survey.

The survey results show that Japanese firms gave high evaluation marks on Indonesia's "growth potential of the domestic market" and "reasonable labor force", while "tax incentives" in the country was not recognized to be attractive.

According to the survey results, only 1.9% of respondents answer "taxation incentive" in Indonesia is attractive, which is considerably lower than other competitor (Malaysia: 25.0%, Thailand: 15.9%, Vietnam: 8.0% and China: 6.3%), as shown in Figure II.2.2



Source: Overseas Business Operations by Japanese Manufacturing Companies: Results of 2010 Survey, JBIC

Figure II.2.2: Percent of Respondents Answered "Tax Incentive" is Attractive

(2) Inadequate Supply of Infrastructure (Poor Logistics Performance)

The above-mentioned JBIC survey in 2009 revealed that Japanese firms recognized "insufficient infrastructure" as one of the biggest obstacles of investing in Indonesia. Around 35.4% of Japanese firms answered "insufficient infrastructure" as constraints, which is comparable with India (46.9%) and Vietnam (33.8%); but is worse than China (14.6%), Thailand (3.8%), and Malaysia (4.2%). Among the firms that answered infrastructure in Indonesia is insufficient, about 81% and 63% of

respondents recognized road and electric power supply as problems, respectively (water supply: 44%, communication: 19%, railway: 19%, port 13%, and airport: 6%).

According to the 2010 World Competitiveness Report by the World Economic Forum, "inadequate supply of infrastructure" was ranked as the third biggest obstructive factor in investing in Indonesia. The survey also revealed that the firm's evaluation on infrastructure in Indonesia is quite low (see Table II.2.1).

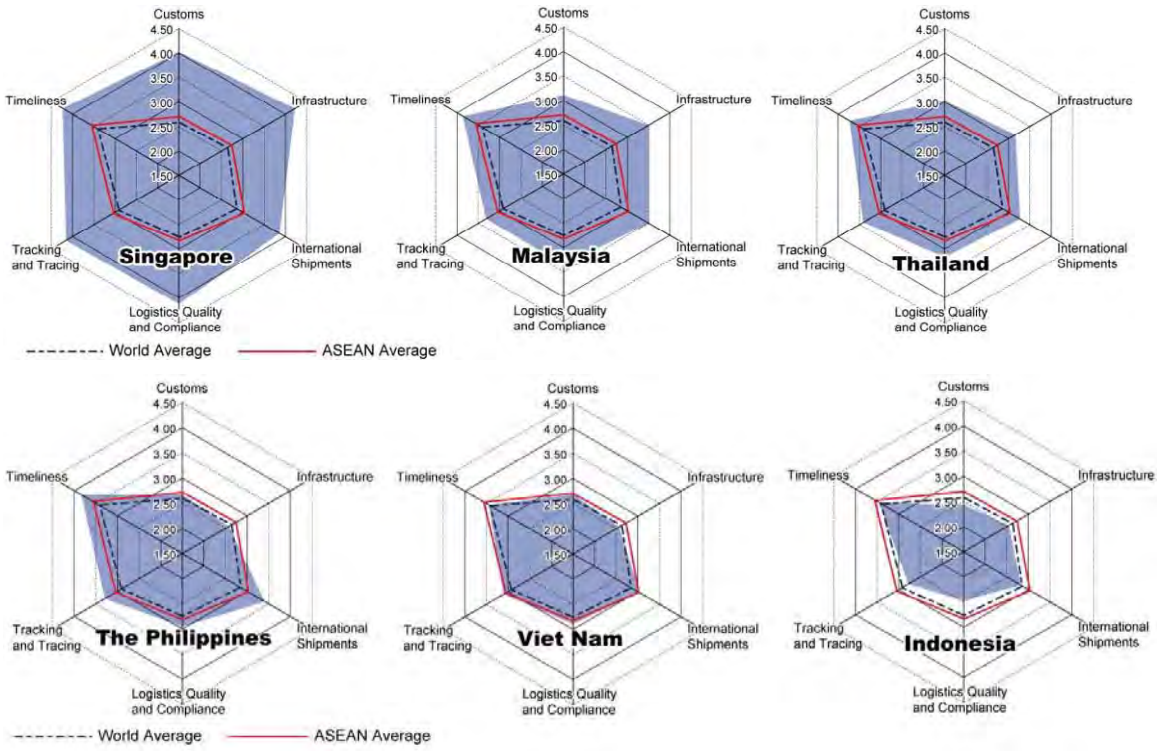
Table II.2.1: Infrastructure Quality Ranking (out of 133 Countries)

	Roads	Railroads	Ports	Air Transport	Electricity Supply	Telephone
China	50	27	61	80	61	49
India	89	20	90	65	106	103
Indonesia	94	60	95	68	96	79
Malaysia	24	19	19	27	39	72
Philippines	104	92	112	100	87	102
Thailand	35	52	47	26	41	84
Vietnam	102	58	99	84	103	36

Source: World Economic Forum

Moreover, the OECD report in 2007 stated that almost 50% of companies in Indonesia reported issues with transport problems. Besides poor physical transport infrastructure, the World Bank report also pointed out other aspects of insufficient logistics performance in the country.

The World Bank's Logistics Performance Index (LPI) survey assesses six key dimensions of logistics performance. The survey assessed not only quality of trade and transport-related infrastructure but also efficiency of the customs clearance process, ease of arranging competitively priced shipments, competence and quality of logistics services, ability to track and trace consignments, and frequency with which shipments reach the consignee within the scheduled or expected time. According to the 2010 LPI survey, Indonesia only scored 2.76, way behind China, the Philippines and Vietnam. Its ranking fell from 43 in 2007 to 75 in 2010. LPI in the country is lower than other ASEAN countries as well as the world average (see Figure II.2.3).



Source: Logistics Performance Index 2010, World Bank

Figure II.2.3: Logistics Performance Indicators of Major ASEAN Countries

Besides weak logistics performance, electricity supply in the country is relatively unstable. In the face of occasional electricity outage, a lot of manufacturing plants have backup power generators. However, it costs more to generate one's own electricity than to acquire from public supply.

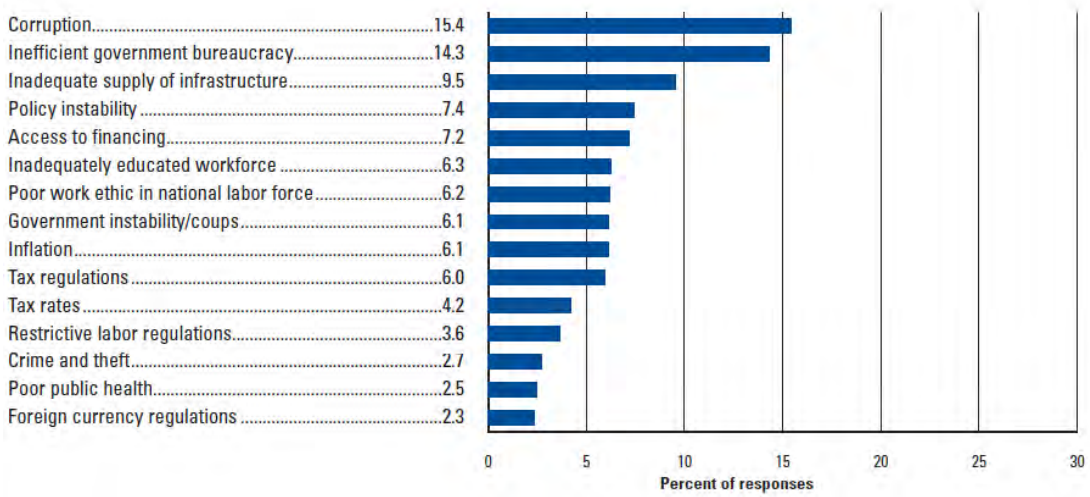
(3) Corruption and Insufficient Government Bureaucracy

The issue of corruption and government bureaucracy is not new for investors who does or plans to do business in developing countries.

According to the Global Competitiveness Report 2010-2011, respondents stated that "insufficient government bureaucracy" and "corruption" are the top two constraints in investing in Indonesia (see Figure II.2.4). Also, according to the 2010 JBIC survey, 22.4% of respondents answered "opaque application of laws and regulations" as constraints, which was ranked third among the constraints.

The issue of corruption has long been recognized as a constraint in doing business and investing in Indonesia. Numerous documents reported that the issue of corruption was further aggravated after the decentralization in the early 2000s[4]. After the decentralization, local governments were allowed to issue their own business regulations. Although local government regulations cannot contradict those issued by the central government, variation in details of business regulations and implementation of government policies can still cause trouble for foreign investors.

[4] E.g.: "Political Decentralization and Corruption", Raymond Fisman and Roberta Gatti, Journals of Public Economy, March 2002, "Decentralization and Democracy in Indonesia", Vedi R. Hadiz, 2004, and "Fighting corruption in decentralized Indonesia", Taufik Rinaldi, Marini Purnomo and Dewi Damayanti, World Bank, May 2007



Source: The Global Competitiveness Report 2010-2011, World Economic Forum

Figure II.2.4: Obstructive Factors in Investing Indonesia

The Indonesian government has made significant progress in fighting against corruption over the last few years. According to Transparency International's Corruption Perception Index, Indonesia's ranking improved from 143rd in 2007 to 110th in 2010. The situation may be improving on the whole, but corruption and some business malpractices still exist.

BKPM's FDI Strategy Paper 2010 stated issues of corruption and government bureaucracy as follows: "Opaque and arbitrary practices overruling official processes further sow confusion. While standards exist that govern the conduct of business, it is no secret that enforcement depends on the whims of individuals as opposed to the principles and precedents of institutions. Where administrative capacity still is weak, discretionary regulation serves as a poor substitute for transparent, rules based regulations; as such this creates a red flag for foreign investors".

II.3 SEZ Experience in Other Countries

II.3.1 Trend of SEZ Development in World

According to the ILO report[5], more than 3,500 Export Processing Zone (EPZ), FTZ and SEZ, and other similar types of economic zones have been developed in 130 countries currently creating 66,000,000 employments (see Table II.3.1). Given that only 79 EPZs were developed during the 1970s, the increase in EPZ, FTZ, and SEZs during the past three decades is surprisingly huge. The Asian region has the largest number of EPZ, FTZ, and SEZs. Worldwide employment is as shown in Table II.3.2.

[5] ILO database on export processing zones (Revised), April 2007

Table II.3.1: EPZ, FTZ and SEZ Development around the World

Years	1975	1986	1997	2002	2006
Number of countries with EPZ/FTZ/SEZ	25	47	93	116	130
Number of EPZ/FTZ/SEZ	79	176	845	3,000	3,500
Employment (millions)	n.a.	n.a.	23	43	66
– of which China	n.a.	n.a.	18	30	40
– of which other countries with figures available	1	2	5	13	26

Source: ILO Database on Export Processing Zones (Revised), April 2007

Ireland EPZ is said to be the first EPZ started in the late 1950s followed by Taiwan in 1966 and Korea in 1970. In the 1980s, Southeast Asian countries and China started EPZ, FTZ, and SEZs for FDI promotion and export increase.

In this chapter, EZP, FTZ and SEZ development experiences in Southeast Asia, China and India are studied hereunder.

Table II.3.2: EPZ, FTZ and SEZ by Region

Geographical Area	Num. of Zones	Employment (million)
Asia	900+	55.74
Central America & Mexico	155	5.25
Middle Eazt	50	1.04
North Africa	65	0.64
Sub-Saharan Africa	90+	0.86
USA	713	0.34
South America	43	0.46
Transition economies	400	1.40
Caribbean	250	0.55
Indian Ocean	1	0.18
Europe	50	0.36
Pacific	14	0.15
Total	3,500+	66.97

Source: ILO database on export processing zones (Revised), April 2007

II.3.2 SEZ in Neighboring Countries

SEZ development history differs by each country. The Philippines and India started their EPZ in the 1960s and changed them to SEZs from the mid-1990s and 2000 to cope with investors requesting a different type of place for investing high-technology industries and various industrial sectors such as tourism and ICT industry instead of labor intensive manufacturing zones. SEZs in India and the Philippines are typically characterized with a single function development by private initiative such as manufacturing, information technology (IT), tourism, and agricultural SEZs.

Korea started its EPZ in 1970 and, like the Philippines and India, converted it to FTZ and Foreign Industrial Zone (FIZ) in the early 1990s. Moreover, the Korean government started Free Economic Zone (FEZ) projects in 2003 to construct an advanced SEZ with multifunction industries.

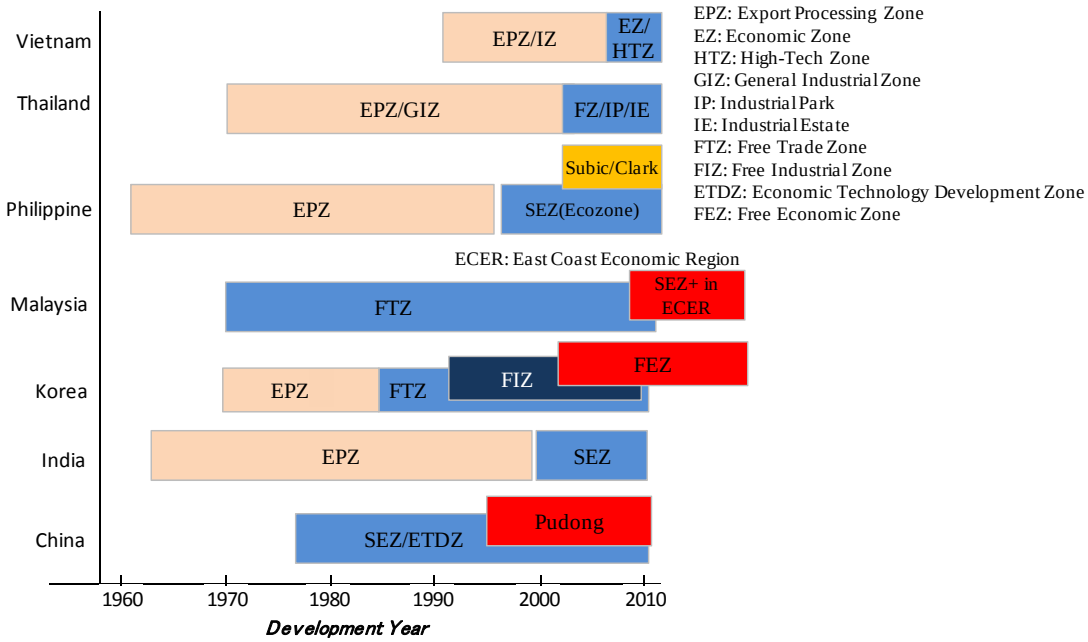
Thailand recognized as the leading country with regards to FDI promotion, started EPZ and General Industrial Zone (GIZ) in the early 1970s with a tax incentive treatment based on the geographical definition. However, EPZ was converted to Free Zone (FZ) in line with World Trade Organization (WTO) regulations in the early 2000s. These regulations divided GIZ into Industrial Estate (IE) and Industrial Park (IP) zones to be managed by the Industrial Estate Authority of Thailand (IEAT) and the private sector, respectively. The Board of Investment (BOI) started additional sector-wise incentives for the food, machinery, casting/foundry, R&D, ITC, and environmental protection related

industries. An eight-year tax exemption is applicable to significant sectors depending on the project location.

Vietnam started its free economy policy and developed EPZ and Industrial Zone (IZ) in the 1990s and succeeded with FDI promotion significantly. Sector-wise tax incentive was applied to all investments notwithstanding the geographical condition. From the late 2000s, Vietnam formulated SEZ of EZ and High-technology Zone (HTZ) with special tax incentives to accelerate FDI promotion.

Malaysia also launched an advanced SEZ in East Coast Economic Region (ECER), succeeding the developed FTZ since the 1970s.

China is a late comer with regards to SEZ. However, SEZ and Economic Technological Development Zone (ETDZ) strategically constructed in the coastal region in the late 1970s, accelerated China's economic growth drastically. From 1992, advanced SEZ with multifunction industries were launched in the Pudong area of Shanghai Metropolitan Area. Figure II.3.1 shows the chronology of SEZ development in Asian countries.

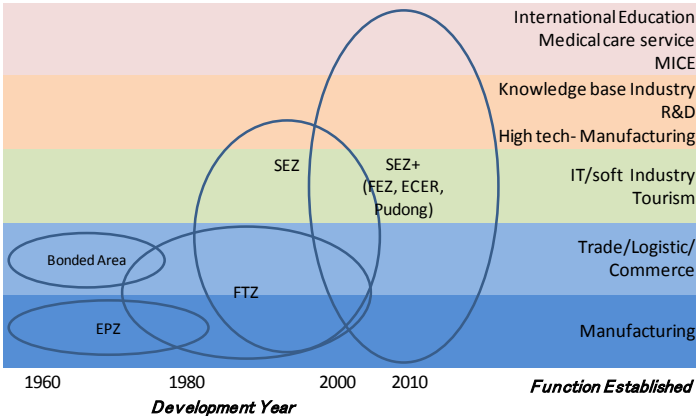


Source: JICA Survey Team

Figure II.3.1 EPZ, FTZ and SEZ Development in Southeast Asian Countries, China and India

Components of SEZ

EPZs and bonded areas started in the 1960's had a single function of either manufacturing or logistics business. FTZs developed from the 1970s and SEZs from the 1980s added more functions such as tourism business, IT industry, and high-technology manufacturing. Most advanced SEZs currently being developed have more functions including medical care business, high education business, research and development, and convention businesses (see Figure II.3.2).

