No.

MINISTRY OF INDUSTRY
AND COMMERCE (MOIC)

JAPAN INTERNATIONAL
COOPERATION AGENCY (JICA)

# PREPARATORY SURVEY ON INDUSTRIAL ZONE DEVELOPMENT IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

## FINAL REPORT
## PART I
## NATIONAL INDUSTRIAL DEVELOPMENT

JUNE 2010

NIPPON KOEI CO., LTD.
INTERNATIONAL DEVELOPMENT CENTER OF JAPAN
MINTECH CONSULTANTS INC.

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**Survey Area for a Basic Plan (Whole of the Lao PDR)**

# PREFACE

Based on an agreement with the Government of the Lao People's Democratic Republic (Lao PDR), Japan International Corporation Agency (JICA) decided to conduct the "Preparatory Survey on Industrial Zone Development in the Lao PDR", aiming at the enhancement of the industrial sector in the country.

JICA dispatched a survey team which was headed by Mr. Nobuhiro OSHIMA, Nippon Koei Co., Ltd., to the Lao PDR between February 2009 and April 2010.

In cooperation with the Laotian counterpart, JICA Survey Team conducted the survey which consists of (1) formulating a basic plan for the integrated industrial development at national level, (2) formulating a conceptual design for each of the three industrial parks in Vientiane, Savannakhet, and Pakse, and (3) conducting a feasibility study (F/S) for the industrial park in Vientiane, through discussions with the relevant officials of the Government of the Lao PDR. Upon returning to Japan, JICA survey team finalized all the survey tasks, and then prepared and delivered the present report.

I hope that the this report will contribute to the promotion of the industrial development in the Lao PDR and to the enhancement of friendship between the two countries.

Finally, I wish to express my sincere appreciation to those who participated in and cooperated to the survey.

June 2010

Atsuro KURODA
Vice President
Japan International Corporation Agency

June 2010

**Mr. Atsuro KURODA**
Vice President
Japan International Corporation Agency
Tokyo

## Letter of Transmittal

Dear Sir,

We are pleased to formally submit herewith the final report of the “Preparatory Survey on Industrial Zone Development in the Lao PDR”.

This report includes the whole results of the survey which was conducted in the Lao PDR, in Japan, and in the third countries which are Thailand and Vietnam between February 2009 and June 2010 by a consortium consisting of Nippon Koei Co., Ltd. International Development Center of Japan, and Mintech Consultants Inc.

We would like to express our sincere appreciation and deep gratitude to your agency, the Government of the Lao PDR including the main Laotian counterpart, Ministry of Industry and Commerce (MoIC), and all other organizations and private persons who extended their extensive assistance to JICA Survey Team throughout the survey period. Thanks to the close cooperation and kind attention we benefited from these organizations and persons, we believe firmly that we could be rewarded with fruitful results which are mainly composed of (1) a basic plan for the integrated industrial development at national level, (2) a conceptual design for each of the three industrial parks in Vientiane Capital, Savannakhet, and Pakse, and (3) a feasibility study (F/S) for the industrial park in Vientiane Capital

We hope that the present report will contribute to promoting the industrial development in the Lao PDR and to the enhancement of friendly relations between the two countries.

Very truly yours,

**Nobuhiro OSHIMA**
Team Leader
The Survey Team for
The “Preparatory Survey on Industrial Zone Development in the Lao PDR”

# Preparatory Survey
# on
# Industrial Zone Development
# in
# the Lao People's Democratic Republic

## Final Report

## Part I

## National Industrial Development

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# Part II
# Industrial Estate Development in Vientiane Capital, Savannakhet and Champasak

**and**

# Part III
# Feasibility Study for Vientiane Industrial Park

**are bound separately.**

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## List of Abbreviations

| | |
|---|---|
| 450-YR | 450 Year Road |
| ADB | Asian Development Bank |
| AFTA | ASEAN Free Trade Area |
| AISP | ASEAN Integrated System of Preferences |
| ASEAN | Association of Southeast Asian Nations |
| BOI | Board of Investment |
| BPS | Bit Per Second |
| BRICs | Brazil, Russia, India, China |
| CA | Concession Agreement |
| CBR | California Bearing Ratio |
| CBTA | Cross Boarder Transport Agreements |
| CCA | Common Control Area |
| CDR | Crude Death Rate |
| CEPT | Common Effective Preferential Tariff |
| CIQ | Customs, Immigration and Quarantine |
| CLMV | the four newer ASEAN members consisting of Cambodia, Laos, Myanmar and Vietnam |
| CPI | Consumer Price Index |
| CPMI | Committee for Promotion and Management of Investment |
| D/D | Detailed Design |
| DDFI | Department for Promotion and Management of Domestic and Foreign Investment |
| DHUP | Department of Hosing and Urban Planning |
| DMS | Detailed Measurement Survey |
| DOF | Department of Forestry, Ministry of Agriculture and Forestry |
| DoIC | Division of Industry and Commerce |
| DoS | Department of Statistics, Ministry of Planning and Investment |
| DPI | Department for Planning and Investment |
| DPRA | Development Project Responsible Agency |
| DR | District Road Number |
| EA | Environmental Assessment |
| ECC | Environmental Compliance Certificate |
| EDL | Electricité du Laos |
| EIA | Environmental Impact Assessment |
| EMDP | Ethnic Minority Development Plan |
| EMP | Environmental Monitoring Plan |

| | |
|---|---|
| EPZ | Export Processing Zone |
| ESCC | Environmental and Social Compliance Certificate |
| ESIA | Environmental and Social Impact Assessment |
| ESIAD | Department of Environmental and Social Impact Assessment |
| ETL | Enterprise of Telecommunications Lao |
| EU | European Union |
| F/S | Feasibility Study |
| FDI | Foreign Direct Investment |
| FIA | Foreign Investment Agency |
| FTZ | Free Trade Zone |
| FY | Fiscal Year |
| GDP | Gross Domestic Product |
| GEL | General Exception List |
| GMS | Greater Mekong Sub-region |
| GPS | Global Positing System |
| GRDP | Gross Regional Domestic Product |
| GSP | General System of Preference |
| HQO | Head Quarter's Office |
| HS | Harmonized System |
| IE | Industrial Estate |
| IEAT | Industrial Estate Authority of Thailand |
| IEE | Initial Environmental Evaluation |
| IEZ | Industrial Estate Zone |
| IL | Inclusion List |
| IMF | International Monetary Fund |
| IP | Industrial Park |
| IPZ | Import Processing Zone |
| ISA | Initial Social Assessment |
| ISO | International Organization for Standardization |
| JBIC | Japan Bank for International Cooperation |
| JETRO | Japan External Trade Organization |
| JICA | Japan International Cooperation Agency |
| JIT | Just-In-Time |
| JST | JICA Survey Team |
| LACR | Land Acquisition and Compensation Report |
| Lao PDR | Lao People's Democratic Republic |
| LCL | Less Container Load |

| | |
|---|---|
| LDC | Least Development Country |
| LIEPDA | Laos Industrial Estate Promotion and Development Authority |
| LMA | Land Management Authority |
| LNCCI | Lao National Chamber of Commerce and Industry |
| LPCD | Liter Per Capita Day |
| MAF | Ministry of Agriculture and Forestry |
| M/M | Minutes of Meeting |
| MDGs | Millennium Development Goals |
| MLW | Ministry of Labor and Social Welfare |
| MoF | Ministry of Finance |
| MoIC | Ministry of Industry and Commerce |
| MoPI | Ministry of Planning and Investment |
| MOU | Memorandum of Understanding |
| M/P | Master plan |
| MPI | Ministry of Planning and Investment |
| MPWT | Ministry of Public Works and Transport |
| MSL | Mean Sea Level |
| NEC | National Environmental Committee |
| NEM | New Economic Mechanism |
| NGPES | National Growth and Poverty Eradication Strategy |
| NPC | Nam Papa UAD |
| NPS | Nam Papa Savannakhet |
| NPSEs | Nam Papa State Owned Enterprises |
| NPVC | Nam Papa Vientiane Capital |
| NR- | National Road Number |
| NSEDP | National Socio-Economic Development Plan |
| NTFPs | Non-Timber forest Products |
| O&M | Operation and Maintenance |
| O&M | Operation & Maintenance |
| OBOI | Office of the Board of Investment |
| ODA | Official Development Assistance |
| OSU | One-Stop-Service Unit |
| PAHs | Project Affected Households |
| PAPs | Project-affected peoples |
| PD | Project owner must submit project Description |
| PDA | Project Development Agreement |
| PI | Public Involvement |

| | |
|---|---|
| PIs | Public Involvements |
| PM | Prime Minister |
| PMO | Prime Minister's Office |
| PMU | Project Management Unit |
| PPA | Power Purchase Agreement |
| PPP | Public Private Partnership |
| R&D | Research and Development |
| RAP | Resettlement Action Plan |
| S/W | Scope of Work |
| SA | Social Assessment |
| SASEZ | Savan-Seno Special Economic Zone |
| SC | Steering Committee |
| SDH | Synchronous Digital Hierarchy |
| SED | Social and Environment Division |
| SEMC | Social and Environment Management Committee |
| SEZ | Special Economic Zone |
| SEZA | Savan-Seno Special Economic Zone Authority |
| SIDA | Swedish International Development Cooperation Agency |
| SL | Sensitive List |
| SOG | Secretariat of Government |
| SPT | Standard Penetration Test |
| STEA | Science, Technology and Environment Agency |
| STM | Synchronous Transport Module |
| TA | Technical Assistance |
| TEL | Temporary Exclusion List |
| TFR | Total Fertility Rate |
| TOR | Term of Reference |
| UDAA | Urban Development and Administration Authority |
| UNDP | United Nations Development Program |
| UNIDO | United Nations Industrial Development Organization |
| USD | United States Dollar |
| UXO | Unexploded Ordinance |
| VAT | Value-Added Tax |
| VEPZ | Vientiane EPZ |
| VIP | Vientiane Industrial Park |
| VIPA | Vientiane Industrial Park Authority |
| VIZ | Vientiane Industrial Zone |

| | |
|---|---|
| VLP | Vientiane Logistics Park |
| VMI | Vendor Management Inventory |
| VUDAA | Vientiane Urban Development and Administration Authority |
| WASA | Water Supply Authority |
| WREA | Water Resources and Environment Agency |
| WREO | Office of Water Resources and Environment Administration |
| WSD | Water Supply Division |
| WSRC | Water Supply Regulatory Committee |
| WSRO | Water Supply Regulatory Office |
| WTO | World Trade Organization |
| WTPs | Water Treatment Plants |

# INTRODUCTION

## Background

Being a landlocked country and confronted with a lot of geographical difficulties, the Lao People's Democratic Republic (hereinafter referred to as "the Lao PDR") is quite disadvantaged in terms of international economic activities. Moreover, natural resources exploitation and human resources development are retarded in the Lao PDR, which is a main reason why it remains one of the most underdeveloped countries in Asia when it comes to developing industry sector. However, thanks to the transportation networking of the east-west and the north-south economic corridors which is ongoing under the Greater Mekong Sub-region (GMS) design, the Lao PDR have just begun to succeed in changing disadvantages into advantages, metamorphosing from an "isolated landlocked country" to an "important crossroads of regional transportation".

The Government of the Lao PDR focuses on importance of economic competitiveness, improvement of economic infrastructure, enhancement of market economy, industrial build-up, and, making the most of the nation's opportunities and comparative advantages within the framework of the existing international organizations, such as Association of Southeast Asian Nations (ASEAN), World Trade Organization (WTO), etc. Though the existence of industrial parks is considered important for economic development, there are no integrated industrial laws or organizations in charge of industrial development at national level which are necessary for balanced economic advancement.

In this context, it is important to formulate a basic plan for the integrated development of industry at national level. At the same time, the conceptual design for an industrial park is needed in main cities such as Vientiane Capital, Savannakhet and Pakse, according to the basic plan for industrial development. With a view to realizing the scheme in the capital city, a feasibility study (F/S) shall be also carried out, as a part of the Survey, for the industrial park in Vientiane Capital.

## Objectives

The main objectives of the Survey are as follows:

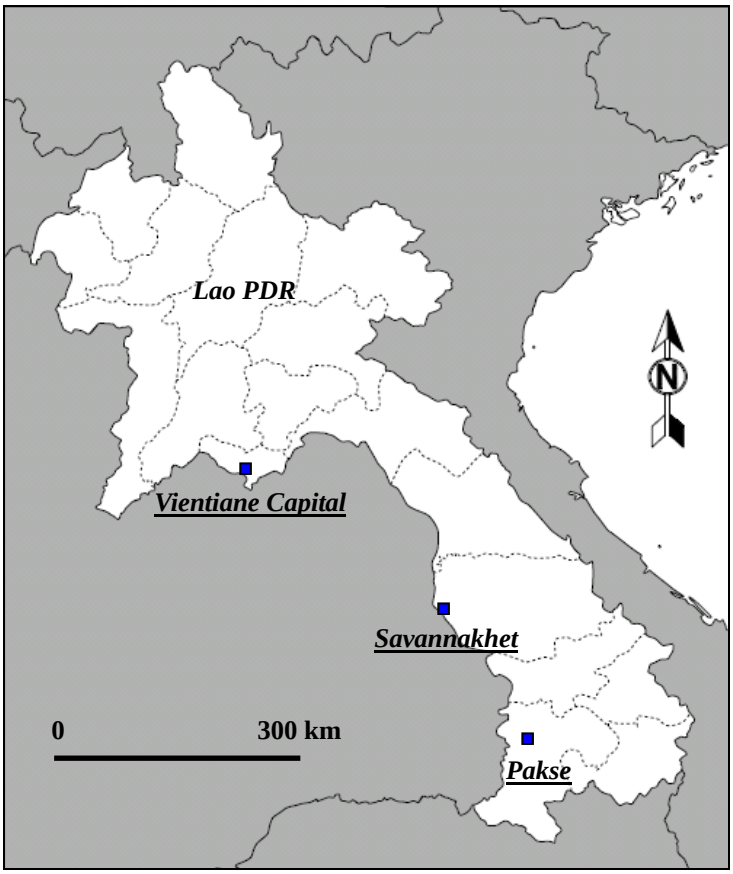
(1) To formulate a basic plan for the integrated development of industry at national level,

(2) To formulate a conceptual design for each of the three industrial parks in Vientiane Capital, Savannakhet and Pakse, and

(3) To execute a Feasibility Study (F/S) for the industrial park in Vientiane Capital to be implemented by a potential fund of Official Development Assistance (ODA) scheme.

## Survey Area

The Survey area for a basic plan covers the whole of the Lao PDR. The basic plan aims at providing a general policy and essential features for industrialization of the country (See Figure on the next page). Then, the conceptual design for an industrial park will be formulated in Vientiane Capital, in Savannakhet, and in Pakse. Finally, a feasibility study (F/S) will be carried out for the industrial park in Vientiane Capital.




**Survey Area for a Basic Plan (Whole of the Lao PDR)**

## Structure of the Draft Final Report

The Draft Final Report consists of three parts as follows.

- Part-I National Industrial Development

  The integrated development of industry at national level is planned in this part. This part also includes a socioeconomic projection, the aspect of legal & institutional system, and the result of an investment demand survey.

- Part-II Industrial Estate Development in Vientiane Capital, Savannakhet and Champasak

  Priority regions for industrial estate development are selected. A basic industrial estate development plan is formulated for each of the three (3) selected regions, which are Vientiane Capital, Savannakhet and Champasak (Pakse).

- Part-III Feasibility Study for Vientiane Industrial Park

  In Vientiane Capital, which is considered as the area with the first priority for industrial estate development, a feasibility study is conducted for the 1st stage of VIP (Vientiane Industrial Park).

# PART I NATIONAL INDUSTRIAL DEVELOPMENT

# CHAPTER 1 NATIONAL ECONOMY AND INDUSTRIAL SECTOR

## 1.1 Population and Employment

### 1.1.1 Population Growth and Population Distribution among Province

Table 1.1.1 indicates the change and annual average growth rates of population in the census years. The population of the Lao PDR had doubled from 2.9 million in 1976 to 5.6 million in 2005, a growth rate higher than that in East Asia and the Pacific[1]. However, the growth rate is gradually decreasing, from 2.5% in 1976-85 to 2.0% in 1995-2005. According to the Statistical Yearbook 2008, the population was recorded at six million in 2008.

**Table 1.1.1: Population and Annual Average Growth Rate in Census Years**

| Year | 1976 | 1985 | 1995 | 2005 |
|---|---|---|---|---|
| Total Population (000 persons) | 2,886 | 3,618 | 4,605 | 5,622 |
| Annual Average Growth Rate (%) | - | 2.5 | 2.4 | 2.0 |

Source: Statistical Yearbook 1975-2005, 2007, DoS

**Table 1.1.2: Population by Provinces in 1995 and 2005**

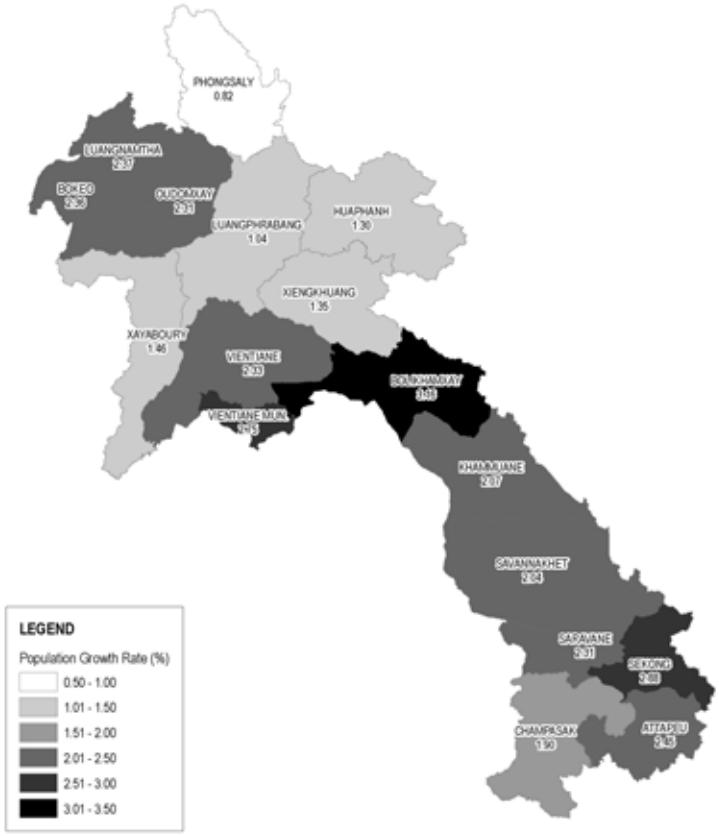
| Province | Population (000 persons) | | Percentage share (percent) | |
|---|---|---|---|---|
| | 1995 | 2005 | 1995 | 2005 |
| Vientiane Capital | 524 | 698 | 11.6 | 12.4 |
| Phongsaly | 153 | 166 | 3.3 | 3.0 |
| Luang Namtha | 115 | 145 | 2.5 | 2.6 |
| Oudomxay | 210 | 265 | 4.6 | 4.7 |
| Bokeo | 114 | 145 | 2.5 | 2.6 |
| Luangprabang | 365 | 407 | 8.0 | 7.2 |
| Huaphanh | 245 | 281 | 5.4 | 5.0 |
| Xayaboury | 292 | 339 | 6.4 | 6.0 |
| Xiengkhuang | 201 | 241 | 4.4 | 4.3 |
| Vientiane | 287 | 417 | 6.2 | 7.4 |
| Borikhamxay | 164 | 225 | 3.6 | 4.0 |
| Khammuane | 272 | 337 | 6.0 | 6.0 |
| Savannakhet | 672 | 826 | 14.7 | 14.7 |
| Saravane | 256 | 324 | 5.6 | 5.8 |
| Sekong | 64 | 85 | 1.4 | 1.5 |
| Champasak | 501 | 607 | 10.9 | 10.8 |
| Attapeu | 87 | 112 | 1.9 | 2.0 |
| Xaysomboon SR | 54 | - | 1.2 | 0.0 |
| Total | 4,575 | 5,622 | 100 | 100 |

Source: Census 2005 and 1995, Steering Committee of the Population and Housing Census

[1] Annual average population growth rate in Lao PDR from 1976 to 2005 is recorded at 2.3%. The rate is 0.9 point higher than population growth in East Asia & Pacific (data from World Development Indicators 2009).

Table 1.1.2 indicates the change of provincial population and percentage share in the total national population. Figure 1.1.1 illustrates the annual population growth rate by provinces between 1995 and 2005. The following characteristics are observed:

- In the northern provinces, Luang Namtha (2.4%), Bokeo (2.4%) and Oudomxay (2.3%) recorded higher annual growth rates than the national average (2.0%). The growth rates in other provinces are observed at lower figures.
- In the central and southern provinces, the annual population growth rate is higher than the national average, except for Champasak Province (1.9%). In particular, Bolikhamxay (3.2%), Sekong (2.9%) and Vientiane Capital (2.9%) experienced high growth.




Source: Census 1995 and 2005

**Figure 1.1.1: Population Growth Rate by Province, 1995-2005**

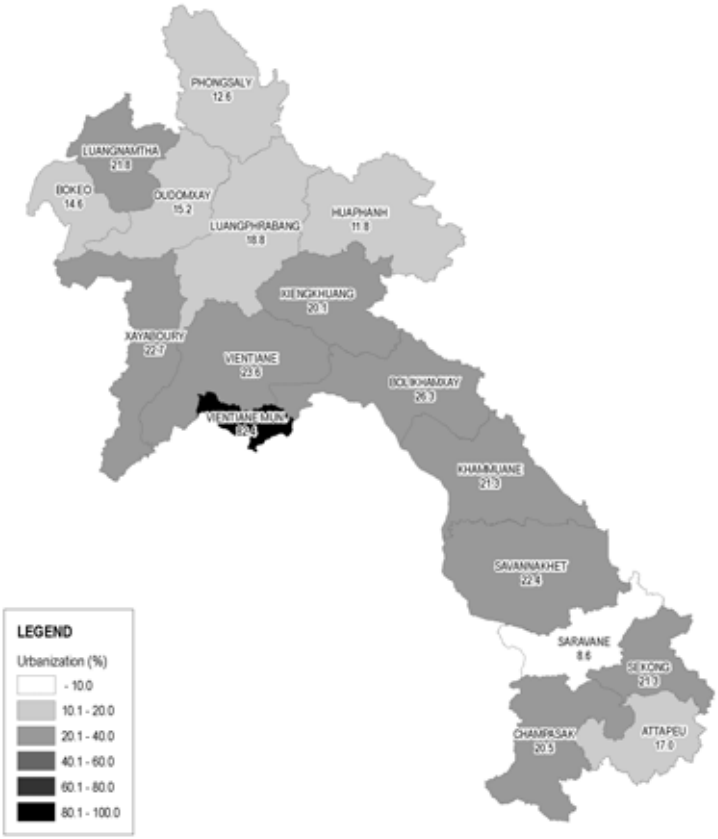
### 1.1.2 Urbanization

The Census 2005 report introduced the definition of "urban", "rural with road" and "rural without road" to classify villages. An urban village has the following characteristics:

- The village must lie in a municipal vicinity where the district or provincial authority is located, and there are more than 600 residents or more than 100 households.
- There is a road for motor vehicles to get access to the village.
- The majority of households in the village are electrified.
- There is a tap water supply service to the majority of households.
- There is a market in the village.

Population of urban villages was 15 million, occupying 27% of the total population in 2005. Figure 1.1.2 indicates percentages of population in the urban villages to the total population by provinces (referred to as "urbanization ratio"). The percentage of Vientiane Capital is recorded at 82%, followed by Bolikhamxay (26%), Vientiane Province (24%), Xayaboury (23%), Savannakhet (22%), Luang Namtha (22%), Khammuane (21%) and Sekong (21%).

The urbanization ratio at the provincial level shows that urbanization continues only in Vientiane Capital, and urbanization of other cities lags behind. However, the Population Division of the United Nations analyzes that the urbanization ratio will increase to 49 percent in 2025[2], due to rapid economic development and the inflow of population from the rural area.



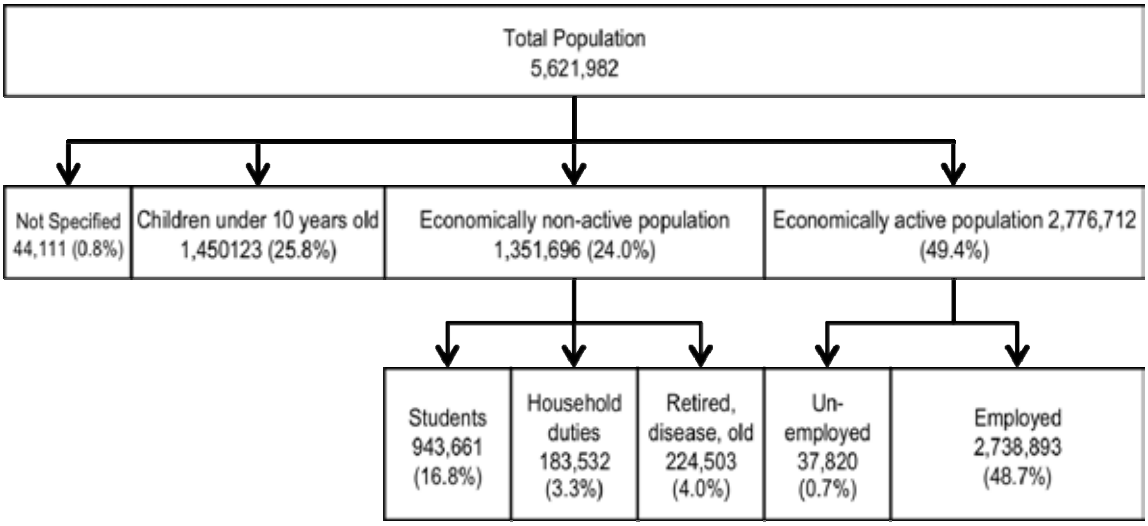

Source: Census 1995 and 2005

**Figure 1.1.2: Urbanization Ratio in 2005**

### 1.1.3 Labor Force

The distribution of the population by economic and non-economic activities in 2005 is indicated in Figure 1.1.3. In comparison with the same data in the previous census in 1995, the proportion of the economically active population to the total population has increased by 10 points, from 40% in 1995 to 50% in 2005. As a result, the increase of the economically active population was recorded at 556,000 during the period.

[2] Data from "World Urbanization Prospects: The 2007 Revision" prepared by Population Division, Department of Economic and Social Affairs, the United Nations Secretariat (http://esa.un.org/unup/p2k0data.asp)




Source: Results from the Population and Housing Census 2005, Steering Committee for Census of Population and Housing

**Figure 1.1.3: Distribution of Population by Economic Activity in 2005**

In Figure 1.1.3, the unemployed population is estimated at 37,820. The figure doesn't seem to reflect the real situation of unemployment. Such low figure comes from the following two reasons. The first one is due to the limited survey of unemployment. The Ministry of Labor and Welfare and Labor Allocation Enterprise have functions to match labor demand and labor supply. This is the only method to have information about unemployment. The other reason is due to the hidden unemployment in traditional agriculture.

Table 1.1.3 indicates the labor force by economic sectors from 2001 to 2006. The total employment in 2005 in the table is different from the "Employed" in Figure 1.1.3 due to different data sources. Data on labor force by economic sectors and by industries is limited in the country at present. It is expected that labor statistics with reliable time-series data will be prepared in order to grasp the composition of industries from the viewpoint of labor force and employment situation. Such statistics is a basis for employment policy.

The percentage share of each sector has been stable during the period; the primary sector is 82%, the secondary sector is 10%, and the tertiary sector is 8%.

**Table 1.1.3: Labor Force by Economic Sectors**

(Unit: 000 persons)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|---|---|---|---|---|---|
| Total employment | 2,444 | 2,491 | 2,537 | 2,130 | 2,197 | 2,739 |
| Primary | 2,021 | 2,053 | 2,085 | 1,754 | 1,811 | |
| Secondary | 250 | 263 | 274 | 209 | 214 | |
| Tertiary | 173 | 175 | 178 | 167 | 172 | |
| Primary/ total employment (%) | 82.7 | 82.4 | 82.2 | 82.3 | 82.4 | - |
| Secondary/ total employment (%) | 10.2 | 10.6 | 10.8 | 9.8 | 9.7 | - |
| Tertiary/total employment (%) | 7.1 | 7.0 | 7.0 | 7.8 | 7.8 | - |

Source: Socioeconomic Base of the Lao PDR, JICA Laos Office

In the Lao PDR, migrant workers, who are mostly in Thailand, have significant volume. However, most of them are unofficial workers. According to the Census 2005 report, net migrant population was

138,000 during 1995 and 2005. Moreover, according to a report titled "Labor Export - A Contribution to Lao Development[3]," the following characters of migrant workers are described:

- Registered number of Lao migrant workers in Thailand was 181,614 in 2006 when the report was compiled.
- Most of them were young people aged 16 to 24, with 45% men and 55% women.
- Estimated real figure of Lao migrant workers, which includes both registered and unregistered migrants in Thailand, were 200,000 to 300,000.
- Peak period of migration was between 2000 and 2003 after the Asian financial crisis when the Lao kip depreciated against both the US dollar and Thai baht.
- Workers sent or carried 1,000 to 2,500 baht per month, and it is estimated that the annual total remittance amounted to USD100 million.

## 1.2 Trend of National Economy and Industrial Sector

### 1.2.1 National Economy

(1) GDP Growth Rate by Sector

Lao economy has grown rapidly in recent years. Average real GDP growth rate was 6.9% per annum for 7 years from 2000 to 2006. During this period, GDP per capita grew from USD342 to USD613. This growth was brought mainly by the industrial sector.