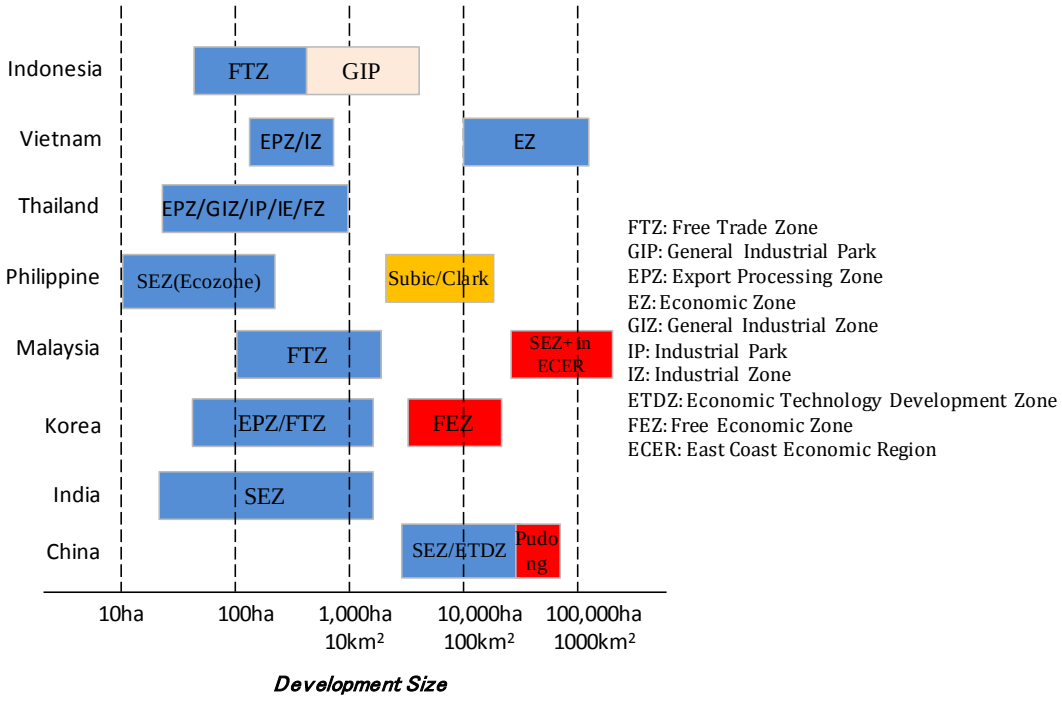


Source: JICA Survey Team

Figure II.3.2 Changes of Function established in SEZ

Size of SEZ

The extent of SEZs varies from 10 ha to 100,000 ha (0.1 km^2 to 1,000 km^2) as shown in Figure II.3.3. Small SEZs are developed in the Philippines and India in which a single-function SEZ with limited area is predominant. Advanced SEZ is being developed with a larger scale to accommodate various functions, which are found in Korea, China, and Malaysia. The various SEZ sizes in Asian countries are as shown in Figure II.3.3.



Source: JICA Survey Team

Figure II.3.3 Development Size of SEZ

Evaluation on Asian SEZ

Evaluation on Asian SEZ development is summarized in Table II.3.3 concluding the possibility to Indonesian SEZ development.

Table II.3.3: Practice of SEZ of Asian Countries

Country	Summarized Evaluation	Reference to Indonesia
China	Large-scale, multifunction SEZ started from 1980s. Multifunction SEZ in Shanghai's Pudong area was also successfully developed in 2010.	Successful SEZ, however, method by total government-led development, unlimited cheap labor force from the inland area, etc. is different from that in Indonesian.
Dubai	FTZ successfully promoted the FDI. Trade business, real estate business, international convention, etc. are prosperous.	Geographical background of inter-trade pole on the crossroad of Asia and Europe is different from Indonesia.
India	EPZ policy continued from 1960s and introduction of SEZ concept started in 2005. SEZ development is quickly spreading throughout the country by private initiative.	Rapid development over the country by private initiative can be used as reference for Indonesia.
Korea	Changing EPZ to FTZ to FIZ to FEZ at 10-year interval is a dynamic policy mechanism to accommodate Korean economy into the world business trend.	Multi-functional SEZ under development in FEZ such as Inchon FEZ can be used as reference for Indonesian SEZ.
Malaysia	Recent movement of multi-functional SEZ in ECER is dynamic policy for industrial modernization and national spatial development acceleration.	Ultra-multi SEZ can be used as reference policy for Indonesian SEZ.
Mauritius	Large-size EPZ was developed by private initiative to promote FDI. Job opportunity increase and export acceleration are successfully achieved.	Small-scale economy with a population of 1.3 million is different from Indonesia
Philippines	Like India, the Philippines continued the EPZ concept from the 1960s and introduced SEZ policy from 1995. FDI increased by SEZ concept is successful.	Successful development of a number of Ecozones and Subic-Clark SEZ by private initiative can be used as reference for Indonesia.
Thailand	FDI value in Thailand is increasing continuously making more difference in Indonesia. Sector-wise incentive scheme is introduced in addition to geographical incentive scheme to compete for promotion of advanced industry category.	New introduction of sector-wise tax incentives in addition to geographically categorized incentive will cause harder competition in FDI promotion for Indonesia.
Vietnam	Recent introduction of SEZ scheme in EZ and HTZ in addition to current sector-wise incentive scheme will accelerate the FDI promotion.	New SEZ scheme recently introduced in Vietnam will cause competent environment for FDI promotion for Indonesia.

Source: JICA Survey Team

II.3.3 Facilities and Institution in SEZ in Neighboring Countries

SEZ development in Asian countries is facilitated with investment incentives to promote FDI. Table II.3.4 shows income tax incentives, which are core incentives for FDI. Almost all other countries offer tax exemption for several years from commencement of FDI business, while Indonesia has no income tax exemption. Details of income tax incentives and other preferential treatment for FDI are discussed in Part A.III.2. Table II.3.5 summarizes the institutional settings for SEZ development in Korea, the Philippines and India where SEZ development has been rapidly and efficiently promoted.

Table II.3.4: Summary of Income Tax Incentive in SEZ by Country

Country	Incentive for Corporate Income Tax in SEZ	Remarks
China	2 years exemption and 25% reduction for subsequent 3 years in Pudong Shanghai	For high –technology industry only
India	10 years exemption/reduction (5 years exemption and 50% reduction for 5 more years) in SEZ	10 years exemption for SEZ developer under some conditions
Korea (FEZ)	7 years exemption/reduction in FEZ	5 years exemption and 50% reduction for 2 more years
Malaysia	10 years exemption in ECER-SEZ	Developer can receive same incentives of investors.
The Philippines	3-6 years exemption in Economic Zone	50% reduction for SEZ developer BOI: 4 years exemption (6 years exemption for pioneer project)
Thailand	No special treatment for SEZ	3-8 years exemption by geographical category with 3 zones (by BOI under some pre-conditions such as minimum investment amount of US$30,000, etc.) 8 years exemption & 5 years 50% reduction for significant sector is newly introduced by BOI in 2008.
Vietnam	4 years exemption and 9 years 50% reduction for EZ and HTZ.	Same incentives can be applied to special promotion area and special sector even outside EZ/HTZ.
Indonesia (FTZ)	Profit amount can be reduced in proportion to investment amount during 6 years in FTZ of Riau/ KAPET. Note: Even outside FTZ or KAPET, same tax allowance can be applied to pioneer industry, etc.	In 2011, income tax exemption treatment (5-10 years exemption plus 2 years 50% reduction) was newly implemented targeting pioneer industries with large investment amount (minimum Rp1 trillion)

Source: JICA Survey Team compiled information.

Table II.3.5: Summary of Organization in Charge of SEZ by Country

Country	SEZ Administration	SEZ Evaluation/ Approval	Stakeholders of SEZ Construction
India	Ministry of Commerce and Industry (MOCI) Department of Commerce (DOC)	Board of Approval (BOA) of DOC evaluates SEZ application based on State Government recommendation.	State-owned corporation, private enterprise, and PPP are the developer of SEZ. Approval Committee at zone level headed by Development Commissioner administering the development and progress of SEZ.
Korea (FEZ)	FEZ Committee under Ministry of Knowledge Economy & FEZ Planning Office	Each FEZ Authority under local government evaluates the developer's application.	Public: Primary infrastructure (port, airport, highway. Etc.) Private/PPP: Component of FEZ such as industrial parks, new town, skyscraper building, etc.
The Philippines	PEZA (Philippine Economic Zone Authority) under the Dep. of Trade and Industry	PEZS evaluates based on relevant ministerial authorities	Private sector, PPP (water supply, etc.)

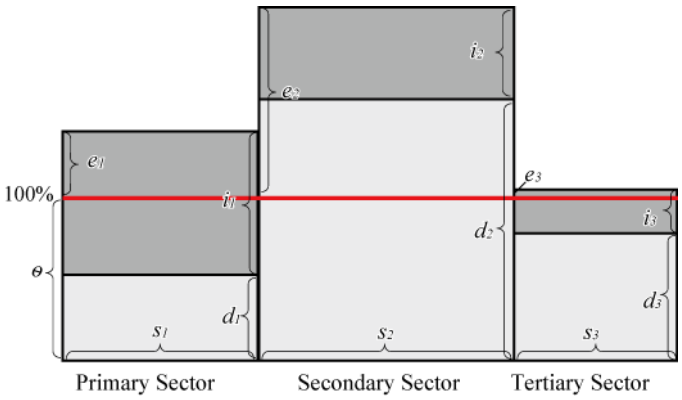
Source: JICA Study compiled information.

CHAPER III: TRADE AND INDUSTRIAL STRUCTURE AND INDIRECT ECONOMIC IMPACT

III.1 Trade and Industrial Structure of Indonesia and Promising Sectors of FDI

III.1.1 Methodology of the Skyline Chart Analysis

This section examines the industrial and trade structure in Indonesia as well as promising industries using skyline chart analysis. A skyline chart shows the industrial and trade structures of one country represented as one figure in the form of a skyline. The chart provides an overview of the extent to which a country's industrial sector depends on domestic production or imports to meet domestic final demand, and the extent to which exports production exceeds domestic final demand. It is also possible to clarify the strengths of the domestic base for the industry by examining whether the said industrial sector depends on imports or is satisfied by domestic procurement.



Source: JICA Survey Team

Figure III.1.1 Simplified Example of a Skyline Chart

Figure III.1.1 includes a simplified example of a skyline chart. The horizontal axis of the chart represents the share of domestic production (gross output) for the sector. The greater the width of *s*, the more important the industry is as it accounts for a significant proportion of overall production in the country's economy. Also in Figure III.1.1, the secondary sector s_2 is the industry that comprises the largest proportion of the country's total production, while the tertiary sector s_3 accounts for the smallest share of production.

For the vertical axis, a red horizontal line has been drawn where the self-sufficiency ratio (domestic procurement rate) is equal to 100% and whatever exceeds this level θ indicates exports *e*. It is possible to know the amount of exports of the industry by the width of the horizontal axis and the height of the horizontal axis. The above figure shows that the secondary sector e_2 has the highest exports, while the tertiary sector e_3 has the least.

The height of bar ($\theta + e$ or light shaded area *d* + dark shaded area *i*) indicates final demand (or total supply) of the sector. The dark shaded area represents the amount of imports, while the light colored area represents the amount of domestically procured and supplied products. As shown in Figure

III.1.1, domestic production of primary sector d_1 cannot meet the domestic final demand because the self-sufficiency ratio is more or less 50%. The primary sector depends on a high proportion of imports to meet domestic final demand of the sector. This is fulfilled by import e_1.

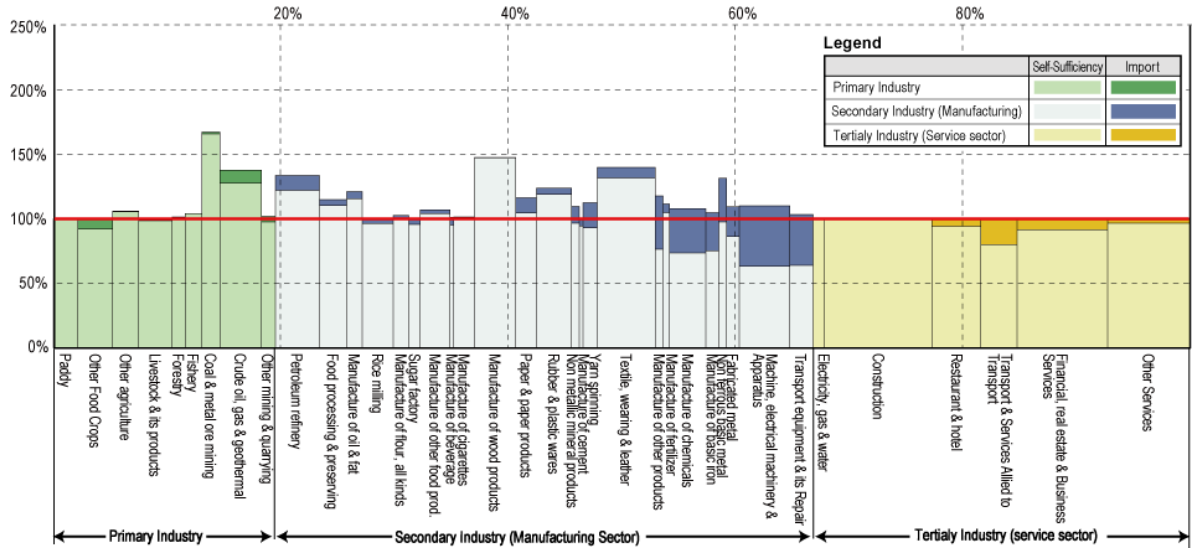
The figure also indicates that domestic production d_2 is far above the domestic final demand. And thus, there is a large export quantity e_2. Their self-sufficiency is about 200%, thus, it is understood that the secondary industry is largely export-oriented, even though it depends on import for much of its raw material.

III.1.2 General Structural Change in Industry

Figure III.1.2 and III.1.3 show the skyline chart of the Indonesian economy in 1995 and in 2008, respectively. They were prepared based on the input-output table (I/O table) of the Indonesian economy published by BPS[6]. Green, blue and yellow colors indicate primary, secondary and tertiary industries, respectively. While dark colored areas (upper side of bars) indicate import and light colored areas (lower side of bars) show domestic production.

The figures show that agricultural products in the country are more or less self-sufficient. Both import and export of raw agricultural products are not significant. In 2008, their self-sufficiency ratio was recorded at nearly 100%.

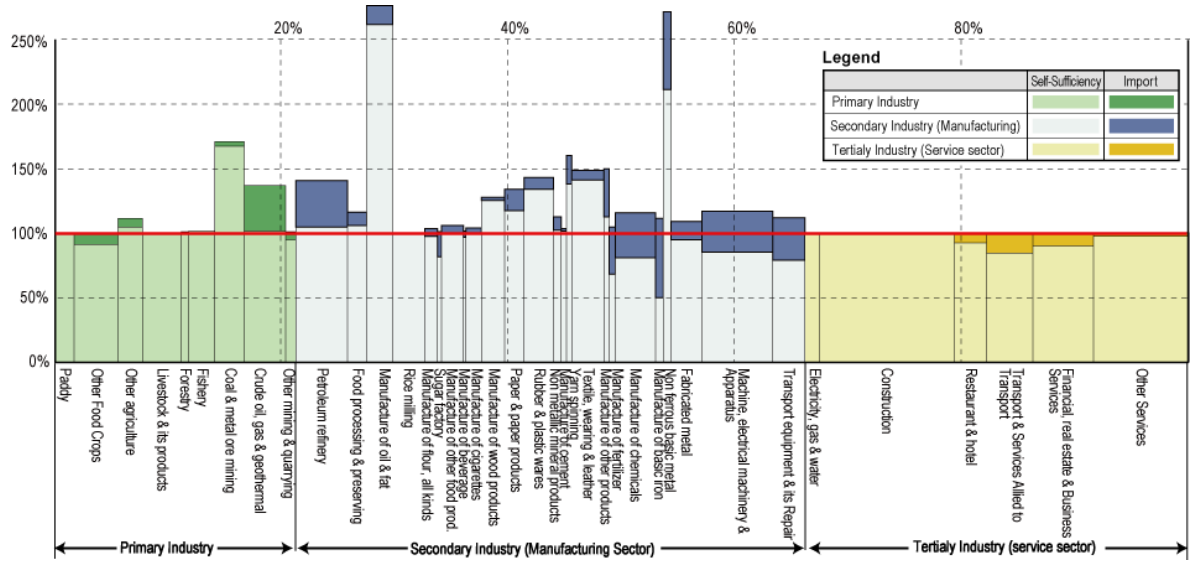
On the other hand, the mining industry was strongly export-oriented. Although for the crude oil, gas and geothermal sector, the proportion of imports-to-production ratio declined relative to that in 1995. This mainly resulted from the sharp increase in crude oil imports in Indonesia.



Source: JICA Survey Team based on Input-Output Table of Indonesia 1995

Figure III.1.2: Skyline Chart of All Industries in Indonesia in 1995

[6] Input-Output Table of the Indonesian Economy in 1995 and 2008, BPS Indonesia



Source: JICA Survey Team based on Input Output Table Indonesia 2008

Figure III.1.3: Skyline Chart of All Industries in Indonesia in 2008

Indonesia has been exporting high-grade crude oil with low sulfur content to Japan and other East Asian countries, while it is importing low-grade oil mainly from the Middle East. Recently, domestic oil production in Indonesia has not fully coped with the increasing demand. Thus, while the country has been increasingly reliant on imported oil, their export volume has been declining. As a result, Indonesia has become a net importer of oil since 2004.