During the 2000-2006 period, the average growth rate of real GDP was 5.5% for the agricultural sector; 6.4% for the service sector; and 12.3% for the industrial sector. Compared with other sectors, the industrial sector has sustained high growth rate.

**Table 1.2.1: GDP Growth by Sector**

| Sector | Growth Rate | GDP at Constant 1990 Price(Million Kip) | |
|---|---|---|---|
| | 2000-2006 | 2000 | Estimate 2006 |
| Agriculture | 5.5% | 583,591 | 702,242 |
| Industry | 12.3% | 254,283 | 525,050 |
| Services | 6.4% | 281,491 | 415,497 |
| Import duties | 14.1% | 7,749 | 16,114 |
| GDP at market price | 6.9% | 1,127,114 | 1,658,903 |

Note: Agriculture includes crops, livestock & fishery, and forestry. Industry includes mining & quarrying, manufacturing, construction, and electricity.
Sources: National Statistics Center, CPI

(2) Narrowing of the Gap between Agriculture and Industry

As shown in Figure 1.2.1, the GDP share of the agricultural sector decreased from 60.7% (1990) to 42.3% (2006); while that of the industrial sector increased from 14.4% (1990) to 31.7% (2006). The gap between agriculture and industry has been narrowing year by year, although the agriculture sector is still the largest sector in terms of GDP share in 2005.

[3] "Labor Export A contribution to Lao Development" Technical Background Paper for the third National Human Development Report Lao PDR 2006, Khamsavath Chanthavysouk, 2006

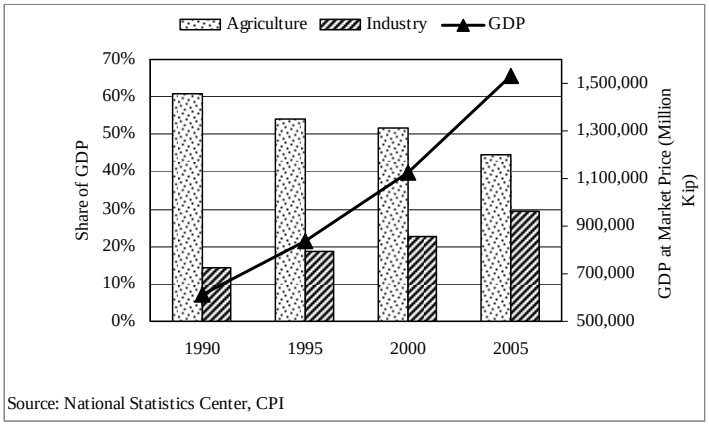



**Figure 1.2.1: Change in GDP Share of Agriculture and Industry**

(3) Change in Employment Structure

Figure 1.2.2 illustrates the employment structure in the nation in 2005. Agriculture population accounted for 82.4% of the total employed population (2.197 million) in that year. Working-age population has been projected to expand by approximately 66,000 per annum during the period from 2010 to 2015, and by 62,000 per annum during the period from 2016 to 2020.[4] It is difficult to increase the employment population through agriculture. Under these circumstances, the Lao PDR faces the critical issue of how to create job opportunities for the growing working-age population.

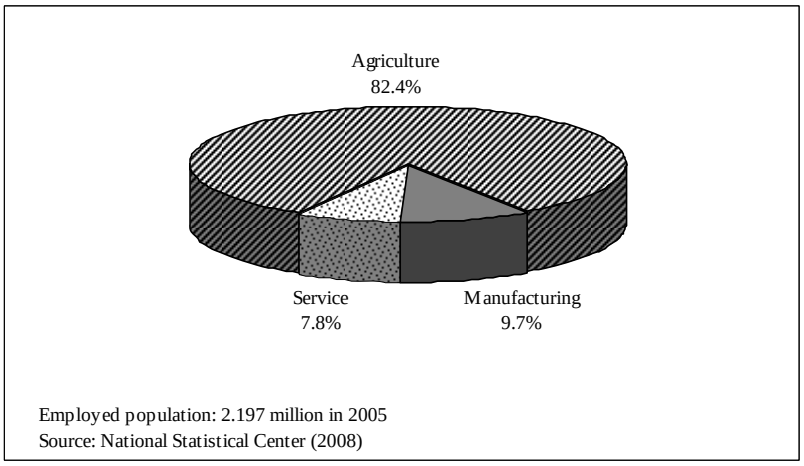



**Figure 1.2.2: Employment Structure (2005)**

The Lao PDR has large mountain area accounting for approximately 80% of the country, and narrow arable area with only 4% of the country[5]. In the agriculture sector, labor productivity will be increased through mechanization. As a result, the number of farmers required for the same production will be decreased. In fact, the employed population of the agriculture sector was slightly reduced during the period from 2001 to 2005. It is highly expected that the industrial sector should provide more job opportunities so as to employ the extra labor force to be generated by the growth in agriculture labor productivity.

[4] Shintaro NAKAMURA, Present situations and problems in the Lao PDR as an inland state (2008)
[5] http://www.maff.go.jp/www/counsil/counsil_cont/nouson_sinkou/nogyo_noson_seibibukai/kokusai_syoiin/2/5-1.pdf

### 1.2.2 Industrial Sector

(1) Changes in the Industrial Sector

The industrial sector has maintained significant growth giving a large impact to the GDP of the nation. Real GDP of the nation increased by LAK532 billion during the 2000-2006 period. The industrial sector contributed 50.9% of this total GDP growth, while the agricultural sector, service sector, and import duties contributed 22.3%, 25.2%, and 1.6%, respectively.

Examining further the industrial sector, the mining and quarrying industries showed a remarkable growth. As shown in Table 1.2.2, the composition ratio of mining and quarrying industries significantly increased from 1.0% in 1990 to 16.8% in 2006. This remarkable increase was largely brought about by copper and gold production at the Sepon mine, which commenced in 2003.

**Table 1.2.2: GDP Share in the Industrial Sector in 1990 and 2006**

| Sector | 1990 | 2006 |
|---|---|---|
| Industry | 100.0% | 100.0% |
| Mining & Quarrying | 1.0% | 16.8% |
| Manufacturing | 68.6% | 64.8% |
| Construction | 20.3% | 10.2% |
| Electricity | 10.0% | 8.1% |

Sources: National Statistics Center, CPI

The manufacturing industry maintained over 60% of the industries during the period. In addition, the manufacturing sector showed steady average growth of 9.9% per annum.

In terms of contribution to the real GDP growth of the nation, the manufacturing industry provided 26.8% of the total, and the mining and quarrying industries provided 8.4%.

(2) Manufacturing Industry

*1) Group of Industry and Scale of Factory*

Table 1.2.3 shows the number of factory as of 2008 in the country by group of industry and scale.

As for the classification of factories by scale, Level-1, 2 and 3 are defined as follows by the law on the processing industry:

- Level 1 factory: a type of large-scale factory with a total labor force in excess of 200 people or mechanized power in excess of 200 horsepower or which has a high level of environmental impact.
- Level 2 factory: a type of medium-scale factory with a total labor force from 51 to 200 people or mechanized power from 51 to 200 horsepower or which has a medium level of environmental impact.
- Level 3 factory: a type of small-scale factory with a total labor force from 10 to 50 people or mechanized power from 5 to 50 horsepower or which has a low level of environmental impact.

Generally speaking, most factories are small scale in the Lao PDR; and the food and beverage industry, which is the principal industry in terms of number, has a lot of small-scale factories.

**Table 1.2.3: Number of Factory by Group of Industry and Scale**

| ISIC Rev.3 | Activity | Number of Factory | | | |
|---|---|---|---|---|---|
| | | Level 1 | Level 2 | Level 3 | Total |
| 15 | Food products & beverages | 23 | 102 | 18,675 | 18,800 |
| 16 | Tobacco products | 3 | 2 | 792 | 797 |
| 17 | Textiles | 10 | 16 | 119 | 145 |
| 18 | Wearing apparel | 531 | 30 | 302 | 863 |
| 19 | Leather and leather products | 4 | 1 | 22 | 27 |
| 20 | Wood and wood products | 41 | 26 | 174 | 241 |
| 21 | Paper & paper products | 1 | 9 | 4 | 14 |
| 22 | Publishing, printing, etc. | 1 | 1 | 5 | 7 |
| 23 | Coke, refined petroleum products, etc. | | | 1 | 1 |
| 24 | Chemicals and chemical products | 5 | 15 | 123 | 143 |
| 25 | Rubber & plastics products | 6 | 4 | 21 | 31 |
| 26 | Other non-metallic mineral products | 29 | 70 | 909 | 1,008 |
| 27 | Basic metals | 10 | 4 | 9 | 23 |
| 28 | Fabricated metal products | 5 | 10 | 159 | 174 |
| 29 | Machinery and equipment n.e.c. | 1 | 35 | 12 | 48 |
| 30 | Office, accounting and computing machinery | | 1 | 1 | 2 |
| 31 | Electrical machinery and apparatus n.e.c. | 3 | 3 | 516 | 522 |
| 32 | Radio, TV and communication equipment & apparatus | 1 | 1 | 12 | 14 |
| 33 | Medical, precision, and optical instruments | | | 30 | 30 |
| 34 | Motor vehicle, trailers and semi-trailers | 1 | 12 | 149 | 162 |
| 35 | Other transport equipment | 2 | 5 | 249 | 256 |
| 36 | Furniture, manufacturing n.e.c. | | | 153 | 153 |
| 40 | Electricity, gas, steam & hot water supply | 1 | 3 | 3 | 7 |
| 41 | Collection, purification and distribution of water | 1 | 3 | | 4 |
| Combination of 20 and 36 | Combination of wood processing and furniture | 178 | 139 | 377 | 694 |
| Total | | 857 | 492 | 22,817 | 24,166 |

Source: MoIC

There were 24,166 factories in the country, according to the internal data of Ministry of Industry and Commerce (2008) as shown by Table 1.2.3. The manufacturing industry has the following characteristics in terms of the number of factory:

- Number of Level 3 factories (small-scale factories) accounted for 94.4% of the total.
- Number of food and beverage factories was dominant accounting for 77.8% of the total. However, the food and beverage industry is not considered as the principal industry in terms of production output and number of labor, since 99.3% of factories are small-scale.
- In contrast, the wearing apparel industry was generally large-scale in the nation. 61.5% of Level 1 factories belonged to the wearing apparel industry. In addition, 61.9% of factories of the wearing apparel industry were classified as Level 1 (large-scale).

*2) Geographical Distribution of Factories*

Table 1.2.4 shows the geographical distribution of factories in the four regions of the nation, namely: Vientiane Capital, Northern Region, Central Region, and Southern Region.

- The Northern Region consists of seven provinces, namely: Phongsaly, Luang Namtha, Oudomxay, Bokeo, Luang Prabang and Xayabury.
- The Central Region consists of five provinces, namely: Xiengkhuang, Vientiane, Boilikhamxay, Khammuane and Savannakhet.

- The Southern Region consists of four provinces, namely: Saravane, Sekong, Champasak and Attapeu.

**Table 1.2.4: Geographical Distribution of Factories (2008)**

| | Level 1 | | Level 2 | | Level 3 | |
|---|---|---|---|---|---|---|
| Region | No. of Factory | Ratio by Region | No. of Factory | Ratio by Region | No. of Factory | Ratio by Region |
| Vientiane Capital | 566 | 66.0% | 103 | 20.9% | 1,503 | 6.6% |
| Northern Region | 82 | 9.6% | 198 | 40.2% | 7,296 | 32.0% |
| Central Region | 151 | 17.6% | 145 | 29.5% | 10,991 | 48.2% |
| Southern Region | 58 | 6.8% | 46 | 9.3% | 3,027 | 13.3% |
| **Whole Country** | **857** | 100.0% | **492** | 100.0% | **22,817** | 100.0% |

Source: MoIC

Geographical distribution of factories was characterized as follows:

- 66% of the large-scale factories (Level 1) in the nation were concentrated in Vientiane Capital.
- Small-scale factories (Level 3) were mainly situated in the Central Region (48%) and the Northern Region (32%).
- Regardless of scale, only small number of factories was located in the Southern Region.

Figure 1.2.3 shows the number of factory employees by region. Vientiane Capital had the largest number of factory employees in the nation, accounting for 41% of the total number. The second largest was the Central Region (30%), followed by the Northern Region (17%) and the Southern Region (12%). The ranks of the number of factory employees are the same as those of the number of large-scale factories (Level 1).

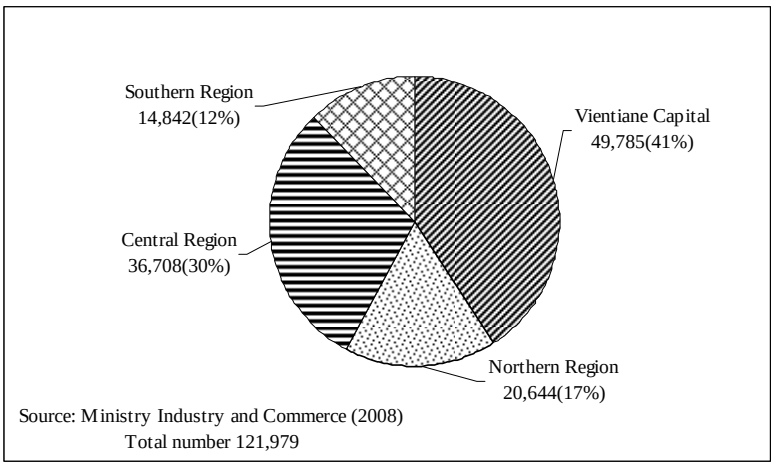



**Figure 1.2.3: Number of Factory Employees by Region (2008)**

(3) Mining and Quarrying Industry

The Lao PDR has rich but not very much exploited mineral resources such as tin, coal, zinc, copper, gold, silver, gypsum, sulfur, and sapphire.

Sepon mine in Savannakhet Province, which produces gold, silver and copper, has given large contributions to the nation's economic development. Besides, mineral resources are being produced

at several mines such as Phu Kham (gold, silver and copper), Kaiso in Vientiane Province (zinc), Dong Hene in Savannakhet Province (gypsum), and Nam Pathene Valley in Khammuan Province (tin)[6].

The following Table 1.2.5 shows the changes in the production volume of mineral resources during the period from 2000 to 2007. In general, the production volume of mineral resources has expanded during the period. High GDP growth in the mining and quarrying sector was achieved by the increase in production.

In the Lao PDR, there are some metal smelting plants and cement plants producing cement from locally available limestone, coal and gypsum, for example in Vientiane Province. These plants are categorized as the manufacturing industry utilizing locally available mineral resources. Generally speaking, the location of this type of manufacturing base is largely dependent on the location of mineral resource production.

**Table 1.2.5: Mineral Resource Production during 2000-2007**

| Product | Unit | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|
| Lead | tons | 470 | 816 | 615 | 840 | 668 | 787 | 809 | 1,109 |
| Barite | 1,000 tons | 3 | 4 | 6 | 4 | 14 | 14 | 7 | 1 |
| Coal lignite | 1,000 tons | 300 | 210 | 270 | 250 | 300 | 320 | 319 | 682 |
| Stink coal | tons | 253 | 230 | 100 | 41 | ... | ... | ... | ... |
| Gypsum | 1,000 tons | 190 | 150 | 99 | 98 | 236 | 239 | 206 | 232 |
| Gravel | 1,000 $m^3$ | 460 | 640 | 665 | 690 | 850 | 900 | 900 | 943 |
| Sand | 1,000 $m^3$ | 300 | 483 | 520 | 535 | 800 | 850 | 700 | 920 |
| Coal anthracite | 1,000 tons | - | - | 31 | 41 | 46 | 51 | 62 | 80 |
| Zinc | tons | - | - | 4,000 | 6,000 | 11,000 | 10,000 | 4,000 | 12,116 |
| Limestone | tons | - | - | 100 | 100 | 410 | 420 | 430 | 450,000 |
| Gold | kg | - | - | - | 8,900 | 7,000 | 10,134 | 11,915 | 8,207 |
| Copper | tons | - | - | - | - | - | 31,000 | 60,758 | 62,621 |
| Tin | tons | - | - | - | - | - | 2,571 | 2,249 | 2,350 |

Source: Ministry of Industry and Handicrafts

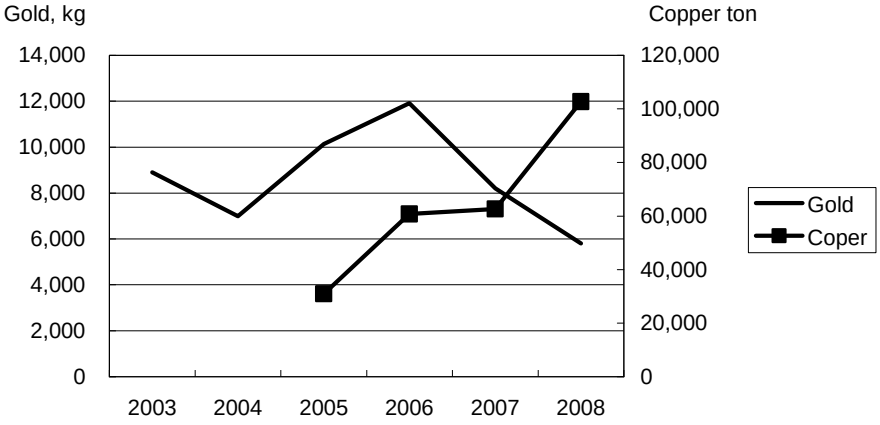
There remain lots of mines that need exploration, development or test drilling. The mining and quarrying industry is at an early stage of development. Expansion of production will be expected in the future, for example:

- There is a bauxite deposit with 2 billion tons of expected output in Bolobens Plateau. Aluminum smelting from bauxite consumes large amount of electricity. The Lao PDR has large hydropower potential utilizing the geography of many mountains and highlands. There is a possibility for aluminum smelting to utilize electricity generated by hydropower.
- A large iron deposit has been found in Xiengkhuang Province. There is a possibility for the iron and steel industry to utilize iron core taken from the deposit and locally available coal. If the iron and steel industry is successfully developed, there will be a possibility for the metalworking industry.

Gold and copper mining at Sepon and Phou Bia has contributed to the recent economic development. Production of gold and copper has started in 2003 and 2005, respectively. Figure 1.2.4 indicates the production volumes of gold and copper from 2003. Gold production, which was recorded in the Statistical Yearbook starting from 2003, has been estimated at 6 to 12 tons per year. Since the estimated deposit amount of gold is 46.7 tons at Sepon Mine and 31.1 tons at Phu Bia Mine, these mines will continue to produce the same volume of gold for more than 10 years.

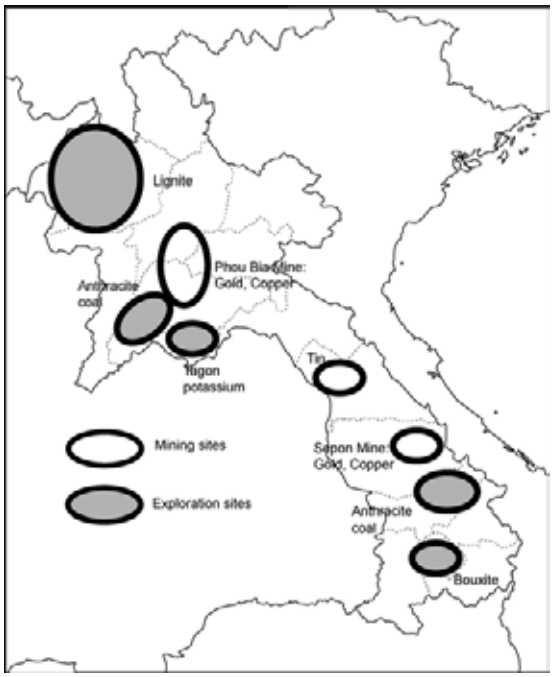
[6] Yoshiaki SHIBATA, Industrial Infrastructure in the Lao PDR (2008, compiled by Motoyoshi SUZUKI)

Production of copper at Sepon Mine started in 2005. The production amount has doubled in 2008 due to the start of the operations at Phu Bia Mine. Like gold, copper production in the two mines has been contributing to rapid economic growth in recent years. Since the deposit amount of copper is 1.7 million tons at Sepon Mine, it will continue to produce the same volume of copper for 30 years.




Source: Statistical Yearbook various issues, DoS

**Figure 1.2.4: Production of Gold and Copper**




Source: Concession data of the Department of Geology, Ministry of Energy and Mines; Investment Environment in the Lao PDR in 2007, Japan Oil, Gas and Minerals National Corporation; Study on Reserve and Development of Coal in the Lao PDR, New Energy and Industrial Technology Development Organization

**Figure 1.2.5: Major Mining Sites**

In addition to gold and copper, mineral and non-mineral resources are abundant all over the territory of the Lao PDR as illustrated in Figure 1.2.5 The Lao government provided concessions for exploitation, exploration and prospection to 130 private companies as of September 2009. Development and expansion of these mines will generate future logistics demand.

### 1.2.3 Trend of National Economy and Industrial Sector in Neighboring Countries

(1) National Economy and Industrial Sector in Thailand

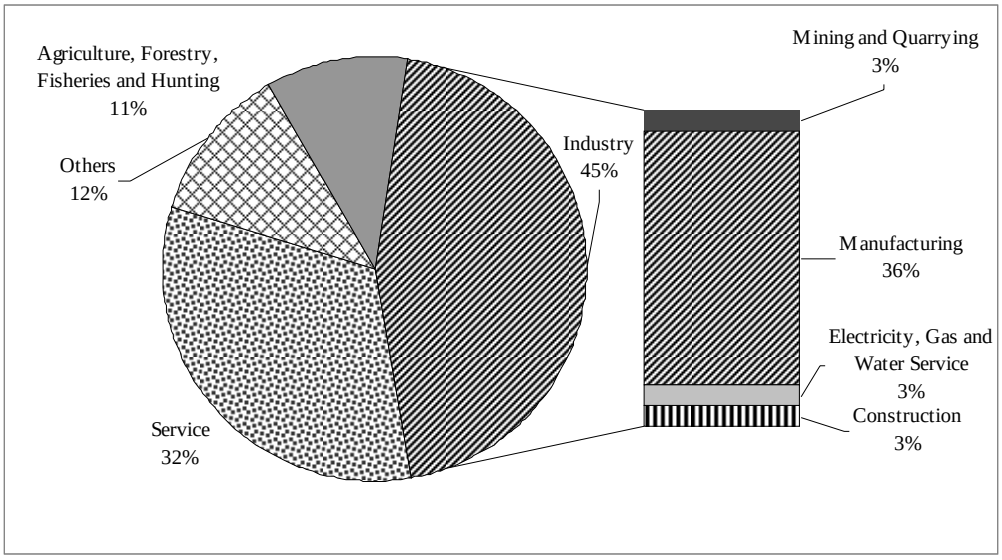
**Table 1.2.6: Fundamentals of Thailand (2007)**

| | |
|---|---|
| Growth rate of GDP at Constant Price | 4.9% |
| GDP at Current Price (million USD) | 246,053 |
| Per capita GNP at Current Price (USD) | 3,732.1 |

Source: JETRO-FILE(http://www3.jetro.go.jp/jetro-file/country.do)

Thailand showed steady economic growth, after recovering from the Asian currency crisis in 1997. This economic growth depended on the growth in the manufacturing sector. The manufacturing industry accounted for 36% of the GDP in Thailand.

Among the manufacturing industries, the assembly industry has remarkably expanded during the period. In particular, many automobile assemblers expanded their business to Thailand including Japanese assemblers such as Toyota, Honda and Isuzu and other global assemblers such as GM and BMW. Besides, a large number of manufacturers opened their plants for electrical and electronic machines and related parts.




Source: NESDB, Thailand http://www.nesdb.go.th/

**Figure 1.2.6: GDP by Industrial Sector in Thailand (2007, estimate)**

Appendix I.1 describes in detail the industrial development in Thailand.

(2) National Economy and Industrial Sector in Vietnam

**Table 1.2.7: Fundamentals of Vietnam (2007)**

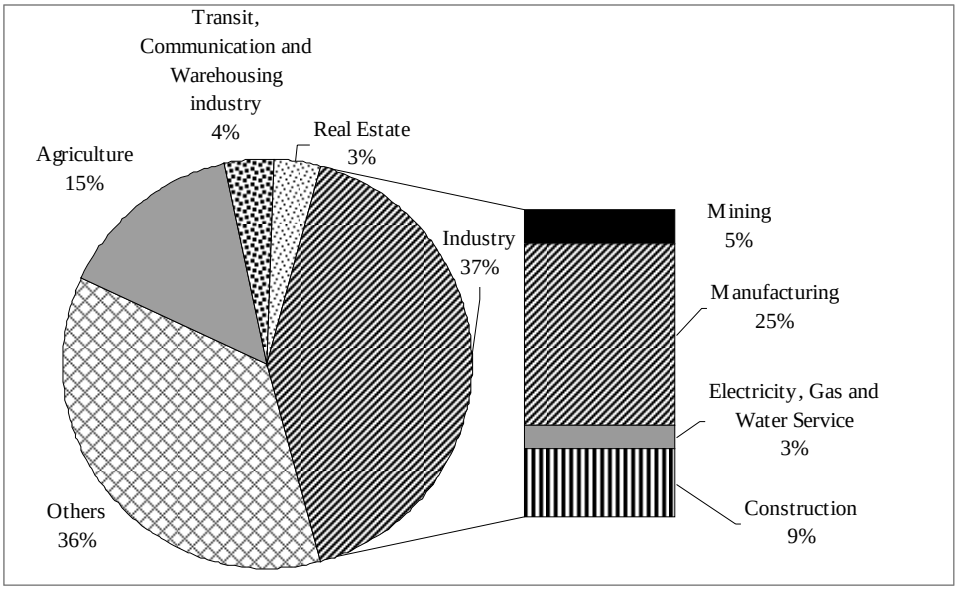
| | |
|---|---|
| Growth rate of GDP at Constant Price | 8.48% |
| GDP at Current Price (million USD) | 71,077 |
| Per capita GDP at Current Price (USD) | 828.8 |

Source: JETRO-FILE(http://www3.jetro.go.jp/jetro-file/country.do)

Vietnam's economy has grown rapidly with over 8% real GDP growth rate for 3 years from 2005 to 2007. This economic growth depended on the growth in the manufacturing sector, which was the largest sector in Vietnam in 2007, accounting for 25% of the real GDP.

Since 2001, real GDP of the manufacturing sector has been larger than that of the agriculture sector. Among the manufacturing sectors, light industry, mostly with labor-intensive characteristics, was the main industry in Vietnam.

Appendix I.2 describes in detail the industrial development in Vietnam.



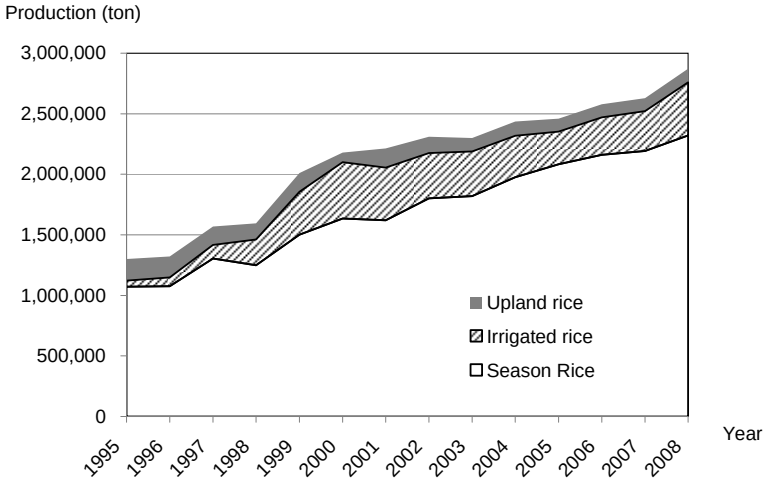

Note: Base year of real GDP is 1994
Source: General Statistics Office of Vietnam

**Figure 1.2.7: GDP by Industrial Sector in Vietnam (2007)**

### 1.2.4 Other Industries

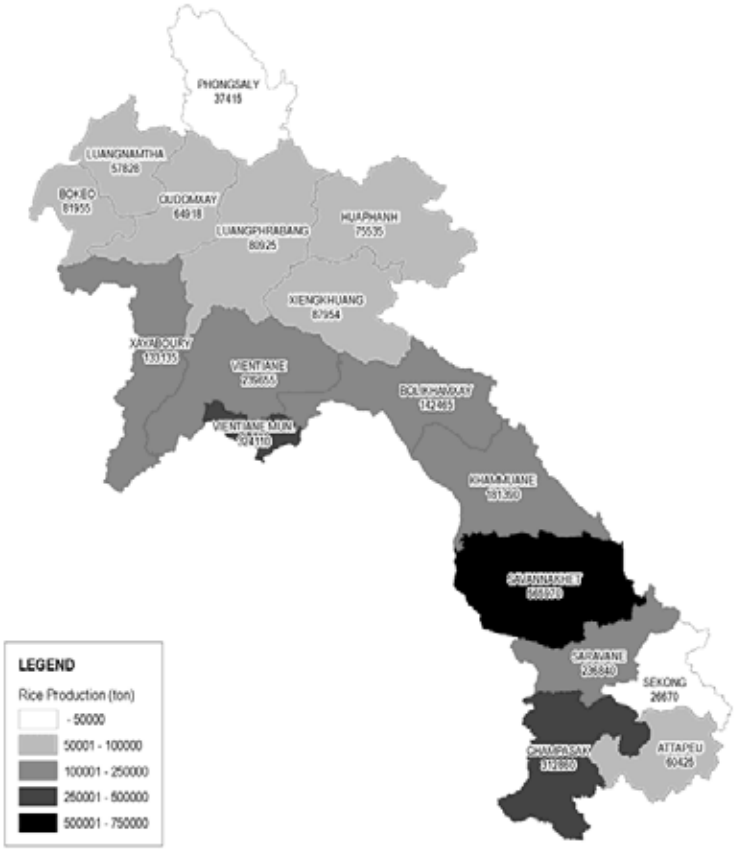
(1) Agriculture Products

Figure 1.2.8 indicates the growth of rice production in the Lao PDR. Rice production has increased by 5.9% annually between 1995 and 2008. Most of the produced rice is seasonal rice which is cultivated one time per year. The production of irrigated rice has not increased much. Figure 1.2.9 illustrates the rice production by provinces in 2007. Svannnakhet Province has 20.9% of the total production, followed by Vientiane Capital (12.0%), Champasak Province (11.5%), Vientiane Province (8.8%) and Saravane Province (8.7%). It is said that the Lao PDR has achieved self-sufficiency in rice but rice production has not increased in the mountainous provinces. Due to undeveloped distribution channels, the northern provinces are suffering from lack of rice. On the other hand, the central and southern provinces have too much.