The figures clearly indicate that during from 1995 to 2008, while the industrial structures of the primary and tertiary (service) sectors have not changed much, the manufacturing sector has changed significantly. Many sectors in the secondary (manufacturing) industry increased their export ratios and reduced import dependency. Also, the share of each sub-sector's domestic production within the manufacturing industry has changed.

Trade and industrial structure of manufacturing industries in Indonesia will be analyzed in detail in the following sections.

III.1.3 Manufacturing Industries

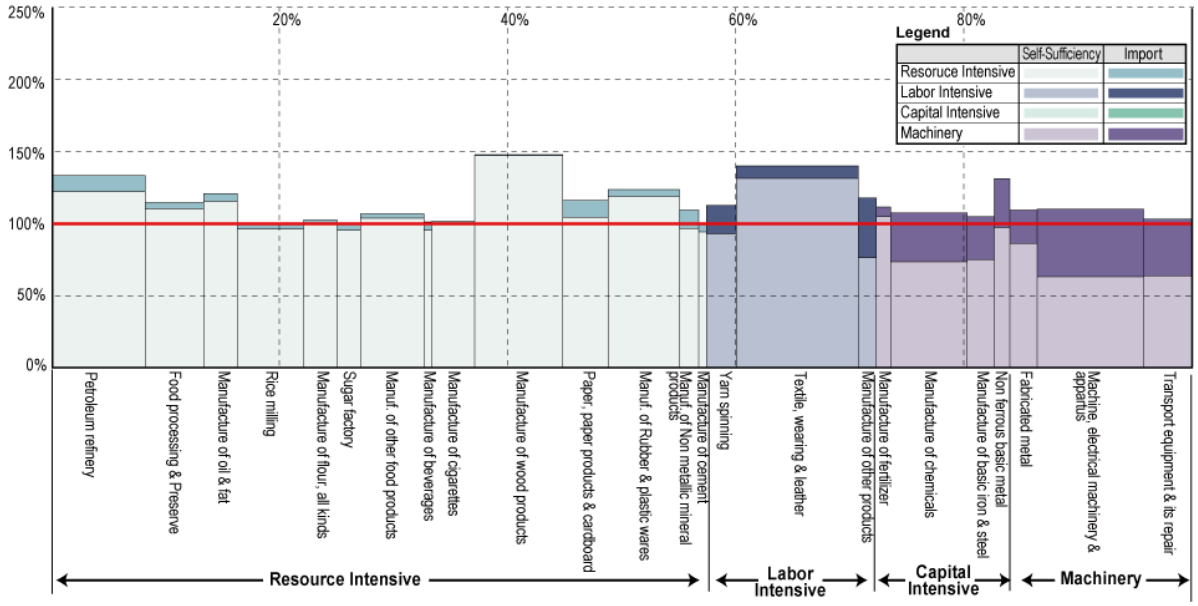
1) General Trade and Industrial Structure of Manufacturing Industries

Skyline charts focusing on the manufacturing industry in 1995 and 2008 are shown in Figures III.1.4 and III.1.5, respectively. Manufacturing sector is divided into 4 groups as follows: (1) resource-intensive, (2) labor-intensive, (3) capital-intensive, and (4) machinery industry, using the same classification as the "Structural Changes in Indonesian Industry and Trade"[7]. The two figures indicate that while the resource-intensive group still occupies more than 50% of the output in manufacturing in 2008, the share of its output has decreased (57.4% in 1995, 53.2% in 2008). The output share of the labor-intensive group has been significantly reduced from 14.9% in 1995 to 8.2% in 2008. On the other hand, the shares of the capital intensive (11.6% in 1995 to 12.2% in 2008) and

7 Mitsuhiro Hayashi, the developing economies, XLIII-1 (March 2005): 39–71

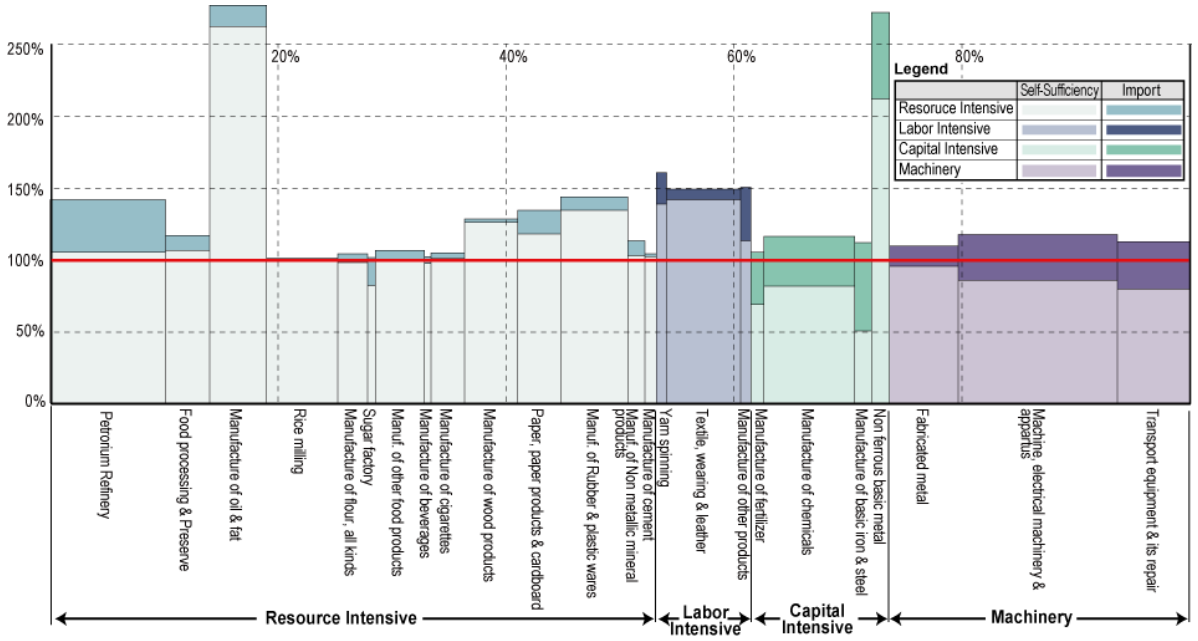
machinery industry groups have considerably increased.

The machinery industry, in particular, expanded its share of gross output during the reference period (12.1% in 1995 to 26.3% in 2008). The decrease in the size of the shaded area in the machinery industries chart between 1995 and 2008 implies that there was a rapid decline in import dependency.



Source: JICA Survey Team based on Input-Output Table 1995

Figure III.1.4: Skyline Chart of Manufacturing Industries of Indonesia in 1995



Source: JICA Survey Team based on Input-Output Table 2008

Figure III.1.5 Skyline Chart of Manufacturing Industries of Indonesia in 2008

The following section describes the detailed analysis of each group.

2) Resource-Intensive Industries

In the resource-intensive group, petroleum refinery expanded the share of their output in the manufacturing industry from 1995 to 2008 due to the increase in domestic petroleum demand. Due to the shortage of oil refining capacities in Indonesia, the share of import to final demand has increased significantly.

The food processing sector, including beverages and cigarettes, slightly decreased its gross output share from 28.8% in 1995 to 26.3% in 2008. However, this sector occupies the largest production share in the manufacturing industry, supplying products made from local resources to the domestic market. While most companies in the food processing sector recorded nearly 100% self-sufficiency, the sector had a low proportion of exports to domestic production. On the contrary, the oil manufacturing sub-sector largely intensified their export-oriented structure. Their output is more than 2.5 times higher than the domestic demand in 2008.

Crude palm oil attracts international attention as a raw material for bio-diesel. Production of crude palm oil in the country has been increasing recently. Indonesia has been the world's biggest producer of crude oil palm since 2006, surpassing Malaysia. It is said that Indonesia has high potential in producing crude palm oil on a global basis, in terms of availability of labor, stable supply of raw materials, and sustainability.[8]

In the same resource-intensive group, the wood, rubber and paper industry maintained its export-oriented nature. For example, in response to the expanding demand for printing paper, paper factories boosted its exports of plain and copy paper.

3) Labor Intensive Industries

The textile industry, including yarn, wearing apparel, leather products and footwear, is classified as a labor-intensive group. During the 1990s and early 2000s, labor-intensive industry had been one of the most significant sectors that contributed directly to the economic growth of Indonesia. This industrial group is not only absorbing massive laborers but also earning a lot of foreign exchange.

While the industry maintained their export-oriented nature, its share of gross output declined, dropping from 14.9% to 8.2% between 1995 and 2008. The textile industry in Indonesia seems to be weaker compared to neighboring countries such as China, Bangladesh and Cambodia. In reality, investment in the textile industry has been declining since the early 1990s.

The country's labor-intensive industry was plagued by problems such as labor disputes, labor costs increase and ageing machinery. In addition, many textile companies had either gone bankrupt or are producing below capacity, particularly after the termination of the quota system in the United States (US) and European Union (EU) countries in January 2005. When the quota system ended, the Indonesian textile industry was exposed to competition with India, China, Cambodia, Bangladesh and Vietnam. China and India, in particular, have been increasing their exports to the US and EU

[8] Report for mission dispatch project regarding oleo-chemical industry in Indonesia, Industrial upgrading promotion project for the promotion of economic cooperation in fiscal year of 2010, March 2011, in Japanese

markets in the post-quota system era.

In consideration of such intensive competition with other Asian countries where cheaper labor cost is available, low value-added products is not the target in Indonesia.

4) Capital-Intensive Industry

Figures III.1.4 and III.1.5 show that the width of the capital-intensive group in the skyline charts became slightly larger from 1995 to 2008. More importantly, import dependency of the sector was significantly reduced, and, consequently, self-sufficiency ratio has improved. In the case of basic chemical sector, the rise in this self-sufficiency ratio seems to reflect the large-scale investments in petrochemical projects such as the Olefin Center Project by Chandra Asri, Purified Terephthalic Acid Project by Mitsui Chemicals, and Styrene Monomer Plant Expansion Project by Tomen Corporation[9]. In 2009, Taisho Pharmaceutical invested US$310 million to obtain 98% stake in Bristol-Myers Squibb Indonesia in order to expand production volume for domestic consumption and export to other Asian counties.

Self-sufficiency ratio of the iron and steel sector was significantly reduced from 75% in 1995 to roughly 50% in 2008. Indonesia is endowed with rich non-ferrous metals. Decrease in self-sufficiency ratio of steel was a result of the limited production capacities and soaring demand driven by the automotive sector, shipyard, electronic device businesses and government-sponsored infrastructure projects.

On the other hand, Indonesia is the world's preeminent non-ferrous basic metal producer (including nickel, copper, gold and tin). Thus, the production of the non-ferrous basic metal industry group is largely export-oriented. Main smelters and refineries are exemplified by Gresik Copper Smelter, Sorowako and Pomalaa Nickel Smelter in Sulawesi Island, Kudur/Mentok Tin Smelter, and Asahan Aluminum Smelter. The Mineral and Coal Mining Act was enacted on January 12, 2009 and imposed a new duty to add high value to domestic productions in Indonesia. Also, non-ferrous metal mining and processing has attracted domestic and foreign investment, for example, the equity participation by Mitsubishi Corp. in nickel development projects in Halmahera Island, North Maluku Province in February 2009.

As mentioned, Indonesia has become the top palm oil producer in the world. However, the production amount of oleo chemicals such as fatty acids, fatty alcohols, and glycerin is only one-half of Malaysia, although Indonesia is the second largest in terms of production. Most of the palm oil feedstock is produced in North Sumatra and Riau in Sumatra Island. The Indonesian government has announced a policy to establish an industrial cluster based on agriculture and oleo chemicals in Dumai, Riau Province, with thriving coconut plantations.

[9] Reference: Structural changes in Indonesian Industry and Trade, the development economics, XLIII-1, Mitsuhiro Hayashi, March 2005

5) Machinery Industry

Figure III.1.4 and III.1.5 show that the width of skyline charts for the machinery industry grew from 16.0% in 1995 to 26.3% in 2008. The metalworking products sector showed a significant increase in the proportion of output to the manufacturing industry. Machinery and apparatus including electronics, which is generally considered as a key to industrialization, rapidly expanded its share in gross production output along with a rise in its self-sufficiency ratio from 1995 to 2000. Its self-sufficiency ratio has increased from roughly 50% in 1995 to about 75% in 2008.

Regarding transport equipment including automobiles and motorcycles, which needs a wider range of supporting industry, the width of the sector has slightly decreased. Also, the height of the automobile and motorcycle sector in the skyline charts did not grow. However, the dark colored portion became smaller from 1995 to 2008, which represents the recent decreasing trend of their import dependency.

III.1.4 Promising Industries for Investment

Given the aforementioned analysis, promising industries for investment can be summarized as shown in Table III.1.1.

Table III.1.1: Promising Industries for Investment

Sub-sector	Note
Oil and fats	Manufacture of oil and fats sub-sector largely intensified their export-oriented structure and had high-inducement effects for other industries (particularly the agriculture industry). This sub-sector is promising on the basis of strong domestic and international demand, rich and sustainable resources and accumulated know-how.
Wood and paper and rubber products	The wood, rubber and paper industry maintained their export-oriented nature as the principal manufacturer. Thinking of high-inducement effects for other industries and rich raw materials, these industries are promising.
Textile, wearing apparel, leather products	Although the sub-sector of textile, wearing apparel and leather products showed rapid decrease in gross output share, the export-oriented products and local characterized products of this sub-sector are promising. In consideration of intensive competition with other Asian countries where cheaper labor cost is available, low value-added products is not the target.
Fertilizers and chemicals	Fertilizer and chemical products, of which a significant volume is imported, should be expanded in consideration of domestic demand increase in line with economic growth. In particular, establishment of an industrial cluster based on coconut palm plantations and oleo chemical factories are promising.
Iron and steel	Iron and steel manufacturing should be promoted more in addition to a recent rapid increase in FDI, considering high domestic demand and current high import dependency.
Non-ferrous metal products	Metal industry rapidly became an export-oriented industry. This industry is promising on the basis of rich natural resources deposited throughout the country (particularly tin, copper, nickel and gold). Enactment of the new mining law, which obliges companies to process all mined ore and minerals domestically, is supportive in making this sub-sector an upgraded value-added industry.
Machinery, electrical equipment, and transport equipment	This sub-sector expanded its production volume and self-sufficiency ratio significantly. However, import volume is still not negligible due to rapidly growing domestic demand. Conversion from import substitute to export-oriented is expected.

III.2 Indirect Economic Impact of SEZ Development

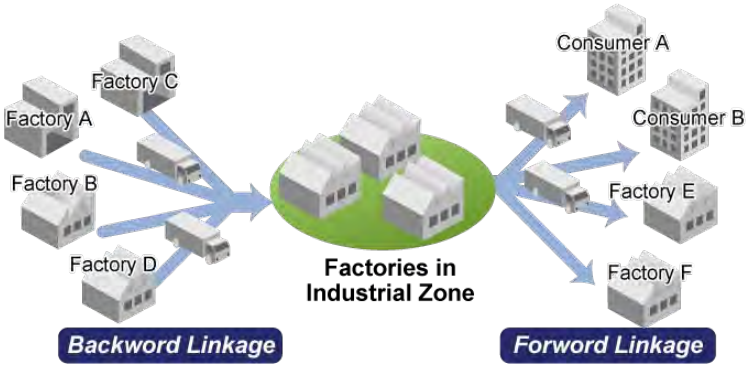
III.2.1 Industrial Linkage Effects

1) Inter-industrial Linkage Effects

Inter-industrial linkages often influence industrial structure and economic development in a country. Production activities in one sector may have effects that directly and indirectly induce those in other sectors. Increase in final demand for an industry with strong inter-industrial linkages can induce a larger increase in production and, thus, contribute to the economy of the country.

For example, increase in the production of automobiles will result in demand increase for steel sheets used in making automotive bodies, electrical parts and components, plastic parts for meters, tires, glass panes, and other auto parts. This will then further increases the demand for input materials necessary for the production of these intermediate goods. “Industrial linkage effects” refers to this chain of demand for intermediate goods generated by the increase in final demand.

Figure III.2.1 illustrates the schematic figure of industrial linkage. Hirschmann (1958) called the effects of inter-industrial linkages that induce the production in downstream industries as “forward linkage effects” and those that induce the production in upstream industries as “backward linkage effects.” The sum of forward and backward linkage effects are called as “indirect effect”.



Source: JICA Survey Team

Figure III.2.1 Backward and Forward Linkage Effects of SEZ

2) Methodology to Estimate Inter-industrial Linkage Effects (Indirect Effect)

I/O tables provide useful information about linkage among industries in a country or region. Input-output analysis has been adopted in economic planning and decision making since the flow of goods and services derived from I/O table are capable of simulating the economic impact.

I/O table describes the sale and purchase relationships between producers and consumers within an economy. The table can be produced by illustrating flows between the sales and purchases (final and intermediate) of industry outputs. In estimating direct and indirect effects, an I/O table with 66 economic sectors in 2008, published by BPS, was used. Table III.2.1 shows the I/O table for 19 economic sectors on that of the 66 economic sectors.