Source: Statistical Yearbook various issues

**Figure 1.2.8: Production Volume of Rice since 1995**




Note: Sum of season rice, irrigated rice and highland rice
Source: Statistical Yearbook 2007

**Figure 1.2.9: Rice Production Volume by Provinces in 2007**

In accordance with economic development, demands for vegetable, fruit and meat are increasing. The production volume of vegetables and beans has increased from 56,000 tons in 1995 to 734,000 tons in 2007. Champasak (18%), Vientiane Capital (15.5%), Vientiane Province (15.4%), Luang Prabang

(9.5%) and Savannakhet (9.1%) have high percentages of vegetable production. This implies that vegetables are produced in the suburbs of the urban area. In case of Champasak, vegetables are transported to Vientiane and the northeastern cities of Thailand under contract farming.

Other major cash crop production includes rubber, pulp, sugarcane, coffee and so on. Rubber plantations, which are invested by Chinese companies, are observed in Luang Namtha and Bokeo while pulp plantations, which are invested by Japanese, Indian and Vietnamese companies, are observed in Khammuane Province and the southern part of the Lao PDR. Sugarcane fields located in Savannakhet Province and providing raw materials to two sugar factories have a total production volume of 750,000 tons in 2008. The percentage share of sugarcane production in Savannakhet Province reached 81% in the same year. Regarding coffee, total production was 31,000 tons in 2008, and 75% of the total is produced in Champasak Province.

(2) Hydropower Development

Table 1.2.8 tabulates a list of power plants under construction and planning. The percentage share of electricity to the total GDP accounted for 4% in 2008; however, the share will increase dramatically in the coming five years. In 2008, the proportions of value added generated from power plants under construction and those being planned are 12% and 36% of GDP, respectively. In particular, Nam Theun 2 (with installed capacity of 1,088 MW), which will start operation in December 2009, and Hongsa Lignite (with installed capacity of 1,800 MW), which is expected to start operation in 2015, will make huge impacts on GDP. On average, the power sector will contribute an annual growth rate of around 2% of GDP until 2020.

These hydropower projects are developed through joint ventures between the Lao PDR and foreign partners. The Lao PDR has equity of only 20% to 30% in these undertakings. It means 70% to 80% of value added will flow out as dividend to shareholders. As a result, the gap between Gross National Income and Gross Domestic Product would be wider. The same situation would occur in the mining industry.

**Table 1.2.8: Future Production of Electricity and Contribution to GDP Growth**

| | Year of Start of Operation | No. of Power Plants (Units) | Installed Capacity (MW) | Production of Electricity per Year (GWh) | Expected Additional Value Added (million kip in 2002 price) | Proportion to Real GDP in 2008 (%) |
|---|---|---|---|---|---|---|
| Operation Stage | | 10 | 669 | 3,677 | | |
| Construction Stage | Total | 8 | 2,529 | 11,060 | 3,141,268 | 12 |
| | 2009 | 3 | 1,164 | 6,259 | 1,777,685 | 7 |
| | 2010 | 2 | 350 | 645 | 183,193 | 1 |
| | 2011 | 2 | 735 | 2,616 | 742,998 | 3 |
| | 2012 | 1 | 280 | 1,540 | 437,392 | 2 |
| Planning Stage | Total | 14 | 6,277 | 34,524 | 9,805,387 | 36 |
| | 2012 | 3 | 144 | 792 | 224,944 | 1 |
| | 2013 | 3 | 440 | 2,420 | 687,330 | 3 |
| | 2014 | 2 | 545 | 2,998 | 851,352 | 3 |
| | 2015 | 3 | 2,468 | 13,574 | 3,855,296 | 14 |
| | 2016 | 2 | 1,420 | 7,810 | 2,218,201 | 8 |
| | To be determined | 1 | 1,260 | 6,930 | 1,968,263 | 7 |
| Study Stage | To be determined | 45 | 12,216 | 67,189 | - | - |

Source: Data from Powering Progress Web Page (http://www.poweringprogress.org/)

## 1.3 Foreign Investment

The Lao economy in recent years has been greatly dependent on private sector and foreign investments. It goes without saying that the enhancement of foreign investment will remain indispensable to the healthy economic growth of the Lao PDR in the future. In this context, the current foreign investment situation in the Lao PDR was studied and explained carefully in this section.

(1) Overview of Foreign Direct Investment (FDI) in the Lao PDR

The Lao PDR has opened its economy to foreign investors since the government adopted the New Economic Mechanism (NEM) policy in 1986. This policy, aiming to shift the country's economic activity away from a central command towards a market-friendly system, has provided the private sector an active role in socio-economic development. Since then, the Lao PDR has attracted considerable FDI, especially from its neighboring countries due mainly to the vigorous cross border economic activities under the initiatives of ASEAN Free Trade Area (AFTA) and Greater Mekong Sub-region (GMS). This private sector development, including FDI, has firmly contributed to achieve the steady improvements in key social and economic indicators of the country. For countries like the Lao PDR whose national savings remain low, FDI, which brings in revenue to the government, is one of the most important sources to achieve economic growth[7].

Figure 1.3.1 shows the total number of FDI in the Lao PDR by country during the last five years (2003-2004 to 2007-2008). Japan ranks sixth with a sum of 25 investments after China, Thailand, Vietnam, Korea, and France. Figure1.3.2 shows the yearly change of number of FDI from the main countries. China was continuously at the top throughout the five years. The number of Japanese investment varies from two (2) to seven (7) for the same period.

As shown in Figures 1.3.1 and 1.3.3, the Lao PDR received more than 800 FDI projects from 2003-2004 to 2007-2008 with a total committed capital of USD6.27 billion. As the expected amount of FDI commitment during the 2006-2010 period was USD3 billion[8] and the committed capital of FDI during the prior five years (2001-2005) was USD2.8 billion[9], it is confirmed that the FDI environment in the Lao PDR has been improving drastically. The FDI value was highest in 2005-2006 as shown in Figure 1.3.3. The Japanese investment value was also outstanding in 2005-2006 compared with the other years as shown in Figure 1.3.4.

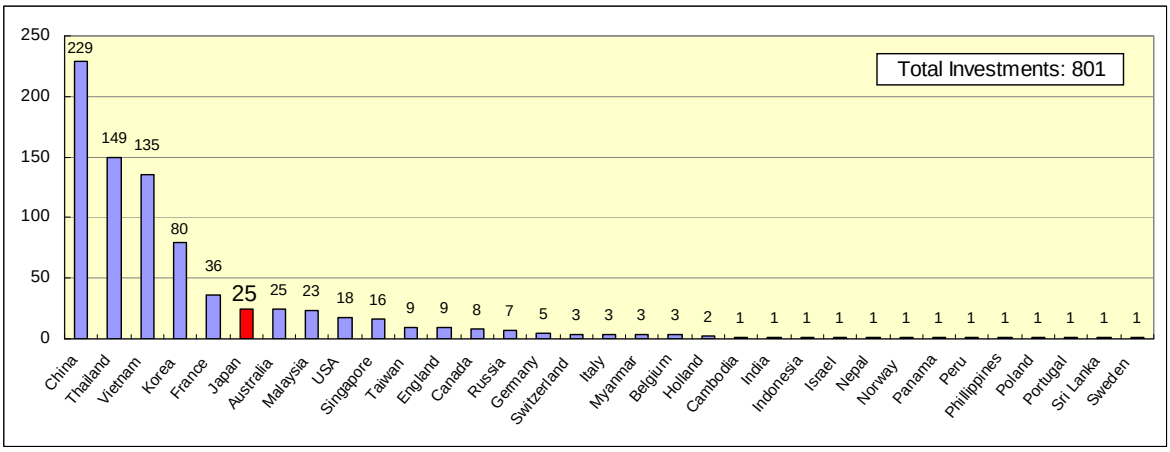
The three top countries with large investment in terms of value during the last five years are Thailand, China and Vietnam as shown in Figure 1.3.5. Japan, Korea, France, India, and Australia are the second-tier large investors in the Lao PDR.

The last five year FDI statistics provided by MPI reveal that countries such as Thailand, Japan and Australia invested in rather large capital investments such as hydropower development projects and mining development projects, whereas China, Vietnam, Korea and Singapore have invested in many small- and medium-sized projects in garment, service, trading, hotel and restaurants, and manufacturing industries.

[7] National Growth and Poverty Eradication Strategy (NGPES) has estimated that the targeted economic growth rate of 7% per annum over the next decade is necessary in order to achieve the 2020 goal of exiting the status of a least developed country. NGPES has also mentioned that necessary investment level to achieve this targeted economic growth is estimated at 26-28% of GDP, some 10-11% of which will be by the public sector while some of the remaining 16-17% will be by the private sector, including FDI.

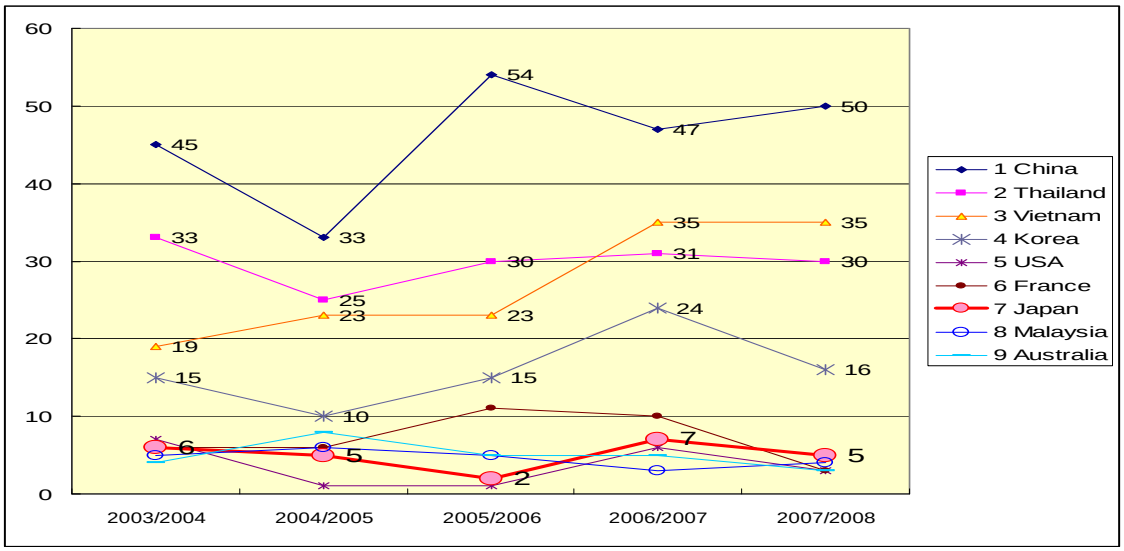
[8] The Sixth Five-Year NSEDP has estimated that a total investment of 73,900 billion kip is required to ensure the economic growth of 7.5-8%, which was set as target economic growth ratio during the period of the Plan (2006-2010). The Plan estimated that the contribution of FDI for the overall investment during the period is USD3 billion.

[9] Total actual disbursed FDI during the same period (2001-2005) was USD1.07 billion.



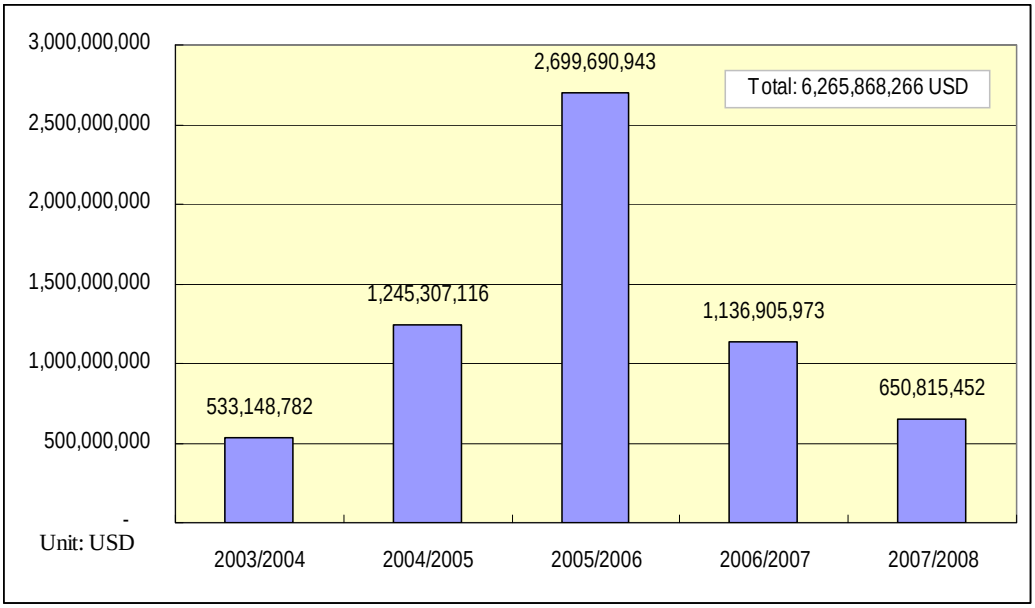

Source: Investment Promotion Department, MPI

**Figure 1.3.1: Total Number of FDI by Country during the Last Five Years (2003-2004 to 2007-2008)**



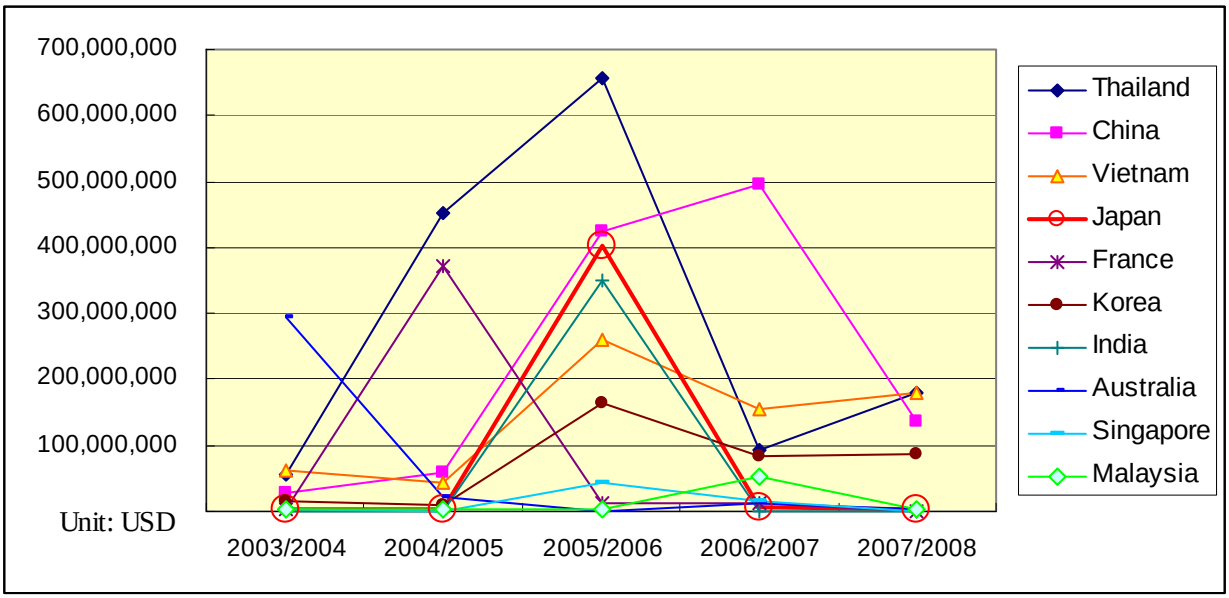

Source: Investment Promotion Department, MPI

**Figure 1.3.2: Yearly Change of Number of FDI from Main Countries (Last Five Years)**



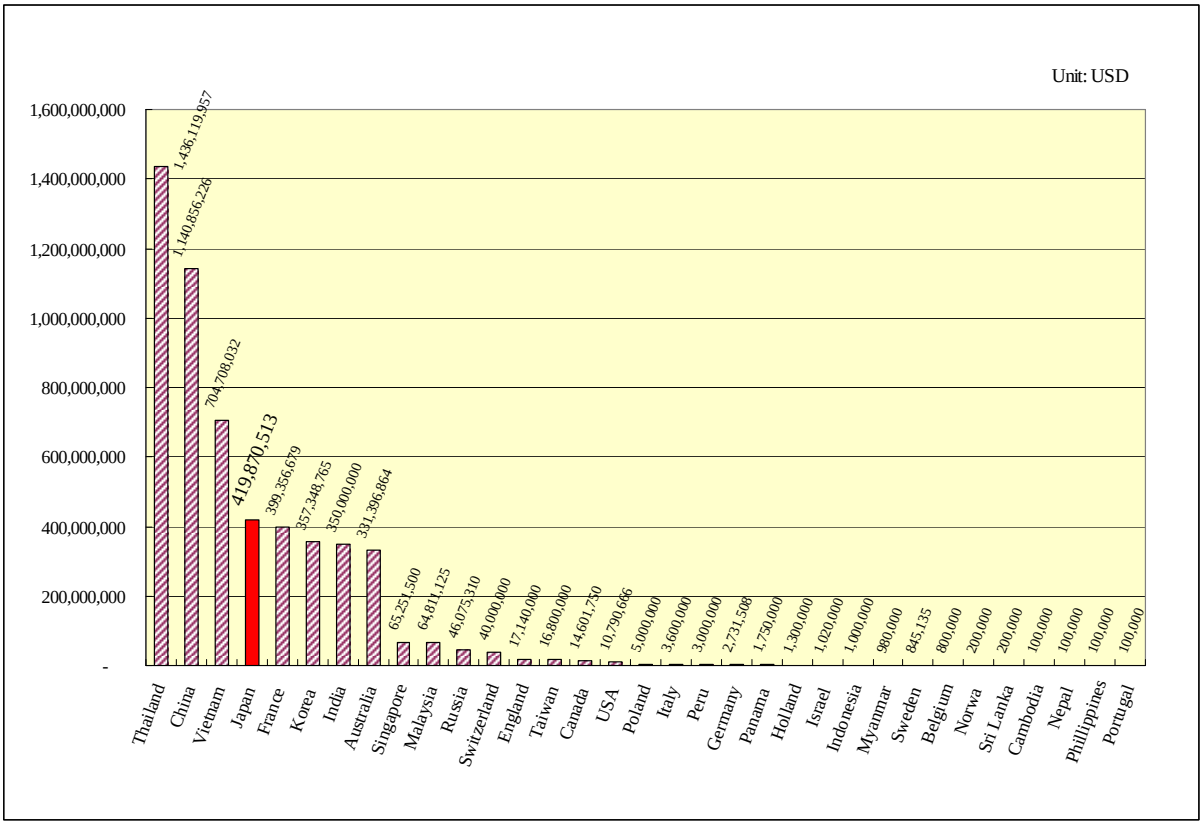

Source: Investment Promotion Department, MPI

**Figure 1.3.3: Yearly Change of Total FDI Value (Last Five Years)**




Source: Investment Promotion Department, MPI

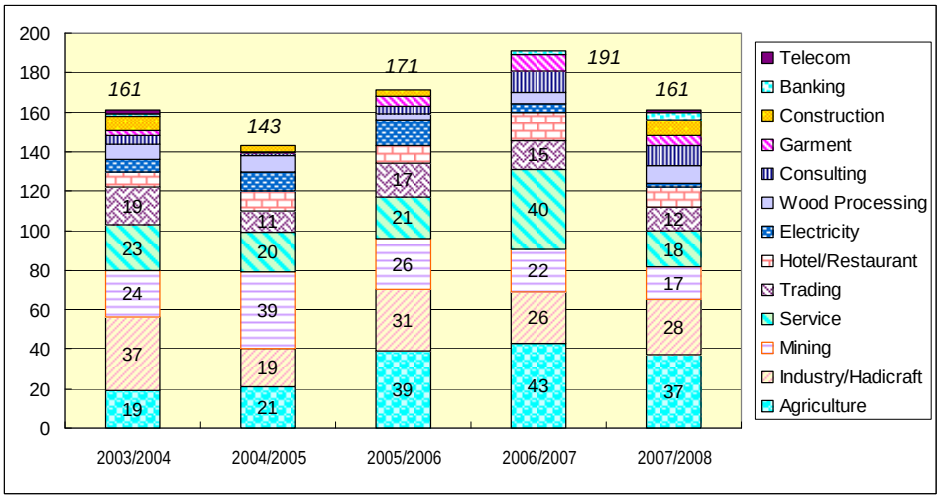
**Figure 1.3.4: Yearly Value Change of FDI from Main Countries (Last Five Years)**




Source: Investment Promotion Department, MPI

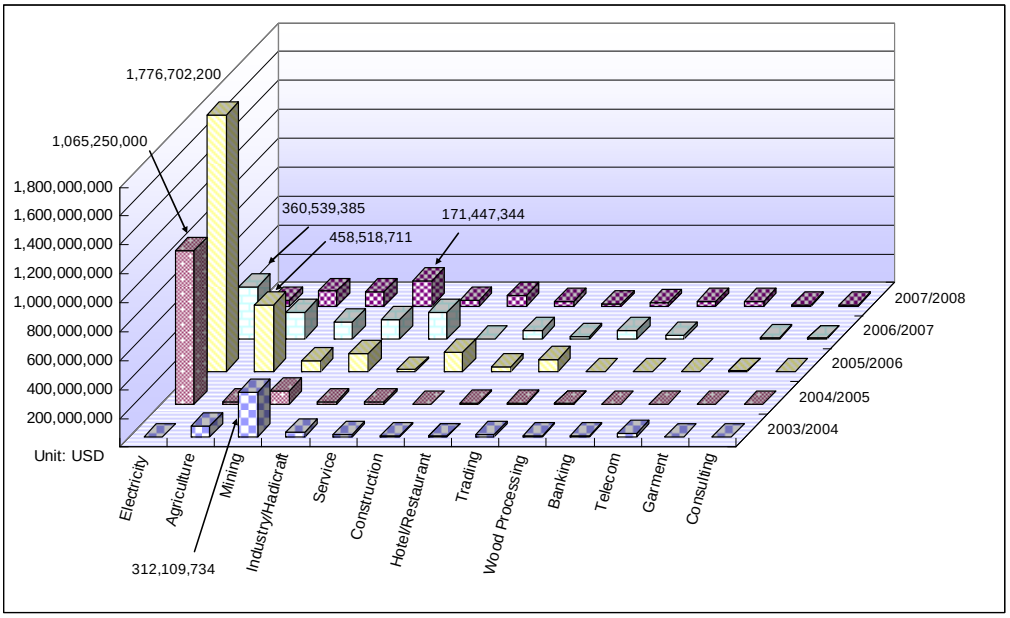
**Figure 1.3.5: Total Value of FDI by Country during the Last Five Years (2003-2004 to 2007-2008)**

Figures 1.3.6 and 1.3.7 show the total number of FDI by sector and yearly change of FDI value by sector during the last five years, respectively.




Source: Investment Promotion Department, MPI

**Figure 1.3.6: Total Number of FDI by Sector during the Last Five Years (2003-2004 to 2007-2008)**




Source: Investment Promotion Department, MPI

**Figure 1.3.7: Yearly Change of FDI Value by Sector during the Last Five Years (2003-2004 to 2007-2008)**

As shown in Table 1.3.1, the agriculture sector received 19.2%, the industry and handicraft sector received 17.0%, and the services sector received 14.8% of the total number of FDI projects during the last five years. The proportions of investment especially in the agriculture and services sectors, including hotel and restaurant, trading and consulting, show an increasing trend.

In terms of the total capital of the investment, the large hydropower projects, such as Nam Theun 2 and Sesaman 3, have pushed up the total value of FDI in the electric industry as shown in Figure 1.3.7. As shown in Table 1.3.1, the share of electricity in the total value of FDI in the Lao PDR during the last five years exceeds 50%.

**Table 1.3.1: Number and Value of FDI during the Last 5 Years by Sector**

| Industry | Num. | Share in Num. | Value (USD) | Share in Value |
|---|---|---|---|---|
| Year | 2003/04-2007/08 | | | |
| Electricity | 35 | 4.2% | 3,247,991,585 | 51.8% |
| Agriculture | 159 | 19.2% | 836,976,408 | 13.4% |
| Mining | 128 | 15.5% | 694,791,185 | 11.1% |
| Industry/Hadicraft | 141 | 17.0% | 478,602,231 | 7.6% |
| Service | 122 | 14.8% | 268,438,258 | 4.3% |
| Construction | 21 | 2.5% | 212,641,123 | 3.4% |
| Hotel/Restaurant | 51 | 6.2% | 140,615,931 | 2.2% |
| Trading | 74 | 8.9% | 136,920,550 | 2.2% |
| Wood Processing | 34 | 4.1% | 93,645,507 | 1.5% |
| Banking | 7 | 0.8% | 68,200,000 | 1.1% |
| Telecom | 3 | 0.4% | 59,450,980 | 0.9% |
| Garment | 22 | 2.7% | 17,914,920 | 0.3% |
| Consulting | 30 | 3.6% | 9,679,588 | 0.2% |
| Total | 827 | 100.0% | 6,265,868,266 | 100.0% |

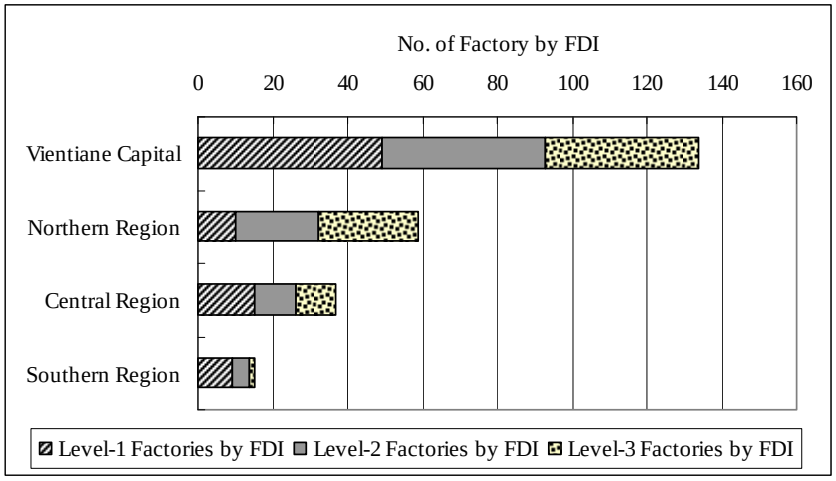
Source: Investment Promotion Department, MPI

(2) Foreign Investment to Manufacturing Industry

In this section, the current situation of foreign investment to the manufacturing industry is analyzed from three points of view, namely: geographical distribution of foreign factories in the country, number of foreign factory by industry group, and geographical distribution of foreign workers in the country.

*1) Geographical Distribution of Foreign Factories*

There are 245 factories invested by foreign enterprises, and more than half of them are located in Vientiane Capital. The following Figure 1.3.8 shows the geographical distribution of these factories in Vientiane Capital, Northern Region, Central Region and Southern Region. Factories are classified by scale into Level-1 (large), Level-2 (medium), and Level-3 (small).




Source: Prepared by JICA Survey Team from the internal data of Ministry of Industry and Commerce (compiled up to 2008)

**Figure 1.3.8: Geographical Distribution of Foreign Factories**

The following is the geographical distribution of foreign factories:

- 134 factories (55%) in Vientiane Capital,
- 59 factories (24%) in the Northern Region,
- 37 factories (15%) in the Central Region, and
- 15 factories (6%) in the Southern Region.

The degree of concentration in Vientiane Capital by scale of factory is as follows:

- 59% for Level-1 foreign factories,
- 54% for Level-2, and
- 51% for Level-3.