Table III.2.1 19 Sector Input Output Table in Indonesia 2008 (unit: Rp.1,000, 2008 Market Price)

	Paddy	Other Food Crops	Other agriculture	Livestock and its products	Forestry	Fishery	Mining and quarrying	Manufacture of food, beverages and tobacco	Other manufacturing	Petroleum refinery	Electricity, gas and water supply	Construction	Trade	Restaurant and hotel	Transport and communication	Financial intermediaries, real estate and business service	General government and defense	Other services	Unspecified sector	Intermediate demand	Private /Government consumption expenditure	Gross fixed capital formation	Change in inventory	Export of goods and Service	Total Final Demand	Total demand	Total Import	Trade margin and transport cost	Total Output	Total Supply
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	180	300	303	304	307	309	310	409	509	600	700
1. Paddy	6,252.9	0.0	158.3	1,402.5	0.0	0.0	0.0	168,431.3	500.9	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0	67.1	0.0	176,827.1	0.0	0.0	3,118.4	0.0	3,118.4	179,945.5	16.0	10,088.6	169,840.9	179,945.5
2. Other Food Crops	0.0	13,266.4	185.5	5,990.5	0.0	675.6	0.0	94,594.2	701.0	0.0	0.0	0.0	442.6	25,418.3	69.4	0.0	0.0	30,282.7	0.0	171,626.2	281,313.5	5.2	-10,463.0	900.8	271,756.4	443,382.6	41,633.6	99,639.3	302,109.7	443,382.6
3. Other agriculture	7,834.9	3,912.9	12,998.2	2,137.4	2,075.7	664.1	0.0	103,259.3	61,125.9	0.1	0.0	0.0	41.7	1,329.9	7.9	0.1	49.5	561.1	707.4	196,807.3	15,491.0	1,459.0	-749.1	23,110.4	39,310.4	236,117.6	13,479.5	18,160.0	204,478.0	236,117.6
4. Livestock and its products	6,467.0	9,844.8	4,204.5	52,861.7	0.0	137.9	0.0	11,463.9	11,288.3	0.0	0.0	0.0	0.0	71,638.6	239.5	1.9	0.0	11,954.8	0.0	180,100.9	186,509.4	845.9	-8,802.9	543.5	179,095.9	359,196.8	4,904.8	86,858.9	267,433.2	359,196.8
5. Forestry	3.6	7.2	71.8	52.6	1,128.6	138.2	151.5	501.3	27,574.9	0.0	0.0	0.0	28.3	78.8	6.7	19.2	0.0	328.2	0.0	54,568.3	6,516.8	0.0	3,002.8	506.1	10,025.6	64,593.9	620.4	9,921.6	54,053.1	64,595.0
6. Fishery	0.0	0.0	1.0	0.0	0.0	23,206.8	0.0	53,351.4	886.1	0.0	0.0	0.0	0.0	12,081.1	58.0	310.3	0.0	3,269.8	0.0	93,173.7	154,650.2	0.0	-5,155.7	3,810.2	153,304.7	246,478.3	205.9	62,505.2	183,767.3	246,478.3
7. Mining and quarrying	0.0	0.0	2.1	0.0	0.0	0.0	84,101.3	1,176.5	200,251.8	159,868.3	21,902.9	90,404.3	43.4	16.5	7.1.8	0.0	0.0	1,162.5	0.0	560,001.3	1,313.0	997.8	-7,332.8	7,132.8	322,811.4	882,812.7	142,067.0	23,352.9	717,482.9	882,812.7
8. Manufacture of food, beverages and tobacco	0.0	0.0	489.2	67,046.3	0.0	8,398.4	0.0	176,974.9	8,288.0	0.0	0.0	0.0	1,246.5	65,540.8	3,644.2	1,219.8	0.0	24,668.7	0.0	357,512.7	757,394.1	0.0	-27,340.2	205,484.1	935,538.0	1,293,050.7	67,592.2	220,787.1	1,004,671.5	1,293,050.7
9. Other manufacturing	19,578.9	18,400.4	36,134.0	2,705.6	3,524.2	4,052.3	2,987.3	20,015.1	1,003,019.0	1,724.6	5,192.3	516,932.4	71,201.8	4,000.7	40,387.0	28,446.5	25,958.9	162,296.2	907.5	1,987,464.8	737,014.5	237,853.7	114,511.7	682,151.1	1,771,531.0	3,758,995.8	794,276.0	578,336.1	2,386,383.7	3,758,995.8
10. Petroleum refinery	12.0	102.5	2,259.1	502.1	1,604.5	8,595.8	7,945.9	6,732.9	58,750.2	6,534.6	33,882.4	84,148.3	37,812.5	6,46.3	112,434.1	3,605.1	8,036.3	3,422.2	519.9	377,089.9	107,420.9	0.0	-36,079.7	182,003.5	253,344.7	630,433.7	161,130.3	61,200.0	408,103.4	630,433.7
11. Electricity, gas and water supply	0.0	0.6	45.5	451.3	46.3	220.3	366.7	1,669.3	28,241.9	63.1	12,811.1	405.9	24,186.5	623.0	5,378.0	3,111.1	2,845.5	4,961.3	14.6	85,440.8	39,049.9	0.0	0.0	0.0	39,049.9	124,490.7	0.0	0.0	124,490.7	124,490.7
12. Construction	634.7	412.2	5,483.0	122.6	1,083.7	550.8	7,908.7	232.8	3,625.1	75.9	1,003.7	1,203.1	28,211.6	82.7	10,499.6	17,327.1	17,135.1	4,329.3	0.0	99,869.6	0.0	1,444,106.0	0.0	0.0	1,144,106.0	1,243,975.5	0.0	0.0	1,243,975.5	1,243,975.5
13. Trade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-999,122.7	999,122.7	0.0
14. Restaurant and hotel	0.0	127.2	13.2	15.9	79.3	307.3	790.6	1,508.7	9,851.5	182.6	82.2	8,684.6	21,770.4	328.4	4,891.4	3,696.5	16,897.8	3,073.2	0.0	72,422.8	290,142.3	0.0	0.0	39,331.8	329,474.1	361,896.8	24,797.6	0.0	337,099.2	361,896.8
15. Transport and communication	363.3	721.5	1,292.9	522.9	986.3	439.8	6,200.9	7,513.0	55,472.3	303.1	374.9	11,120.1	92,383.5	474.8	53,852.6	16,025.3	19,443.1	8,597.5	39.7	276,627.5	229,999.6	0.0	0.0	59,967.0	289,966.6	566,594.1	78,349.3	-171,856.9	660,101.6	566,594.1
16. Financial intermediaries, real estate and business service	1,462.9	462.8	7,227.4.0	997.1	844.7	948.1	6,906.8	11,675.1	59,222.6	1,133.0	3,007.2	48,480.1	160,260.0	2,172.7	33,442.7	81,431.4	10,709.0	20,546.9	17.6	449,994.8	157,149.0	2,446.0	0.0	17,731.0	177,326.0	627,320.7	60,691.1	0.0	566,629.6	627,320.7
17. General government and defense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	231.8	91.0.0	9,279.6	168.3	1,237.3	0.0	11,827.1	261,155.4	0.0	0.0	4,148.4	265,303.8	277,130.8	1,843.9	0.0	275,287.0	277,130.8
18. Other services	616.1	156.4	2,751.5	534.8	774.9	86.5	5,669.1	6,591.3	22,403.8	528.9	198.8	6,465.9	26,663.3	375.5	53,277.0	17,168.5	16,316.8	17,456.3	0.0	183,035.4	424,778.5	0.0	0.0	18,340.2	643,896.9	643,896.9	22,755.0	0.0	621,141.9	643,896.9
19. Unspecified sector	0.0	0.0	1.9	0.0	0.0	0.0	0.0	116.1	409.3	0.9	0.0	10.6	770.5	0.0	0.7	0.0	0.0	3.4	6.0	1,319.4	2,773.1	0.0	0.0	41.9	2,815.1	4,134.5	45.3	21.9	3,869.3	4,134.5
190 Total Intermediate Input	43.3	47,414.7	73,443.0	135,346.5	12,148.2	48.4	143,028.9	665,806.1	1,551,611.4	170.4	78.5	792.3	465.6	185.0	324,170.7	181,642.2	117.6	298,218.4	1.8	5,335,709.4	3,612,671.1	1,405.5	103.4	1,497,237.8	6,608,739.5	11,944,448.9	1,414,407.7	0.0	10,530,041.2	11,944,448.9
201. Wage and salary	21,865.6	42,685.0	38,780.3	43,401.5	8,856.3	26,451.3	83,489.1	83,942.0	267,909.6	61,257.6	31,570.7	167,855.9	151,338.6	53,632.1	107,177.2	85,209.2	138,982.3	188,523.8	529.0	1,603,567.0										
202 Operating surplus	101,115.2	207,878.9	81,735.0	82,427.9	29,158.0	103,612.6	435,498.1	173,163.5	439,084.6	49,069.0	241,707.6	226,568.9	322,167.9	74,547.4	122,416.2	26,493.2	0.0	93,146.8	1,484.2	3,049,801.0										
203 Depreciation	2,265.1	1,289.4	5,584.0	3,439.1	2,119.5	3,740.2	31,742.7	25,383.8	108,021.3	30,460.0	43,839.8	40,876.0	40,318.7	17,055.6	102,460.5	26,677.4	18,744.5	34,456.5	43.8	538,537.8										
204 Indirect tax	1,858.0	3,119.8	2,251.5	2,819.2	1,771.1	1,641.1	23,714.0	56,376.0	34,920.7	2,178.2	5,461.9	163,469.9	19,720.9	6,827.3	5,565.5	8,181.6	0.0	6,837.1	59.6	199,644.6										
205 Subsidy	-909.4	-278.1	0.0	0.0	0.0	-97.7	0.0	0.0	-15,183.9	-97,917.2	-83,906.5	0.0	0.0	0.0	-1,688.4	0.0	0.0	-40.7	0.0	-199,702.0										
209 Gross Value Added	126,514.5	254,695.1	131,034.0	132,087.7	41,904.9	135,347.5	574,454.0	338,865.4	834,772.3	237,686.2	46,034.9	453,641.7	533,546.2	152,052.4	335,931.0	384,987.4	157,726.8	322,923.5	2,116.5	5,194,331.8										
210 Total Input	169,944.0.9	302,109.7	204,477.0.0	267,433.2	54,053.1	183,767.3	717,482.9	1,004,671.5	2,386,383.7	408,103.4	124,490.7	1,243,975.5	999,122.7	337,099.2	660,101.6	566,629.6	275,287.0	621,141.9	3,869.3	10,530,041.2										

Source: JICA Survey Team based on 66 sector input output table in Indonesia 2008, BPS

Economic effects were calculated based on the mid-term development target of SEZ, which was set at 4,150 ha (including area for on-site infrastructure and public space) in 2019. Occupancy rate of SEZ is assumed to be 80%.

In this simulation, locators in SEZ are assumed to be all large-scale (more than 100 employees) and medium scale (20 to 99 employees) manufacturing industries. Composition of locator's industrial sub-sector is assumed to be same as the actual proportion of manufacturing industry in Indonesia in 2008 (see Figure III.2.2).

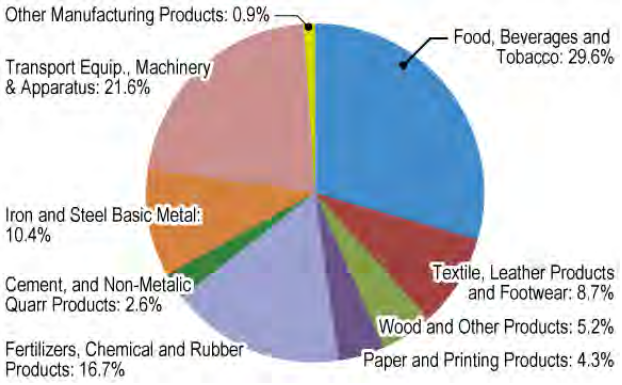


Figure III.2.2 **Composition of Locators (% of Industrial Output)**

Based on the above, the change in final demand (gross output generated inside SEZ) was calculated using the following formula:

$$Y_j = \frac{DA * EC * OR * LP}{VAR} \times GO_j \div \left\{ \sum_{j=27}^{40} GO_j + \sum_{j=42}^{50} GO_j \right\}$$

Where,

- FD_j= Final Demand of economic sector, j (j=27-40, 42-50 indicates economic sector of manufacturing industries in 66 economic sector I/O table)
- GO_j: Gross output of economic sector, j in year 2008
- DA: Gross development area of SEZ (4,150 ha)
- EC: Gross land area to employment coefficient (126.4 employee/ha)
- OR: Occupancy ratio (80%)
- VAR: Value added to gross output ratio of large and medium scale manufacturing industry (0.346)
- LP: Labor productivity of large and medium scale manufacturing industry (Rp259.45 million/employee, 2009 constant price)

Indirect output inducement effects were calculated using Leontief inverse matrix taking import and export structures into consideration, using the following formula:

$$X = [I - (I - \acute{M})*A]^{-1} * [I - \acute{M}] * Y + E]$$

Where,

- Z: Vector of gross output generated inside SEZ plus induced gross output outside SEZ
- Y: Vector of change in final demand
- A: Input coefficient matrix which is the ratio of imports to total domestic demand, calculated by JICA Survey Team based on I/O table 2008
- $\acute{M}$: Diagonal matrix of import coefficient, calculated by JICA Survey Team based on I/O table 2008
- E: Export demand, calculated by JICA Survey Team based on I/O table 2008

Value added effect was calculated using the following formula:

$$VAE = \sum_{i=1}^{9} (GO_i * VAR_i) + DA * EC * OR * LP$$

Where,

VAE= Total value added effect

GO_i= Induced Gross output of economic sector "i" (i= 1, 2, 3, … 9)

VAR_i: Value added to gross output ratio of economic sector "i", calculated based on 9 sector I/O table 2008, BPS

DA: Gross development area of SEZ (4,150 ha)

EC: Gross land area to employment coefficient (126.4 employee/ha)

OR: Occupancy ratio (80%)

LP: Labor productivity of large and medium scale manufacturing industry (Rp 259.45 million/employee, 2009 constant price)

Employment effect was calculated using the following formula:

$$EE = \sum_{i=1}^{9} \left(\frac{GO_i * VAR_i}{LP_i}\right) + DA * EC * OR$$

Where,

EE: Total Employment Effect

GO_i= Induced Gross output of economic sector, i (i= 1, 2, 3, … 9)

VAR_i: Value added to gross output ratio of economic sector, i, calculated based on 9 sector I/O table 2008, BPS

LP_i= Labor productivity of economic sector, i (i= 1, 2, 3, … 9)

DA: Gross development area of SEZ (4,150 ha)

EC: Gross land area to employment coefficient (126.4 employee/ha)

OR: Occupancy ratio (80%)

Table III.2.2: **Value Added to Gross Output Ratio and Labor Productivity by Economic Sector in 2009**

Indicators / Economic Sector	Value Added to Gross Output Ratio*1	Number of Laborers (1,000)*2	GDP (Rp Billion)*2	Labor Productivity (Rp million/ employee)*3
1 Agriculture, hunting, forestry and fishing	0.6998	41,612	858,252	20.63
2 Mining and quarrying	0.8031	1,155	591,532	512.05
3 Manufacturing industry	0.3485	12,840	1,480,905	115.34
4 Electricity, Gas and Water Supply	0.3698	223	46,823	209.92
5 Construction	0.3631	5,487	554,982	101.15
6 Trade, Hotel and Restaurant	0.4511	21,948	750,605	34.20
7 Transport and Communication	0.5171	6,118	352,407	57.60
8 Financial, real estate and business services	0.6716	1,487	404,116	271.84
9 Other Services	0.5035	14,002	573,819	40.98

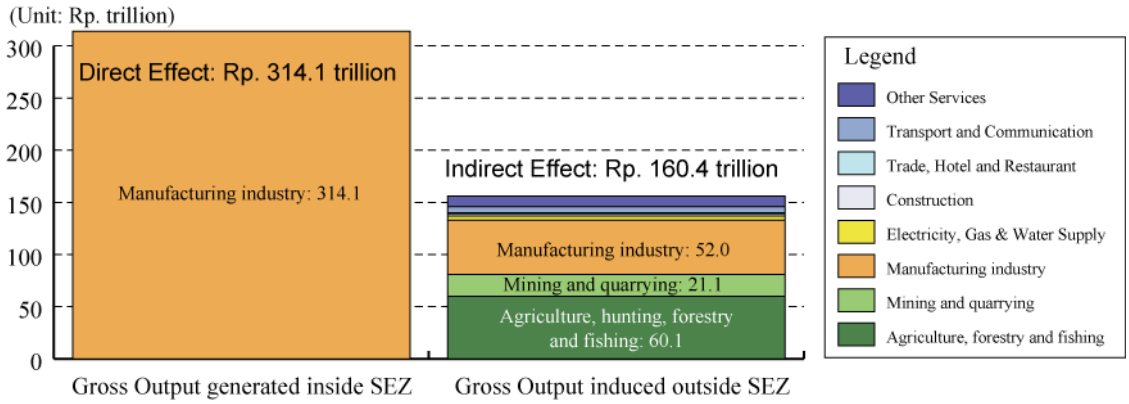
Source: *1= Input Output table 2008, BPS, *2= Indonesia Statistical Year Book 2010, BPS
*3= Calculated figure

III.2.2 Industrial Linkage Effects of SEZ

1) Industrial Output

Industrial output generated in SEZ is estimated to be Rp314 trillion per year. In addition, Rp 160 trillion of output will be induced outside SEZ through forward and backward linkage effects. As shown in Figure III.2.3 development of SEZ will be expected to contribute particularly to the agricultural and manufacturing sectors located outside SEZ. Out of the indirect effects (induced output outside SEZ), shares of industrial output to agricultural and manufacturing industries are estimated to be 37% (Rp 60 trillion) and 32% (Rp 52 trillion), respectively.

Food processing industries, expected to occupy about 30% of the industrial output in SEZ, are the main contributors of such large inducement effects on the agricultural sector, because the industry has strong linkage effects with other industries, particularly with the agricultural sector.