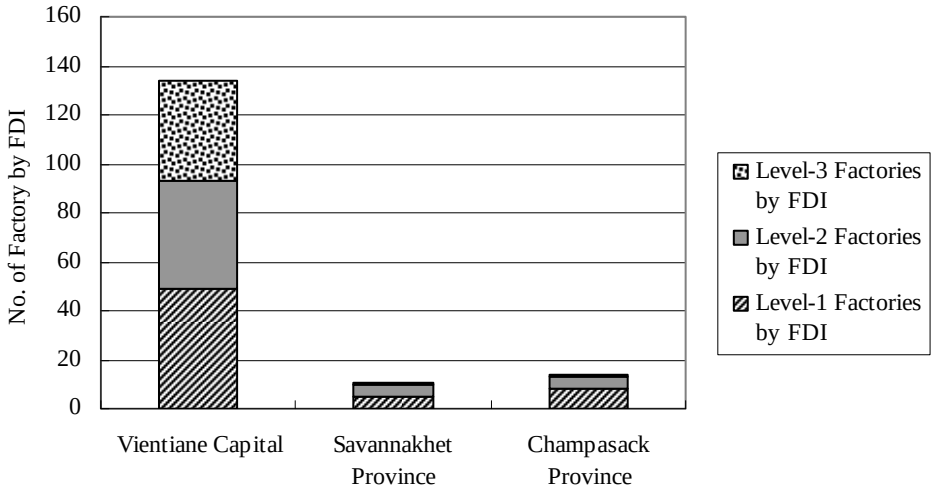
Why does such large portion of foreign factories concentrate in Vientiane Capital with only 1.7%[10] of the national land? The following reasons are conceivable:

[10] According to the data of Department of Statistics, Ministry of Planning, land area of Laos is 236,800 km$^2$ and that of

- Vientiane Capital has convenient air transportation to and from Bangkok or Hanoi. Therefore, Vientiane Capital is convenient for the investors who have mother factories in Bangkok or Hanoi. If the factory locates in Vientiane Capital, the managers and engineers can go quickly to the factory when there is a need to solve a sudden problem.
- If the factory locates in Vientiane Capital, foreign staff can easily visit ministries or national agencies to acquire approval and license including *"Certificate of Origin"* for GSP application. This is an advantage for the foreign companies. If the factory locates at a remote place from Vientiane Capital, foreign staff needs to take a long time to visit Vientiane Capital.
- Vientiane Capital has better living environment for foreigners than other provinces; for example, it has restaurants, apartments, supermarkets, hospitals, schools for children, and amusement facilities.
- Since Vientiane Capital is the center of politics, economics, finance and information in the country, it can provide foreign enterprises a convenience for business activities.
- Vientiane Capital has large plain lands with respect to small administrative district with only 1.7% of the whole country. Therefore, foreign enterprises can conveniently find a flat site for factory.
- Vientiane Capital has a population of 726,000 in 2007, accounting for 12.4% of a population of the country (5.873 million). In terms of population density, Vientiane Capital has 185.2 persons/km$^2$, 7.5 times of the country's population density (24.8 persons/km$^2$). Vientiane Capital has advantage of employing labors due to higher concentration of population.[11]

Figure 1.3.9 compares the number of foreign factories in Vientiane Capital, Savannakhet Province and Champasak Province.

As shown in the chart, 134 foreign factories locate in Vientiane Capital, while much smaller numbers of foreign factories locate in Savannakhet Province (11 factories) and Champasak Province (14 factories).




Source: Prepared by JICA Survey Team from the internal data of Ministry of Industry and Commerce (compiled up to 2008)

**Figure 1.3.9: Comparison of Foreign Factories in Three Major Areas**

Vientiane Capital is 3,920 km$^2$.

[11] Values are given and calculated from the data in 2007 of Department of Statistics, Ministry of Planning.

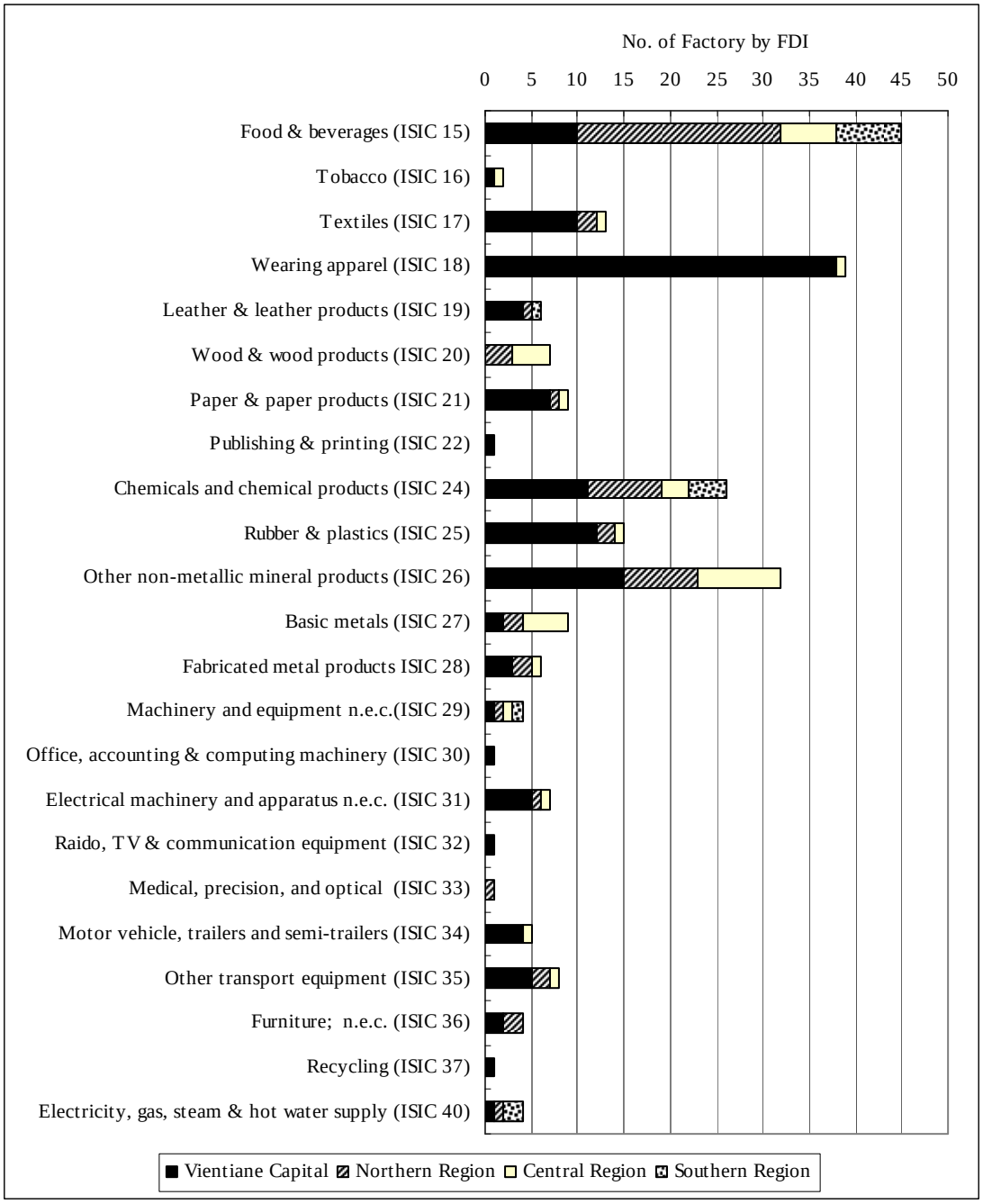
*2) Breakdown by Group of Industry*

The 245 foreign factories are categorized by type of products. The top five categories, in descending order of share, are the following: (1) food and beverage; (2) wearing apparel; (3) other non-metallic mineral products; (4) chemical and chemical products; and (5) rubber and plastics.

Figure 1.3.10 illustrates the foreign factories categorized by type of products and geographical distribution. Characteristics of the major categories are described as follows:

- Food and beverage (ISIC Group 15[12]): 45 foreign factories (largest in number, 18.3% of total); about half locate in the Northern Region.
- Wearing apparel (ISIC Group 18): 39 foreign factories (second largest in number, 15.9% of total); 38 factories out of 39 locate in Vientiane Capital.
- Other non-metallic mineral products (ISIC Group 26)[13]: 32 foreign factories (third largest in number, 13.0% of total); nearly half locate in Vientiane Capital.
- Chemical and chemical products (ISIC Group 24): 26 foreign factories (fourth largest in number, 10.6% of total); approximately 42% locate in Vientiane Capital.
- Rubber and plastics (ISIC Group 25): 15 foreign factories (fifth largest in number, 6.1% of total); 12 factories out of 15 (80 %) locate in Vientiane Capital.
- Metal products and machinery (ISIC Group 27-35): foreign factories are individually small in number, but their total number amounts to 42 (17% of total), exceeding the wearing apparel factories; 22 factories (more than half) locate in Vientiane Capital.

[12] Revision 3 of the ISIC Code is used in the study, unless otherwise specified.
[13] ISIC Group 26 includes: glass products; clay and ceramic products; cement, lime and plaster; article of concrete, cement and plaster; cutting, shaping and finishing of stone, etc.




Note: Wood factories are not included.
Source: Prepared by JICA Survey Team from the internal data of Ministry of Industry and Commerce (compiled up to 2008) and by geographical distribution

**Figure 1.3.10: Number of Foreign Factories by Group of Industry and Geographical Distribution**

*3) Foreign Workers*

The next Table 1.3.2 shows the percentage of foreign factories for each region. It also shows the percentage of foreign workers for each region.

In Vientiane Capital, foreign factories accounted for 6.2% of the factories, the highest in the whole country. In the northern, central and southern provinces, the percentage is less than 1%.

It is interesting to note that on the contrary, the percentage of foreign workers in Vientiane Capital is 0.2%, the lowest in the whole country. In the northern, central and southern provinces, the percentages are higher than in Vientiane Capital. Particularly, in the Southern Region, it is 13.1%, the highest in the whole country. Provinces with high percentage of foreign workers include Luang Namtha (21.9%) and Oudomxay (13.9%), which are bordered by China and receive many Chinese establishments; Huaphanh (13.4%), which is bordered by Vietnam and has historical relations with Vietnam; Saravane (22.1%), Sekong (47.3%) and Attapeu (18.4%), which are bordered by Vietnam.

**Table 1.3.2: Foreign Factories and Foreign Workers**

| | No. of Factory | | | No. of Worker | | |
|---|---|---|---|---|---|---|
| | Total (A) | Foreign (B) | B/A | Total (a) | Foreigner (b) | b/a |
| Vientiane Capital | 2,172 | 134 | 6.2% | 49,785 | 98 | 0.2% |
| Northern Region | 7,624 | 59 | 0.8% | 20,644 | 1,009 | 4.9% |
| Central Region | 11,293 | 37 | 0.3% | 36,708 | 1,306 | 3.6% |
| Southern Region | 3,138 | 15 | 0.5% | 14,842 | 1,942 | 13.1% |
| Total in the country | 24,227 | 245 | 1.0% | 121,979 | 4,355 | 3.6% |

Source: Prepared by JICA Survey Team from the internal data of Ministry of Industry and Commerce (compiled up to 2008)

Foreign factories increase job creation in Vientiane Capital; however, they only have small impact on job creation in other regions, particularly in some provinces bordered by Vietnam and China, due to the employment of a large number of foreign workers.

Taking account of the difference in percentage of foreign workers by regions, it is considered that there are two types of factories in the country from the viewpoint of worker employment as shown in Table 1.3.3.

Judging from the current situation, each area has the possibility of being attractive to the following types of factories:

- In Vientiane Capital, factories of labor-intensive industry and investors from high labor cost country can be possibly attracted.
- In other areas, factories of manufacturing products utilizing mineral resource, land resource, forest resource, and abundant electric power can be possibly attracted, if the factory site is close to the place of resources.

**Table 1.3.3: Two Types of Factories from Worker Employment Viewpoint**

| Percentage of Foreign Workers | Outstanding Areas | Conceivable Employment in Foreign Factories | Possible Type of Foreign Factories |
|---|---|---|---|
| Area with low percentage of foreign workers | • Vientiane Capital | • Small number of foreign staff control large number of Lao workers.<br>• Lao workers are attractive for foreign investors from viewpoint of costs and quality, compared with workers from own country. | • Factories wherein the critical location factor is cheap labor force; for example, factories of labor-intensive industry and factories of investors from high-labor-cost country. |
| Area with high percentage of foreign workers | • Northern Region particularly Luang Namtha, Oudomxay, Huaphanh provinces<br>• Central Region<br>• Southern Region, particularly Saravane, Sekong and Attapeu provinces | • Many foreign workers are employed by the factory.<br>• Lao workers are not so attractive for foreign investors from viewpoint of costs and quality, compared with workers from own country. | • Factories that anticipate the attractiveness of the area other than cheap labor force; for example, factories of manufacturing products utilizing mineral resource, land resource, forest resource, and abundant electric power.<br>Note:<br>In case of enterprises of high-labor-cost country, they may employ a large number of Lao workers as cheap labor force |

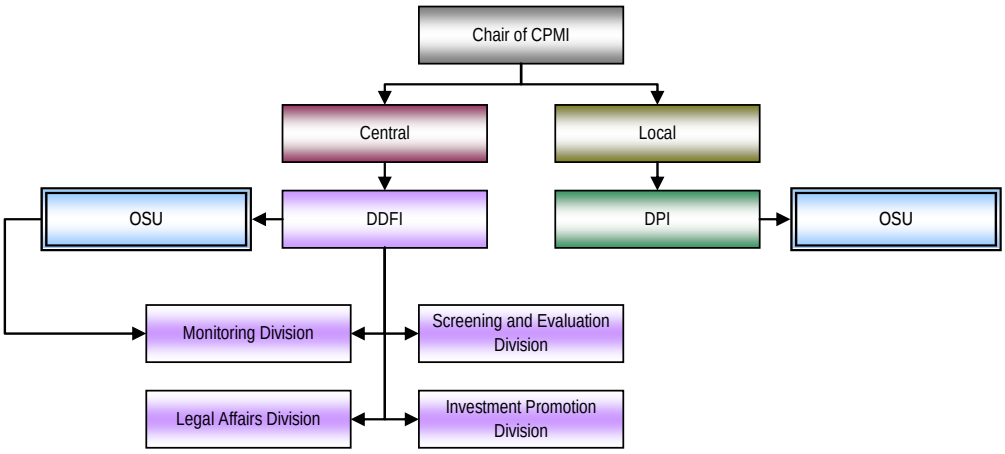
Source: JICA Survey Team

(3) Application for Investment License and Procedure for Investment Approval

*1) Application for an Investment License*

Chapter Five of the Law on the Promotion of Foreign Investment, enacted on 22 October 2004, has stipulated that "*application for foreign investment in the Lao PDR shall go through the one stop service of the Committee for Promotion and Management of Investment (CPMI).*"

As shown in Figure 1.3.11, there are both central and provincial level offices in CPMI. The One-Stop-Service Unit (OSU) of each office is the single unit where the investors can receive the investment applications. It is also the unit that issues the investment license following the approval of CPMI or Council of Ministers.




Note: OSU: One-Stop-Service Unit, DDFI: Department for Promotion and Management of Domestic and Foreign Investment, DPI: Department for Planning and Investment
Source: Article 43 and 44 of *Decree on Domestic Investment Number 300/PM* and Articles 52 and 53 of *Decree on Foreign Investment Number 301/PM*

**Figure 1.3.11: Organizational Chart of CPMI**

Depending upon the category of investment[14] as well as the investment value, the investors can submit the application form to either central level or provincial level of CPMI. Although the foreign investors generally submit the investment applications to the central level OSU, they can submit the applications to the provincial level OSU in case of projects under Category I with an investment value of less than USD5 million. Table 1.3.4 shows the authorized signatory for each categorized investment license.