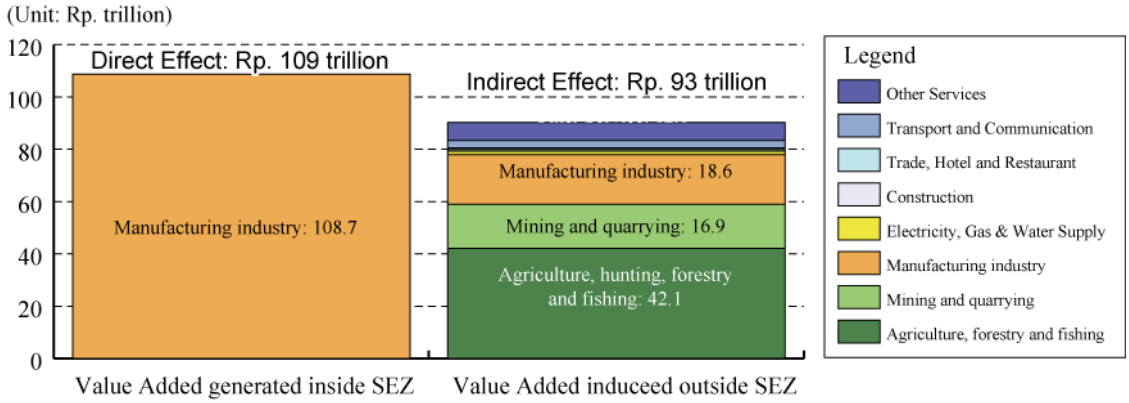


Source: JICA Survey Team

Figure III.2.3 Direct and Indirect Output Effects of SEZ by Industrial Sector (2009 Market Price)

2) Value Added Effect

Value added generated inside and outside the SEZ is estimated at Rp 108 trillion and Rp 93 trillion, respectively, as shown in Figure III.2.4. Manufacturing sector has strong inter-industrial linkage with agricultural, mining and manufacturing industries. Indirect effect (value added induced outside SEZ) is comparable with direct effect (value added generated inside SEZ).



Source: JICA Survey Team

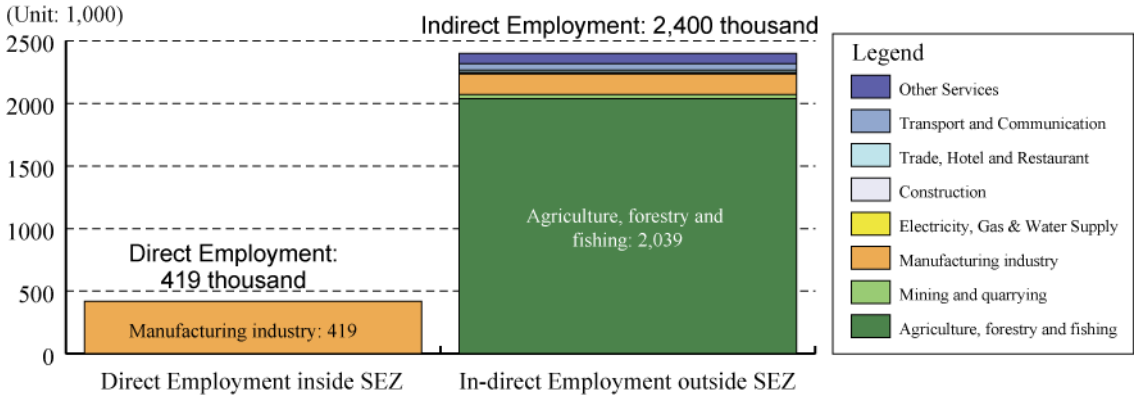
Figure III.2.4 Direct and Indirect Value Added Effects of SEZ by Industrial Sector (2009 Market Price)

3) Employment Effect

SEZ development will create about 419,000 job opportunities inside the SEZ. Also, SEZ development will create about 2,400,000 job opportunities outside the SEZ, as shown in Figure III.2.5. The manufacturing industry inside SEZ (such as food processing and preserving, vegetable and animal oil processing, and manufacture of beverage) will induce reasonably high employment effects on the agricultural sector[10]. "Indirect employment effects" is estimated at about six times

[10] Labor productivity of agricultural sector (Rp 21 million/person in 2009) is considerably lower than other industries (e.g.

larger than “direct employment effect”. SEZ development is estimated to have quite a strong employment creation effect even outside SEZ.

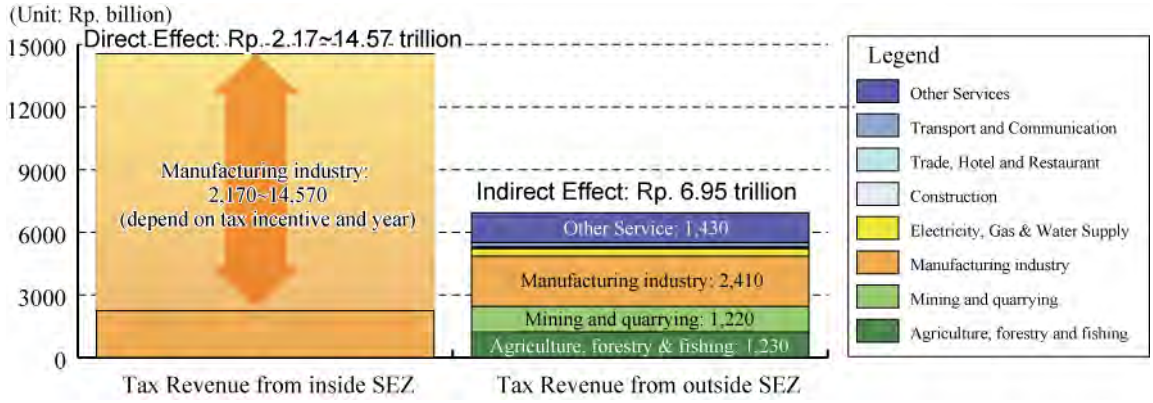


Source: JICA Survey Team

Figure III.2.5: Direct and Indirect Employment Effects of SEZ by Industrial Sector

4) Tax Revenue Effect

Tax revenue of the Indonesian government is estimated to increase by Rp21.5 trillion per year through the development of SEZ. Out of this revenue, 68% or Rp 14.7 trillion will be collected from companies located inside the SEZ, and 32% or Rp6.9 trillion will be collected from various business activities outside SEZ, as shown in Figure III.2.6. Tax revenue from inside the SEZ depends on the tax incentives given to investors. If both corporate income tax and value added tax are exempted, tax revenue from inside the SEZ will be Rp2.2 trillion at the initial stage when all locators fully enjoy tax incentive.



Source: JICA Survey Team

Figure III.2.6: Direct and Indirect Tax Revenue Effects of SEZ by Industrial Sector

As shown in the figure above, manufacturing, mining and quarrying, other services (including financial intermediate, real estate), and agricultural sectors are expected to be major contributors of tax revenue from outside the SEZ.

manufacturing: Rp 115.3 million, Financial, Real Estate, and Business Services: Rp 272 million). Thus, the sector needs more labor force than other industries in producing the same output.

As previously mentioned, induced value added and employment effects on agricultural sector are quite sizable while their contribution to government tax revenue is relatively low.

III.2.3 Summary of Industrial Linkage Effects of SEZ

SEZ development will bring about substantial economic impacts outside SEZ[11]. In 2019, gross output generated directly and indirectly through SEZ development is estimated to be about Rp475 trillion, of which about 33% will be induced outside SEZ. Value added effect increase through SEZ development is estimated to be Rp 201 trillion per year, which is equivalent to 3.6% of the national GDP in 2009. Incremental tax revenue is estimated to be Rp 21.5 trillion per year, which is equivalent to 3.5% of the total tax revenue in the country in 2009.

SEZ development is expected to create a sizable employment opportunity (2.82 million, which is equivalent to 2.7% of the national labor force in 2009). Their employment creation effect outside SEZ is quite high, where agricultural sector will mainly gain benefit.

Table III.2.3: Summary of Direct and Indirect Effects of SEZ Development

	(Unit: Rp billion, 2009 Market Price)			Employment
	Industrial Output	Value Added	Tax Revenue	
Direct Effects generated inside SEZ	314,088	108,705	14,568	419,000
Indirect Effects generated outside SEZ	160,448	92,556	6,946	2,400,000
- Agriculture, Hunting, Forestry and Fishing	60,092	42,051	1,225	2,039,000
- Mining and Quarrying	21,096	16,943	1,224	33,000
- Manufacturing Industry	52,043	18,890	2,414	164,000
- Electricity, Gas and Water Supply	3,696	1,367	352	7,000
- Construction	1,721	625	32	6,000
- Trade, Hotel and Restaurant	1,293	583	58	17,000
- Transport and Communication	5,670	2,932	210	51,000
- Other Services	14,837	9,165	1,431	83,000
Total Effects	474,536	201,261	21,514	2,819,000

Source: JICA Survey Team

[11] Indonesian I/O table indicates inter-industrial linkage in Indonesia as a whole. However, it is sometimes said that SEZ has weaker domestic industrial-linkage than industries located outside SEZ because they tend to procure their production input from abroad, and tends to export their products. Accordingly, actual indirect effects might be much smaller than our estimate.

CHAPTER IV: REGIONAL CHARACTERISTICS AND INFRASTRUCTURE

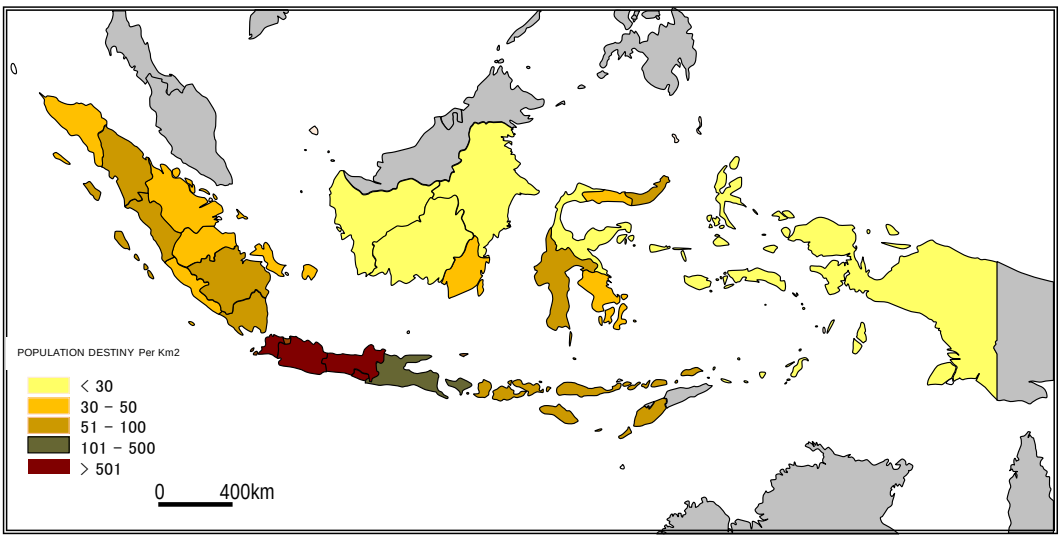
IV.1 Domestic Resource Opportunity (Regional Advantages and Disadvantages)

Indonesia is a broad country widely stretched out from east to west and comprises more than a million islands. The implementation of development nowadays has improved standards of living in many regions. However, because of the differences in geographic conditions, natural resources, infrastructures, socio-cultural conditions, and human capacity, there are still remaining gaps among regions. These difficulties have not caused optimal utilization for competitive advantage as a nation. This section mainly discusses the regional resource advantages and disadvantages by reviewing current regional characteristics of socio-economics, infrastructures, and natural resources.

IV.1.1 Socio-Economic Characteristics

1) Population and Employment

Figure IV.1.1 shows the population density in Indonesia. DKI Jakarta has the highest population density with 12,556 people per km^2 in 2009[12] and urbanization has been rapidly increasing. Indonesia's urban population grew by 39 million or 55% between 1995 and 2005. Residents in urban areas in West Java, DKI Jakarta and Banten makes up about 60% of the total urban population and is expected to grow to more than 80% by 2025[13].



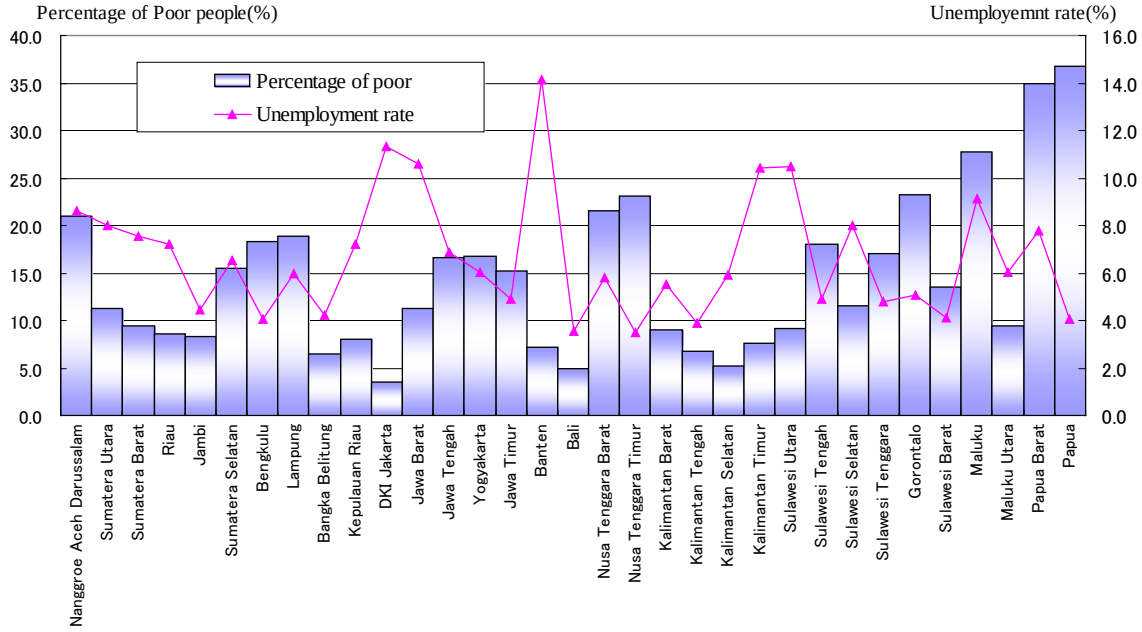
Source: Statistical Yearbook of Indonesia 2010

Figure IV.1.1 Population Density in Indonesia

[12] Source: Statistical Yearbook of Indonesia 2010, BPS
[13] Source: Indonesia Development Policy Review, World Bank

Figure IV.1.2 shows the poverty ratio and unemployment ratio by province. The unemployment rate is more than 10% in five provinces, namely DKI Jakarta, West Java, Banten, East Kalimantan, and North Sulawesi. Overall, most provinces in Java Island have high unemployment ratio. DKI Jakarta has the second largest the unemployment ratio with 11% but has the least poverty ratio with 4% among all provinces. This high unemployment ratio caused by increased population flow and high concentration to the city is also shown in Figure IV.1.2.

In terms of poverty ratio, Papua, West Papua, and West Maluku, which are islands at the eastern edge of the country, hold more than 25% of the poverty population. Especially in Papua, 37% of the population lives below the poverty line. The new industrial development supported by the new economic zones will absorb the redundant labor force and it would contribute to reduce the number of poor people in the region.



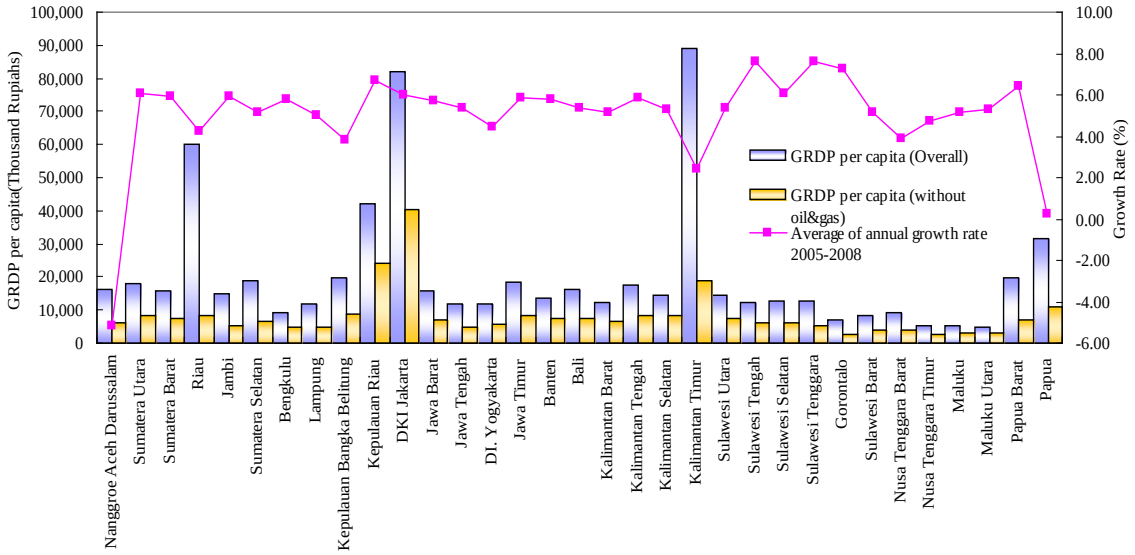
Source: Statistical Yearbook of Indonesia 2010

Figure IV.1.2: Proportion of Poor People and Unemployment by Province

2) Economic Growth

Figure IV.1.3 shows GRDP and its annual growth by province. The following three points can be observed as a trend of regional economy.

- The growth rate and GRDP itself is quite low in Nanggroe Aceh Darussalam and they have not recovered from the tsunami disaster that occurred in December 2004.
- In both East Kalimantan and Riau, oil and gas production contributes approximately 80% of the total GRDP.
- Papua has high GRDP per capita resulting from the high output of mineral resources, especially copper. This region has a serious economic disparity given that the poverty ratio is the highest with 37% of the population.



Source: BPS, 2009

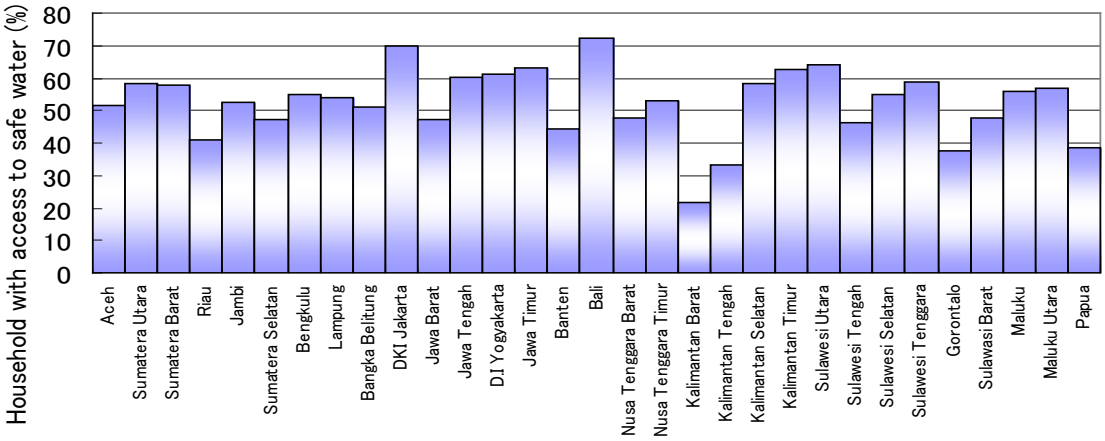
Figure IV.1.3 GRDP in 2009 and Average Annual Growth Rate by Province

IV.1.2 Basic Infrastructure

When it comes to deciding the SEZ locations in Indonesia, it is quite important to evaluate properly existing prepared infrastructure and potential for development. Logistics network, one of the most important basic infrastructure issues in Indonesia, will be mainly discussed in Section IV.1.2.

1) Access to Potable Water

Since Indonesia is comprised by thousands of islands, the national coverage of the water supply system is low compared to its neighboring countries. As shown in Table 4.1.2.1, the population having access to potable water is still lower than the Southeast Asian average both for urban and rural areas. Meanwhile, the coverage ratio differs by islands or provinces. Figure 4.1.2.1 shows the percentage of households with access to potable water in each province. Households with access to potable water reached 70% only in DKI Jakarta and Bali while remote areas require further extension and improvement. In case of SEZ development outside Jakarta and Bali, developers have to carefully investigate the existing water supply conditions.



Source: National Human Development Report 2004, the Economics of Democracy Financing Human Development in Indonesia, BPS, BAPENAS and UNDP

Figure IV.1.4: Access to Safe Water by Provinces (2002)

Table IV.1.1: Proportion of Population Served with Improved Water (%) in 2008

	South East Asia	Indonesia
Urban	92%	89%
Rural	81%	78%
Total	86%	80%

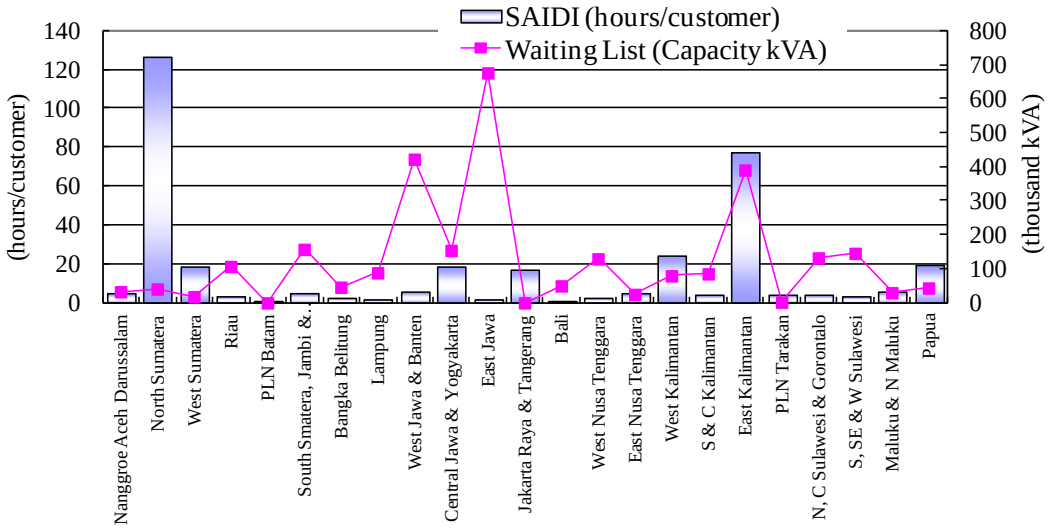
Source: Database of WHO-UNICEF Joint Monitoring Programme for Water Supply and Sanitation

2) Energy

As observed from the System Average Interruption Duration Index (SAIDI) shown in Figure IV.1.5, supply of electricity is almost stabilized in already connected areas except North Sumatra and East Kalimantan. Residents and industries experience electricity outages for 126 hours per year in North Sumatra and 78 hours per hour in East Kalimantan.

Short supply of electric power is very serious in Java Island except Jakarta. Even for already connected areas, the supply is sometimes unstable especially in North Sumatra and East Kalimantan.

Jakarta or Batam, which have a large concentration of industrial areas, totally meets their electric demand. But it is still difficult for most of the other regions to keep up with the increasing electric demand all over the country. As an example of achievement by PLN in 2009, 1,180 MVA were newly applied by households and industries in East Java but only 36% of the demand capacity could be met.



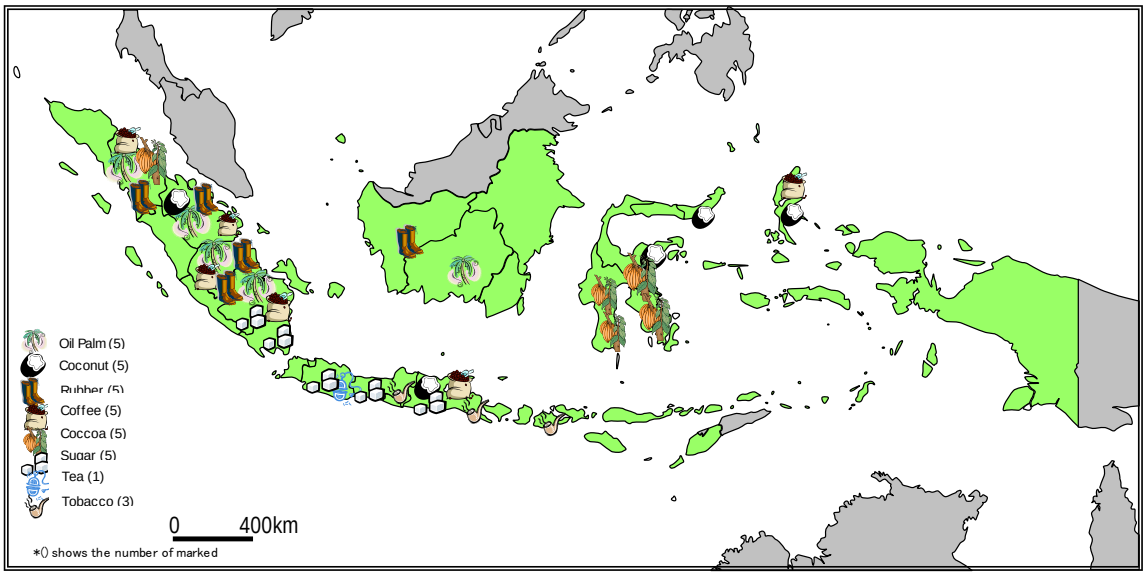
Source: PLN Statistics 2009

Figure IV.1.5: SAIDI and Waiting List for Electricity

IV.1.3 Industrial Resource Characteristics

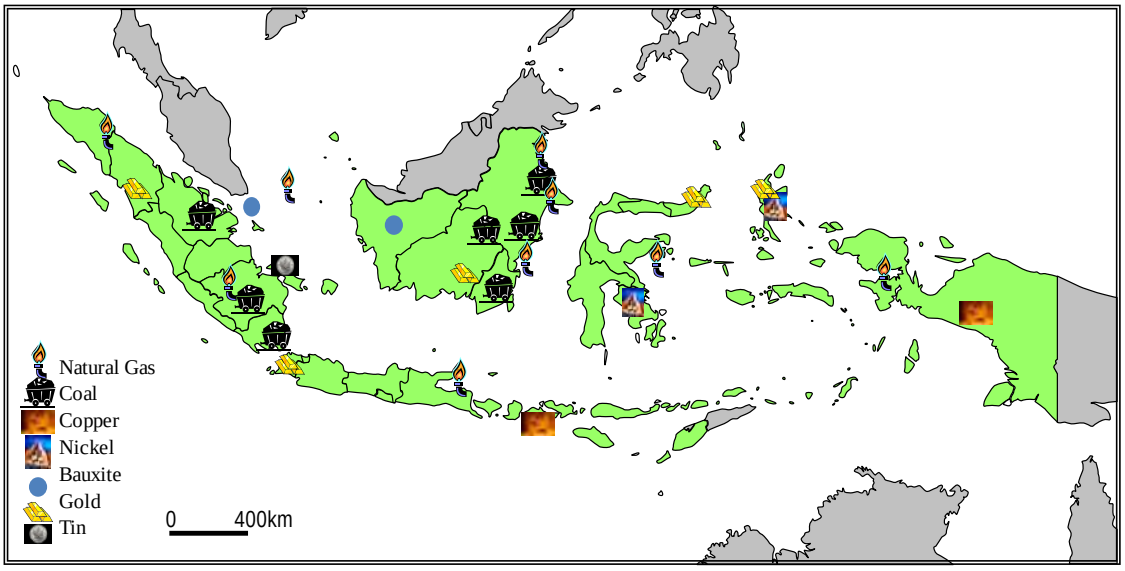
For resource-oriented SEZ development, these regional characteristics have to be assessed carefully. Further research is necessary to assess these resources properly. In order to get the whole brief picture of the industrial resource characteristics, Figures IV.1.6 and IV.1.7 and Table IV.1.2 show the distribution of agricultural production and mineral resources by province. Figure IV.1.8 and Table IV.1.3 show the proportion of export commodities in each region. As an initial assessment, a few findings of the natural resource characteristics by province are briefly summarized as follows:

- Around the coastal regions of Sumatra Island facing the Malacca Straits, there are high production areas of palm oil. Numerous factories and refineries have been built which make the area as one of the promising investment destinations in Indonesia. For example, Dumai in Riau Province has a large palm oil refinery developed by Wilma Co. Ltd. with a further extension of the development area up to 1,000 ha.
- Kalimantan Island except West Kalimantan is a very large exporter of wood products, and ports in Kalimantan Island deal with a remarkably high volume of export or net weight.
- More than 95% of the export value of Papua, West Papua, and North Maluku is from mineral resources. Copper mines in Papua and natural gas field in West Papua have attracted investors in recent years. Maluku next to Papua has high production of nickel and gold. However, the total export value and volume is quite lower than the other provinces.



Source: JICA Survey Team based on Indonesia Statistical Yearbook 2010

Figure IV.1.6: Top Provinces Producing Main Crops in Estates



Source: JICA Survey Team

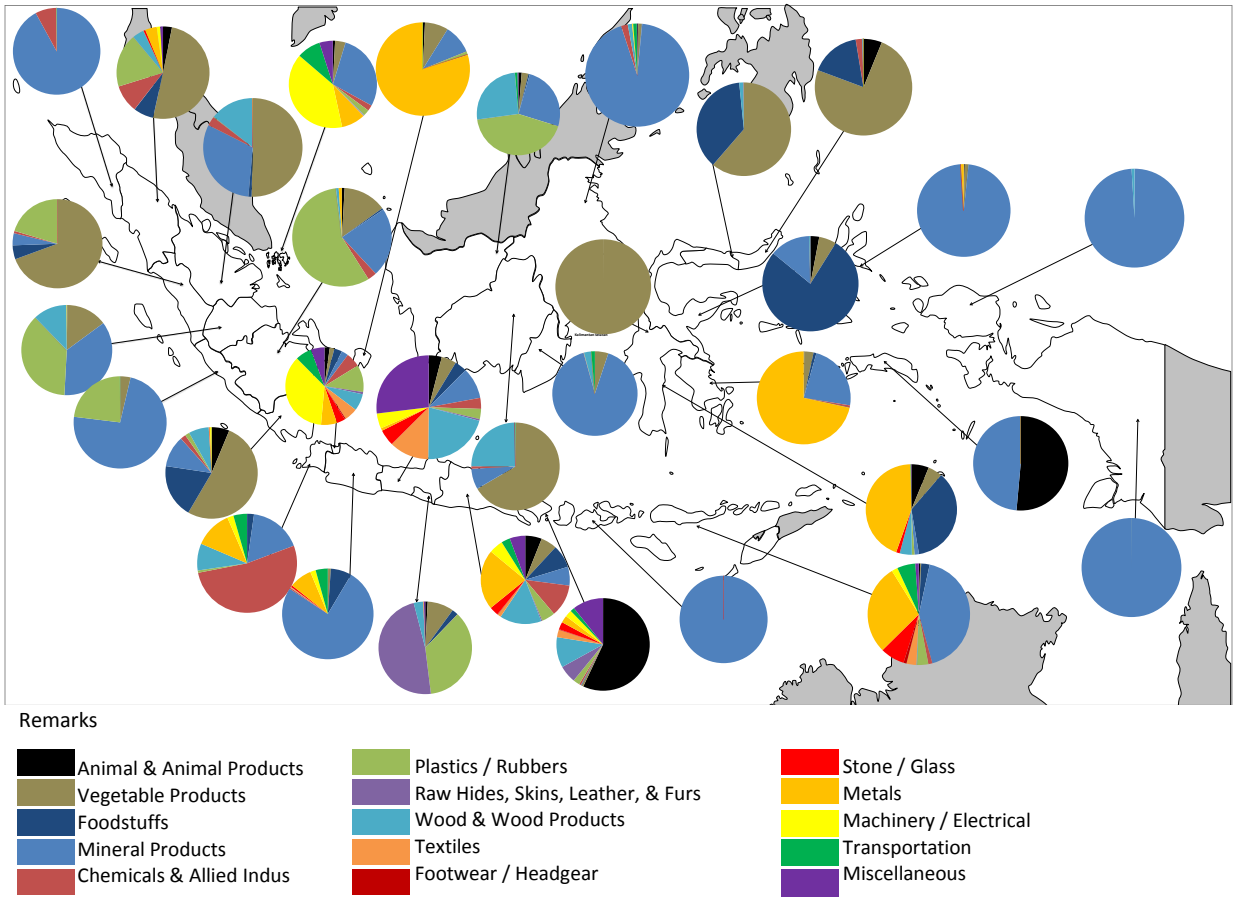
Figure IV.1.7: Regional Distribution of Mineral Resources

Table IV.1.2: World Share of Indonesia Resources

Resource	Production	Estimated Reserves	Export %/4	Usage
Tin	No. 2 *1	No.1 *5	94%	Liquid crystal display, electrode of organic EL
Nickel	No.5 *1	No.4 *3	81%	Magnetic head, shape memory alloy
Copper	No.7 *1	No.1 *5	65%	
Gold	No.11 *1	No.2 *5	76%	
Bauxite	No.6 *1		96%	
Coal	No.7 *2	-	80%	Fuel for thermal electric plant, ceramic/cement industry (energy resources), export
Natural Gas	No.10 *3	-	56%	LNG, fuel for power generation, industrial use, domestic use, LPG, etc.
Palm Oil	No.1 *3	-	-	Materials for margarine, shortening, soap, etc.
Natural Rubber	No.2 *3	-	-	
Cacao	No.3 *3	-	-	

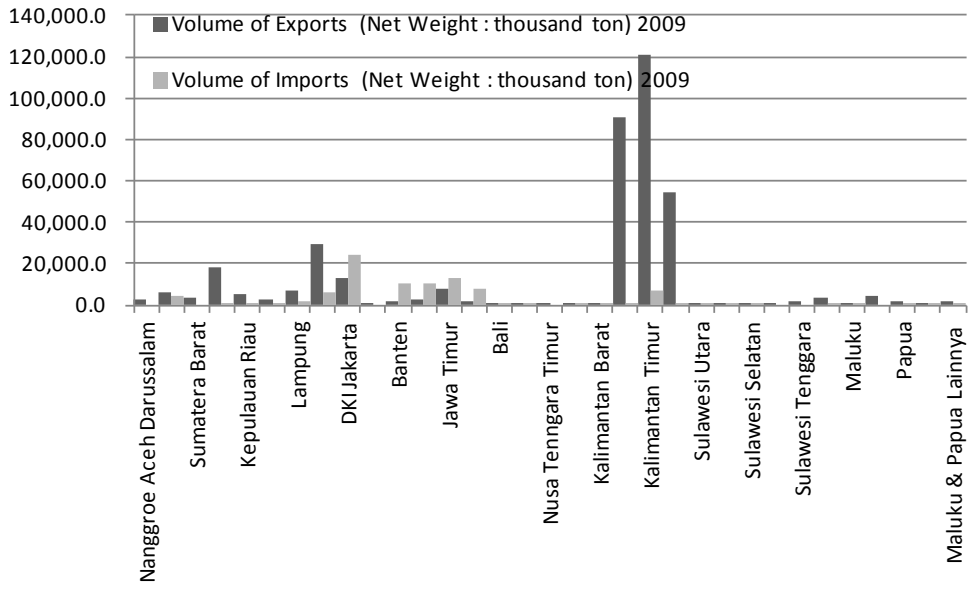
Note: *1 World Metal Statistics Year Book 2009
*2 World Coal Institute 2008
*3 Bank Information
*4 JJC Indonesia Handbook 2010
*5 JOGMEC (Japan Oil, Gas and Metal National Corp.)

Source: Developed by Shinsei Bank based on the data from Sekai Kokusei Zue from 2005 to 2010



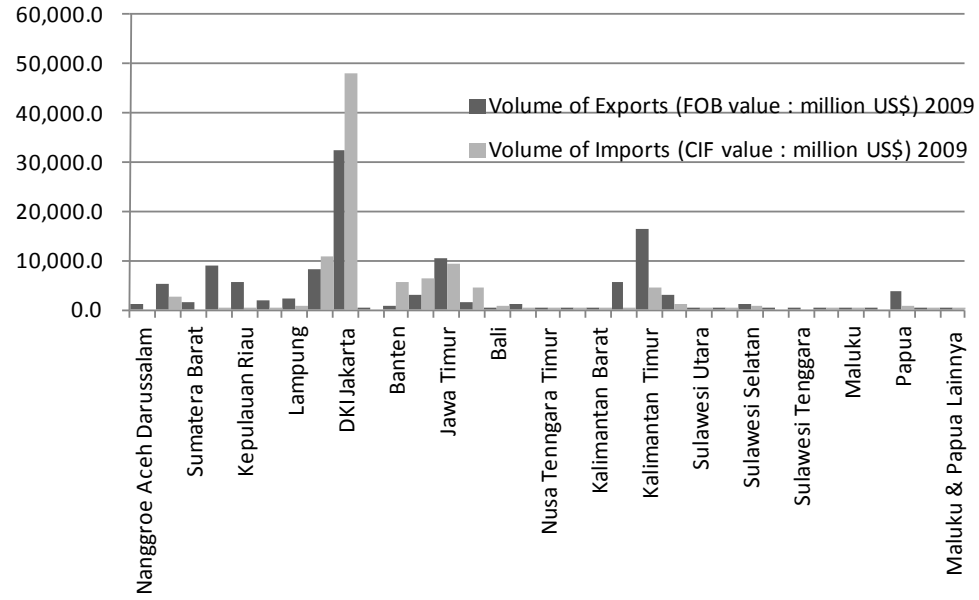
Source: JICA Survey Team based on data from BPS

Figure IV.1.8: Commodity Share in Exports by Provinces



Source: JICA Survey Team based on data from BPS

Figure IV.1.9: Volume of Exports and Imports



Source: JICA Survey Team based on data from BPS

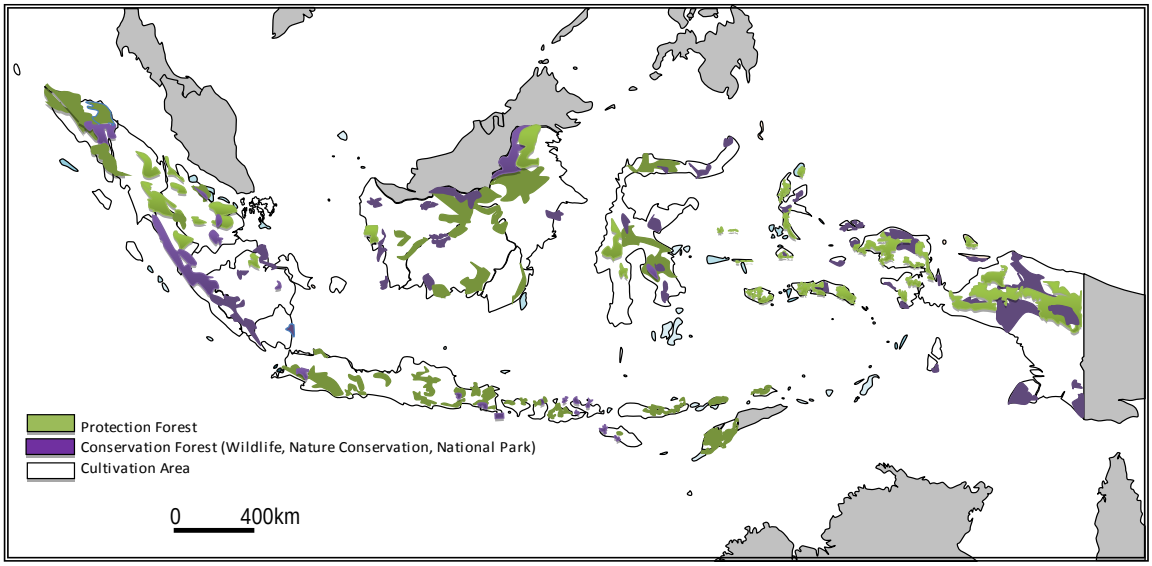
Figure IV.1.10: Value of Exports and Imports

IV.1.4 Natural Characteristics

Indonesia has abundant and unique natural resources in its thousands of islands. Some areas are designated natural conservation areas and there are also registered Ramsar Convention wetlands and world heritages which should be protected as part of a global treaty. Forthcoming development strategy should be sustainable and composed of carefully considered plans to ensure the effective utilization of these limited resources.

1) Natural Conservation Area

Natural conservation and reservation areas are prescribed in the national spatial plan as shown in Figure IV.1.11. Central Kalimantan and Northern Papua has a large conservation area as these are already famous for having abundant tropical rainforests or national parks, for example Lorentz National Park which is a world heritage site. There are growing concerns about rapid mineral resource exploitation even close to national parks especially in Papua. These areas have good potential for eco-tourism development.

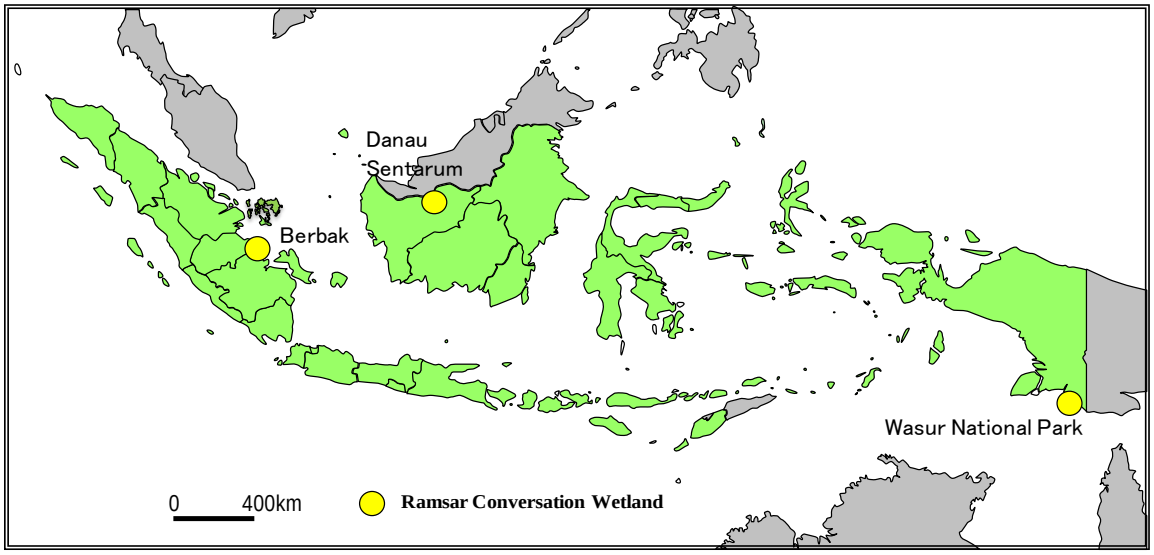


Source: JICA Survey Team based on National Spatial Plan

Figure IV.1.11: Natural Conservation and Reservation Area

2) Ramsar Convention Wetlands

There are three internationally recognized important wetlands namely, Berbak, Danau Sentarum and Wasur, as shown in Figure IV.1.12. These wetlands are important habitats for water birds and are registered as Ramsar Convention wetlands.

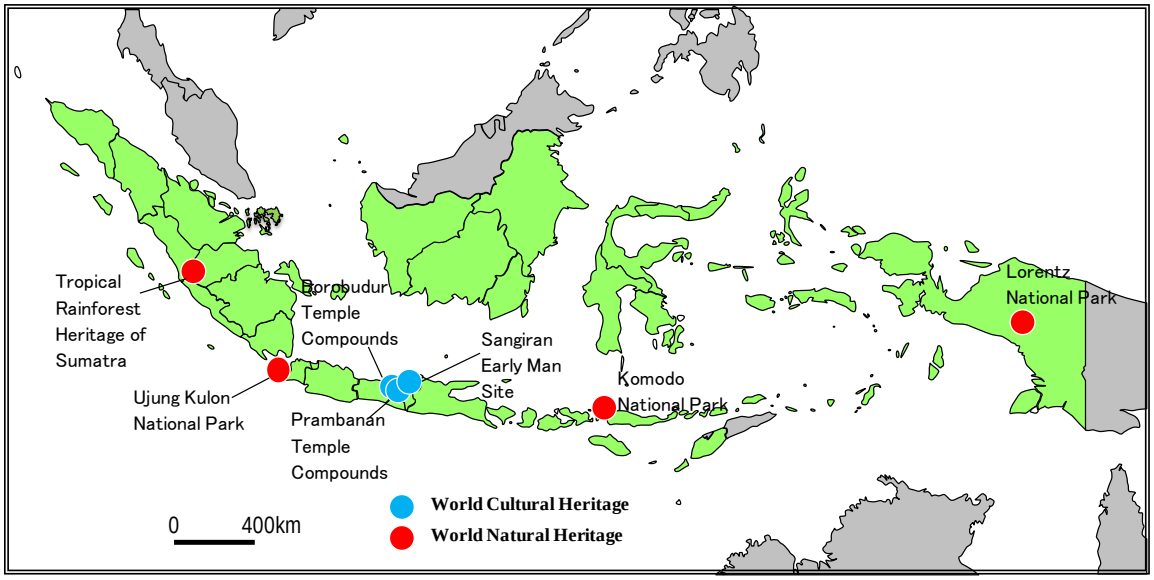


Source: JICA Survey Team based on Ramsar Information Service

Figure IV.1.12: Ramsar Convention Wetlands in Indonesia

3) World Heritage

There are three internationally recognized important cultural heritage sites and four natural heritage sites in Indonesia, which are registered as world heritage by the United Nations Educational, Scientific and Cultural Organization (UNESCO). These sites are mapped in Figure IV.1.13.

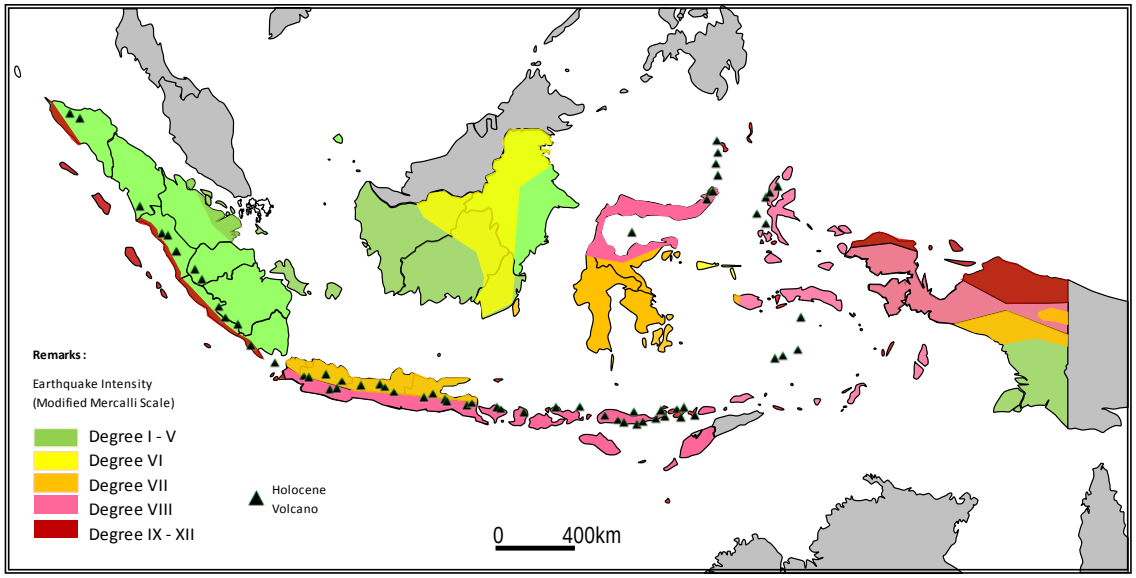


Source: JICA Survey Team based on UNESCO World Heritage Center

Figure IV.1.13: World Heritage Sites in Indonesia

4) National Hazard Map

Indonesia is highly-prone to natural disasters such as earthquakes, volcano eruptions and tsunamis. The lands are located along the Pacific Ring of Fire, where volcanic and seismic activity often happens. There are high probabilities for disasters and, thus, it is important to consider that foreign investors will likely avoid areas with highly-prone to natural disasters, as shown in Figure IV.1.14.



Source: JICA Survey Team based on Natural Hazard Risks Map of Indonesia, UN OCHA Regional Office, 15 February 2007

Figure IV.1.14: Natural Hazard Map of Indonesia (Earthquake Intensity and Holocene Volcanoes)

IV.2 Transportation and Logistics

SEZ candidate sites have to be receptive not only for economical but also physical aspect for any forthcoming concentrated economic development. As mentioned in Section 2.2.2, the LPI score in Indonesia is low although there has been a remarkable improvement from recent reports by WB regarding LPI. To select and establish SEZs in Indonesia, it is quite important to consider the existing prepared infrastructure and the potential for development. Accessibility to international seaports, airports, roads and railway network is an especially critical issue. It contributes to the establishment of a commodity distribution network for vigorous international trade and investment. This section discusses the transportation and logistics condition, especially for transportation which constitutes the commodity distribution network in and around the future SEZ area.

IV.2.1 Main Airports and Ports

Sea and air networks have been well-developed, covering the whole county to connect each main city since the country is composed of many islands. The location of the primary international airports and 25 strategic seaports in Indonesia are mapped in Figure IV.2.1. As of 2002, there are 24 international airports including two with no international flights, and 164 domestic airports in operation including 11 which are non-operational. As an island country, there are numerous seaports developed by the public and private sectors. Figure IV.2.1 shows the locations of 25 designated strategic ports.

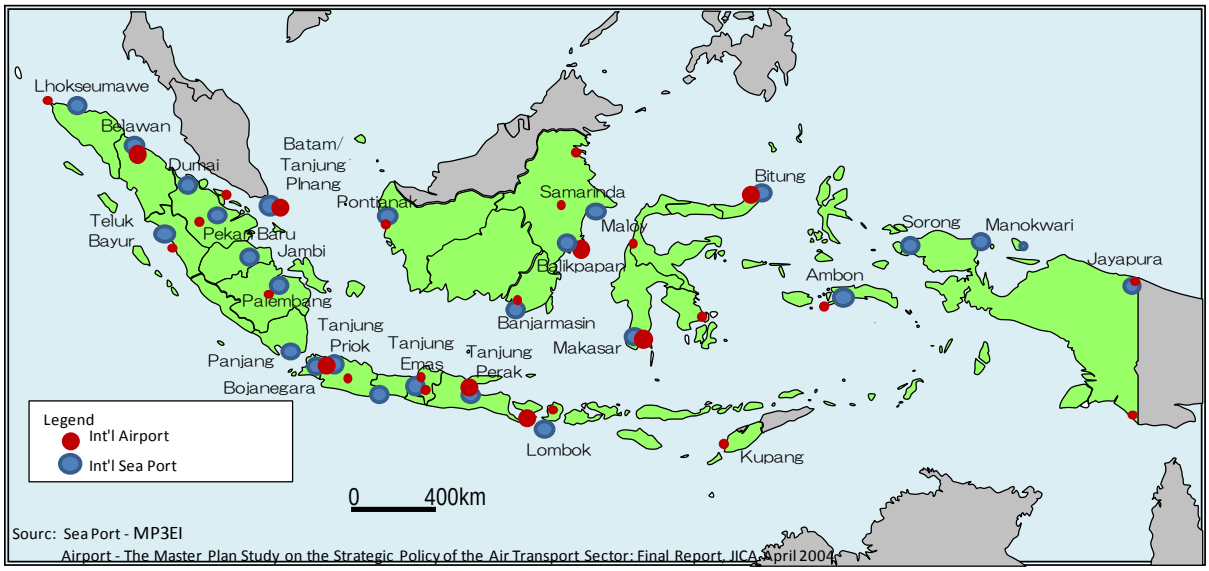


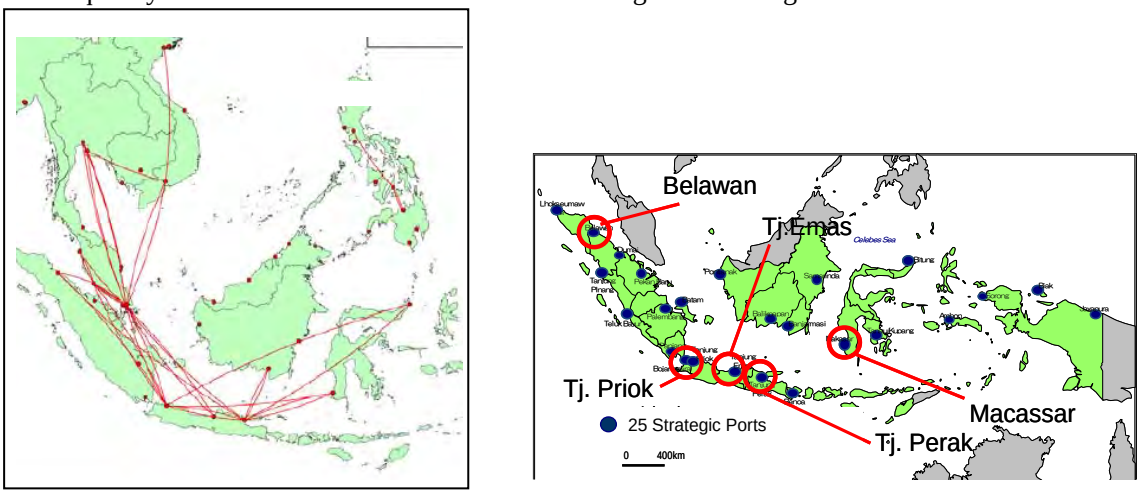
Figure IV.2.1: Location of International Airports and Strategic Sea Ports

IV.2.2 Maritime Transport Condition

Most Indonesian exports and imports delivered by sea are shipped via the port of Singapore. Large transoceanic ships do not make direct calls at Indonesian ports and most international shipping services from Indonesia are merely feeder services to Singapore. Container flows in the region

continue to be dominated by Singapore but its share has been dented by the emergence of Tanjung Pelepas in Malaysia.

With regards to ports in Indonesia, Tanjung Priok has the third highest frequency of shipment service in the ASEAN region. Aside from Tanjung Priok, several ports, such as Tanjung Perak, Belawan and Makassar have efficient services that are internationally competitive. Figure IV.2.2 shows the frequency of container liner routes in the ASEAN region as of August 2008.



Source: The Study on Guidelines for Assessing Port Development Priorities including Acceptable Performance Levels in ASEAN, JICA, February 2010

Figure IV.2.2: Container Liner Routes with more than Twice a Month Frequency in the ASEAN Region, as of August 2008

Three major container ports in Indonesia, namely Tanjung Priok, Belawan and Tanjung Perak, are more or less independent because of the geographical location of each port. It is difficult for any shipping line to deploy only one vessel to cover all these ports. One is direct calling at Tanjung Priok by comparatively larger ships and the other is direct calling at Belawan or Tanjung Perak by smaller ships. Tanjun Emas and Makassar have a large cargo throughput and facilitates enough capacity to be considered as a large port after the above three.

CHAPTER V: LESSONS FROM OTHER ECONOMIC ZONES

V.1 Lessons from KAPET

KAPET is an integrated economic development area established by the Indonesian government in order to accelerate economic development, mainly in the Indonesian Eastern Area (KTI). The KAPET in each province is designated as the growth pole in which it is intended to provide various added values for local products. Presidential Decree No. 150/2000 provides the legal base in developing KAPET, as well as Government Regulation No. 147/2000 that regulates the tax system in the KAPET's region. Currently, there are 14 established KAPETs in Indonesia. Figure V.1.1 shows the location of existing KAPET which are classified according to performance.

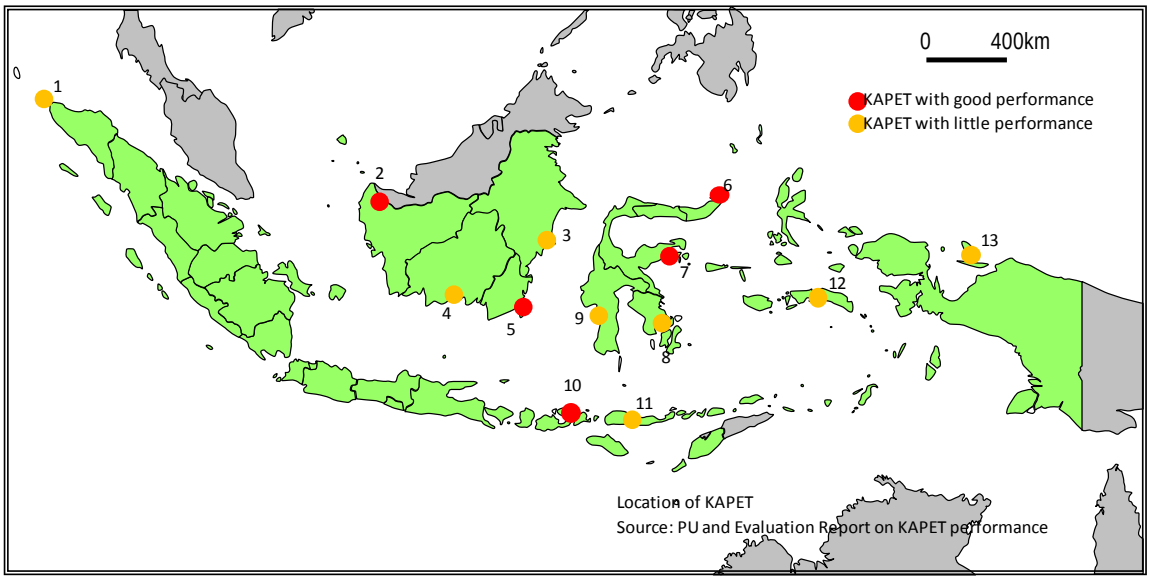


Figure V.1.1: Location of Existing KAPET and its Performance

KAPETs are scattered all over the country, but rather seem biased. Java and Papua islands do not have any KAPETs but Kalimantan and Sulawesi Island have four KAPETs each. Table V.1.1 shows the categories of industry being promoted in each KAPET.

Table V.1.1: Name of Institution and Promoting Industry of Existing KAPET

No.	Name of Institution	Promoting Category of Industry
1	BP KAPET Banda Aceh Darussalam (before Sabang)	
2	BP KAPET Khatulistiwa (before Sanggau)	Agro
3	BP KAPET Sasamba	
4	BP KAPET Kakab River Basin	
5	BP KAPET Batulicin	Mining, Steel, Palm oil, Energy
6	BP KAPET Manado Bitung	Tourism, Fishery
7	BP KAPET Palapas (before Batui)	LNPG, Palm oil, Cacao
8	BP KAPET Bank Sejahtera (before Bukari)	
9	BP KAPET Parepare	
10	BP KAPET Bima	Agro
11	BP KAPET Mbay	
12	BP KAPET Seram	
13	BP KAPET Biak	

Note: No.2,5,6,7, and 9 KAPET are evaluated as performing currently.

An independent survey team found that 5 out of 13 KAPETs have good performance. However, KAPETs have not fulfilled their role as economic growth centers in their respective regions even after 12 years. Reasons of this failure can be classified into four main aspects: 1) legal support, 2) regional development, 3) investment development, and 4) institution. From these aspects, the issue of KAPET and lessons learned from them for the forthcoming SEZ Development Master Plan are summarized in Figure V.1.2.

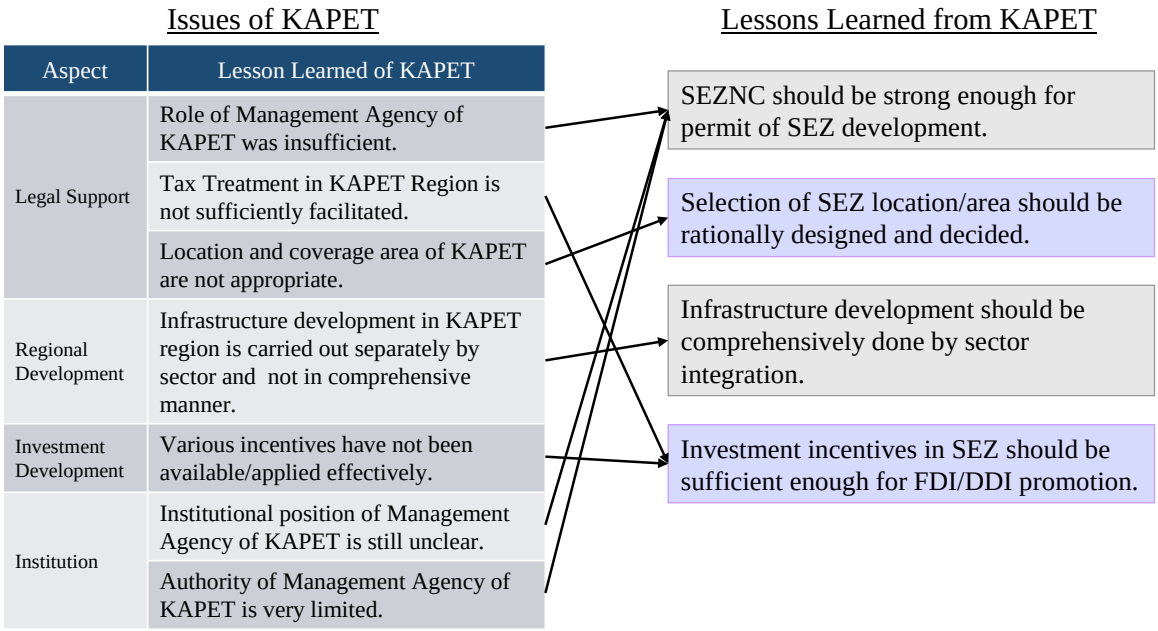


Figure V.1.2: Issues of KAPET and Lessons Learned

CHAPTER VI: NATIONAL SWOT ANALYSIS

In preparing the practical visions for SEZ development, the main issues in the present conditions discussed in the foregoing sections were summarized and evaluated with respect to Indonesia's viability as an investment destination in terms of its; i) strength, ii) weakness, iii) opportunity, and iv) threat, or also know as SWOT.

(1) Strength of Indonesia

Strengths of Indonesia as an investment destination are enumerated as follows:

- The fourth largest population in the world
- Abundant mineral, agricultural and marine resources
- Manufacture base industry is already established in and around Batam FTZ, Jakarta Metropolitan Area, and Surabaya
- Low investment cost

(2) Weakness of Indonesia

Weaknesses of Indonesia as an investment destination are enumerated as follows:

- Low evaluation as an investment destination by international agencies
- Low evaluation as an investment destination in mining resources
- Limited attractiveness of investment incentives
- Difficult and complicated approval process with unclear cost for FDI.
- Inadequate regional economic development schemes to attract investment such as KAPET
- Unclear national industrial development strategy

(3) Opportunity of Indonesia

Opportunities of Indonesia as an investment destination are enumerated as follows:

- Stable economic growth with increasing and high potential domestic market
- Price escalation of natural resources in the world

(4) Threat of Indonesia

Threat of the Indonesia as an investment destination is enumerated as follows:

- Vandalism due to regional economic gap between developed and undeveloped areas
- Developing multi-functional SEZs in neighboring countries to accommodate FDI seeking comprehensive and high-grade business environment
- Natural disaster risks from earthquakes, tsunami, volcanic eruptions
- Decrease of SEZ advantages regarding incentives on trade treatment in line with the progress of Free Trade Agreement (FTA)

CHAPTER VII: ENVIRONMENTAL CONSIDERATIONS

VII.1 Environmental Impact Assessment (EIA)

VII.1.1 Laws and Regulations

According to Article 6 Clause (2) of the SEZ Law (No. 39/2009), any proposal should require an Environmental Impact Assessment (EIA), or known as *Analisis Mengenai Dampak Linkungun*, (AMDAL) in Indonesia, in accordance with legislative regulations. Laws and regulations related to EIA are shown in Table VII.1.1.

Table VII.1.1: Laws and Regulations concerning Environment Impact Assessment

	Laws and Regulations	Contents
Laws	-Law on Environment Protection and Management (No.32/2009)	Fundamental law of environmental management
Regulations and Decree	-Governmental Regulation No.27/1999 concerning Analysis of Environment Impacts	Framework of Indonesian EIA
	-Regulation of Ministry of Environment No. 08/2006 Guideline for Arranging the Environmental Impact Analysis	Procedure and methodology of EIA
	-Regulation of Ministry of Environment No. 11/2006 on Types of Business Plan and/or Activity that require Analyses of Environmental Impact	Types of business plan or activity that require EIA
	-Decree of Ministry of Environment No.45/2005 Regarding Guideline for the Preparation of Environmental Management Plan (RKL) and Environmental Monitoring Plan (RPL)	Guideline for RKL and RPL which is necessary to comply with the EIA procedure
	-Decree of Ministry of Environment No 86/ 2002 Regarding Guidelines of Environmental Management Program (UKL) and Environmental Monitoring Program (UPL)	Guideline for UKL and UPL of the project which is beyond the coverage of EIA

Source: JICA Survey Team

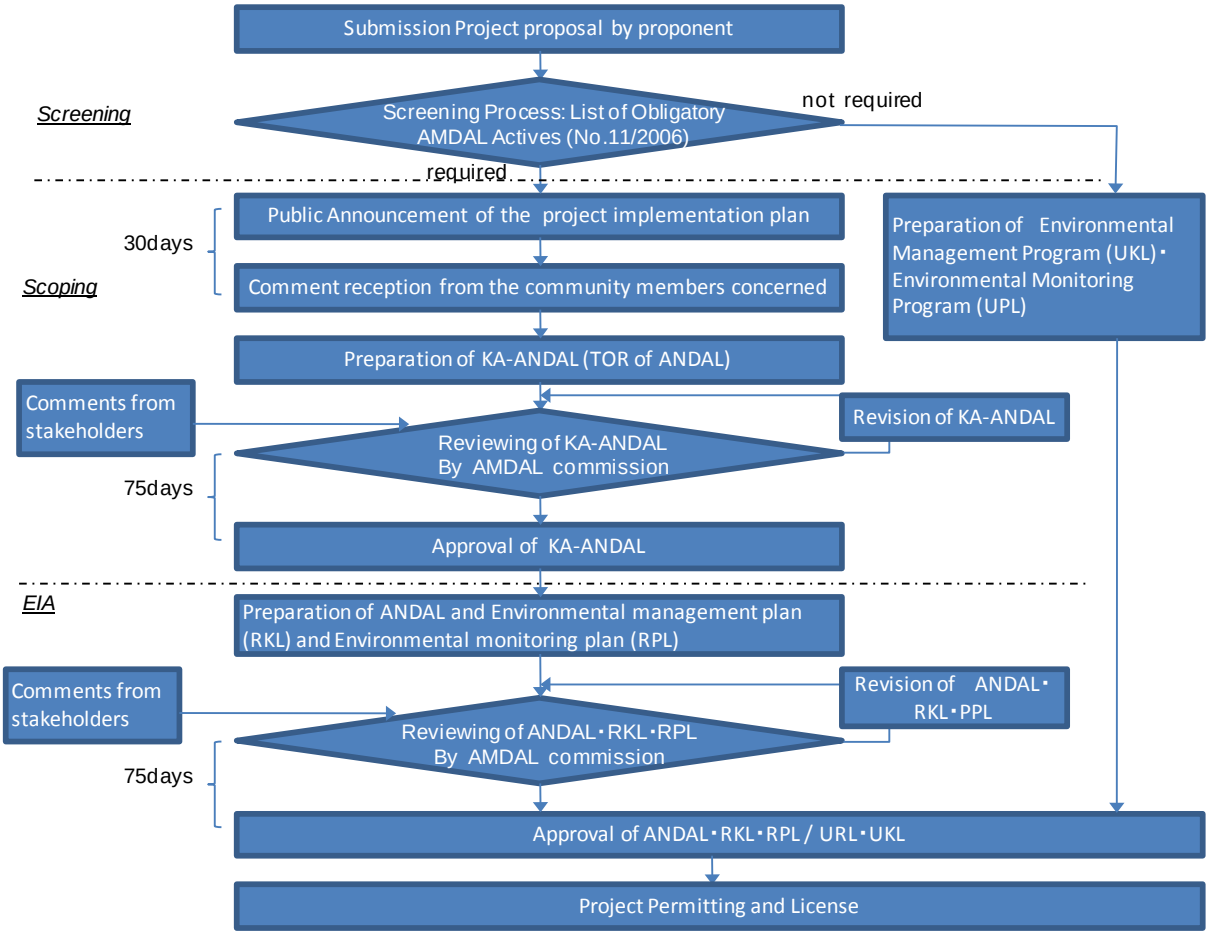
VII.1.2 Approach of EIA

The Indonesian government issues a list for a project or activity that requires EIA according to the type, scale and location of activity through the Ministry of Environment Regulation No. 11/2006. Projects not listed are obliged to prepare an Environmental Management Program (UKL) and Environmental Monitoring Program (UPL) documents in accordance with the Environmental Protection and Management Law 2009 (Article 34) and Decree of Ministry of Environment No.86/2002.

The Deputy 1, Environmental Spatial, in the Ministry of Environment is in charge of EIA in the Indonesian government.

VII.1.3 Procedure of EIA (AMDAL) in Indonesia

The procedure of EIA is shown in Figure VII.1.1. The first step of the EIA process is the screening procedure. Screening is done to determine whether a proposed project will be required to undergo the EIA procedure based on Regulation No.11/2006. For projects which are required, the next step is the preparation of the Terms of Reference (TOR) of ANDAL (KA-ANDAL) to be approved by the AMDAL Commission after the announcement of the plan for the business or activity. According to the Ministry of Environment Regulation No.8/2006, the scoping process seeks to define: (1) the scope of the study; (2) the types of activities of the project that may cause impact to the environment; (3) the environmental parameters likely to be affected by the project; (4) the method of data collection and analysis; (5) the potential and important impact identification; and (6) the methods of impact prediction and evaluation. Government Regulation No.27/1999 (Article 33 -35) defines the need of public involvement. Guidance on public involvement is set forth in Decree No.8 of 2006.



Source: JICA Survey Team based on Governmental Regulation No.27/1999 concerning Analysis of Environment Impacts

Figure VII.1.1: Procedure of EIA