**Table 1.3.4: Authorized Signatory for FDI License (by Size of Capital and Category)**

| | Authorized signatory for investment license | Registered capital = *X* | | |
|---|---|---|---|---|
| | | Category I | Category II | Category III |
| 1 | Council of Ministers / Prime Minister | *X* ≧ USD20 million | | |
| 2 | Central level of CPMI<br>i) Chairman of the CPMI:<br>ii) Vice Chairman of the CPMI: | USD20 million > *X* ≧ USD10 million<br>USD10 million > *X* | | |
| 3 | Provicial level of CPMI<br>i) Chairman of the CPMI of the following provinces:<br>- Vientiane Capital, Savannakhet, Champasak, and Luang Prabang<br>ii) Chairman of the CPMI of the other provinces | USD5 million > *X*<br>USD3 million > *X* | Not authorized | Not authorized |

Note: Category I: promoted industries for FDI, Category II: industries opened for FDI with some restrictions, and Category III: FDI projects that require concession rights

Source: Investment Guide (Prof. Motoyoshi Suzuki), No. 301PM Decree of the Prime Minister regarding the Implementation of the Law on the Promotion of Foreign Investment

*2) Procedure for Investment Approval*

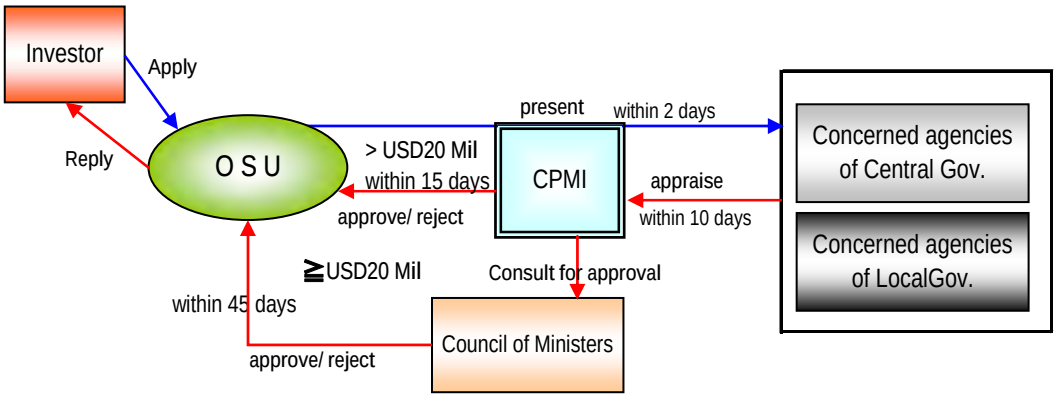
As mentioned in the foregoing section, the procedure for investment approval differs according to the category of the investment.

*i) Category I*

For the approval procedure of Category I investment, OSU of CPMI firstly sends the application to the concerned agencies of the central and local governments after receiving the investment application within two business days. The concerned agencies give back their comments on the investment within 10 business days. Finally, the Chairman or the Vice-chairman of CPMI approves or rejects the issuance of a license within 15 business days. As for projects with investment capital of more than USD20 million, the Council of Ministers is authorized to approve the investment license. They must reply to OSU within 45 business days.

Figure 1.3.12 summarizes the procedural flow for the approval of Category I investments.

[14] There are three categories of foreign direct investment project. Category I is classified as promoted investment activities, while Category II is classified as opened investment activities with some restriction. Category III requires special licenses to investors, especially for projects that require concessions such as power projects and mining projects. Most of the labor-intensive manufacturing industries such as rubber/ plastic processing, metallic processing, wire/harness manufacturing, garment/footwear, and food processing are included in Category I.



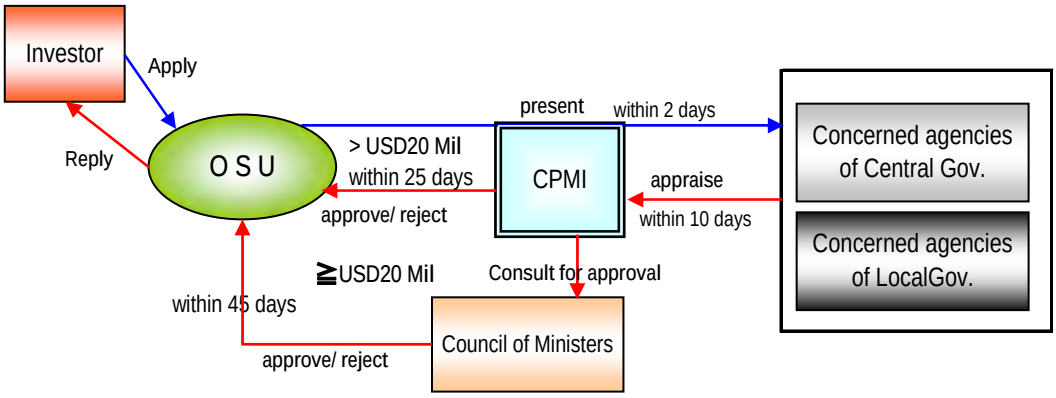

Source: Investment Guidebook for the Lao PDR,

**Figure 1.3.12: Flow Chart of the Approval Procedure for Category I Investments**

*ii) Category II*

For the approval procedure of Category II investment, OSU firstly sends the application to the concerned agencies of central and local governments after receiving the investment application within two business days. The concerned agencies give back their comments on the investment within 10 business days. Finally, the Chairman or the Vice-chairman of CPMI approves or rejects the issuance of a license within 25 business days. As for projects with investment capital of more than USD20 million, the Council of Ministers is authorized to approve the investment license. They must reply to OSU within 45 business days.

Figure 1.3.13 summarizes the procedural flow for the approval of Category II investments.




Source: Investment Guidebook for the Lao PDR,

**Figure 1.3.13: Flow Chart of the Approval Procedure for Category II Investments**

*iii) Category III*

For the approval procedure of Category III investment, OSU firstly sends the application to the concerned agencies of central and local governments after receiving the investment application within two business days. The concerned agencies give back their comments on the investment within 15 business days. Subsequently, the investment applications are filed during the Prime (or Deputy Prime) Minister's or Council of Ministers' meeting, and the result will be informed to the investor through the OSU within 45 business days. The foreign

investor, who receives the notice of negotiation for concluding the Memorandum of Understanding (MOU) or the other agreements, shall be summoned within five business days by CPMI.

If the foreign investor does not either acknowledge after receiving the invitation letter for the negotiation within 15 business days or commence the negotiation with the concerned government agencies within 60 days, the right of the investment shall be automatically waived.

For the MOU and the agreement on exploration of mineral resources, the signature of the Chairman of CPMI is required, whereas the signature of the Prime Minister is required to issue the following: i) general project development agreement (PDA) and/or concession agreement (CA), ii) agreement on extraction of mineral resources, and iii) PDA, power purchase agreement (PPA), and CA for power projects.

*3) Registrations*

After the investment license is issued, the OSU shall facilitate the concerned organization in the Ministry of Industry and Commerce (MoIC) to issue the enterprise registration, as well as facilitate the concerned organization in the Ministry of Economic Finance (MoEF) to issue the domestic tax registration[15] within two business days.

Subsequently, the investors have to obtain operating licenses, which differ according to three types of investment activity as shown in Table 1.3.5, prior to their commencement of business.

**Table 1.3.5: Types of Investment Activities for Company Registration**

| Type of investment activities | Definition | Required license |
|---|---|---|
| Type I | Investment activities of a consulting or trading nature | License to use company seals |
| Type II | Investment activities without construction of new building or factory | License to use company seals as well as operating license from concerned sectors |
| Type III | Investment activities with construction of new building or factory | License to use company seals, construction permit, and operating license |

Source: Investment Guidebook for the Lao PDR, CPI, DDFI

In case a foreign investment enterprise cannot bring 20% of its total registered capital into the Lao PDR, the enterprise shall receive a temporary domestic tax registration, valid for 60 business days only. Unless the above capital amount is prepared within the validity period, the investment license shall be automatically terminated (Investment Guide Book for the Lao PDR, DDFI, 2007).

[15] In case a foreign investment enterprise cannot bring 20% of its total registered capital into the Lao PDR, the enterprise shall receive a temporary domestic tax registration, valid for 60 business days only. Unless the above capital amount is prepared within the validity period, the investment license shall be automatically terminated (Investment Guide Book for the Lao PDR, DDFI, 2007).

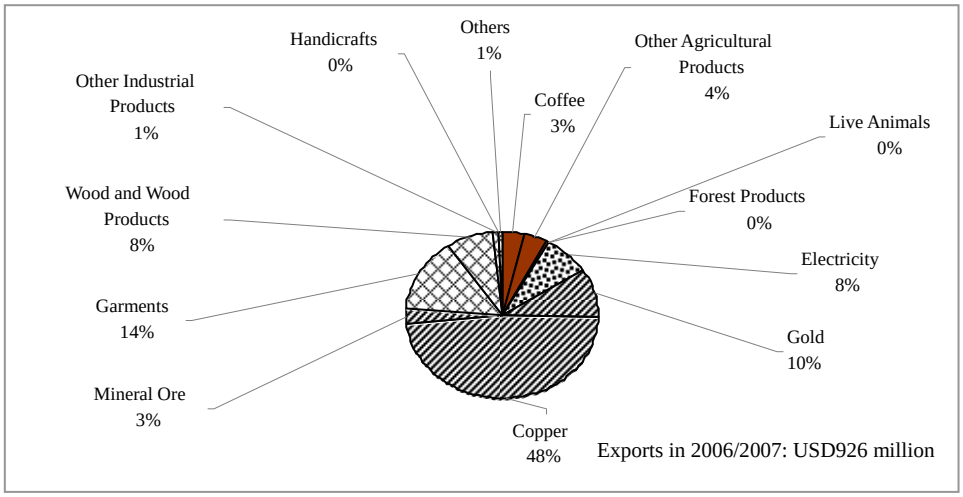
# 1.4 Foreign Trade

## 1.4.1 Foreign Trade Structure

(1) Exports

Figure 1.4.1 illustrates the exports from the Lao PDR in 2006/2007[16] by commodity. The value of exports was about USD926 million in that year. In terms of industry-wise exports, mining products have the largest value (61% of total exports), followed by manufacturing products (23%), electricity (8%), and agriculture and forest products (7%). Major commodities of each industry and their shares were as follows:

- Mining products: 61% (copper: 48%; gold: 10%; and mining ore: 3%);
- Manufacturing products: 23% (garments: 14%; wood & wood products: 8%; and other industrial products: 1%);
- Electricity: 8%; and
- Agriculture and forest products: 7% (coffee: 3%; other agricultural products: 4%; live animals: negligible, small; and forest products: negligible, small).



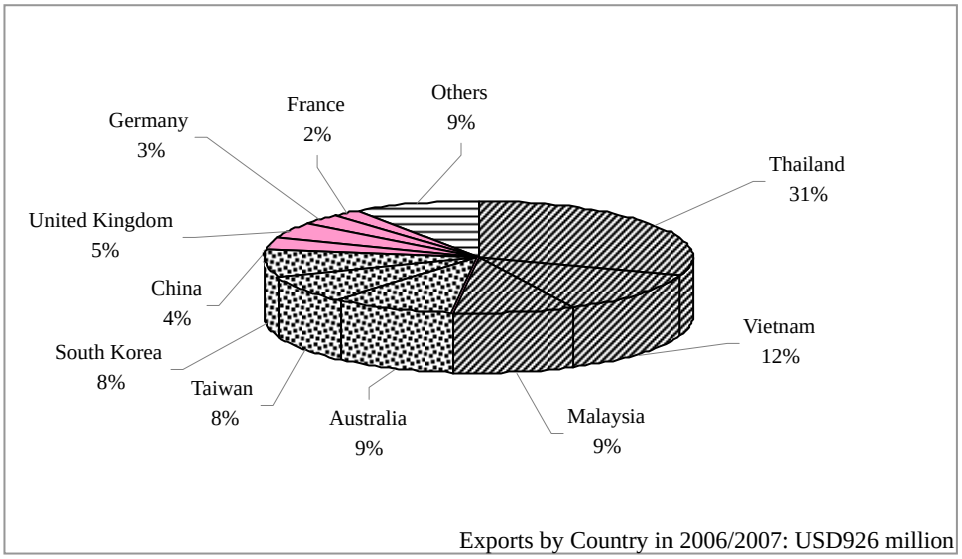

Source: Prepared by JICA Survey Team based on the internal data of MoIC

**Figure 1.4.1: Exports by Commodity (2006/2007)**

Figure 1.4.2 shows the exports from the Lao PDR in 2006/2007 by market. Large markets for export include the ASEAN (52% of total exports), other countries in the Asia-Pacific region (29%), and the European Union (10%). Major countries of destination and their shares were as follows:

- ASEAN: 52% (Thailand: 31%; Vietnam: 12%; and Malaysia: 9%);
- Other countries in the Asia-Pacific region: 29% (Australia: 9%; Taiwan: 8%; South Korea: 8%; and China: 4%); and
- European Union: 10% (United Kingdom: 5%; Germany: 3%; and France 2%).

[16] It means the year from October 2006 to September 2007.



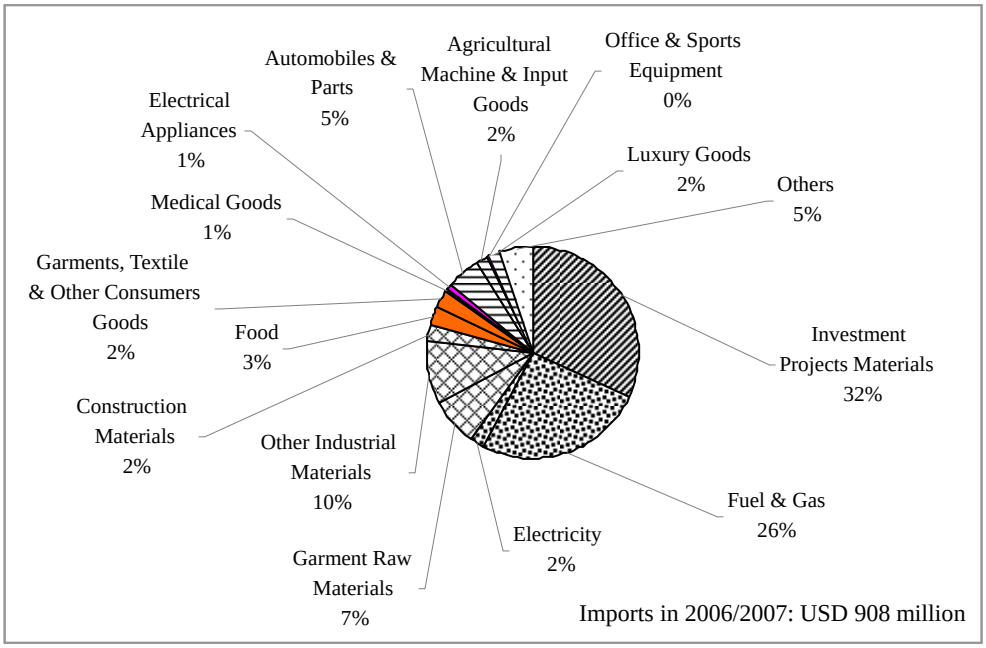

Source: Prepared by JICA Survey Team based on the internal data of MoIC

**Figure 1.4.2: Exports by Market (2006/2007)**

(2) Imports

Figure 1.4.3 illustrates the imports to the Lao PDR in 2006/2007 by commodity. The value of imports was about USD908 million in that year. In terms of the composition of imports, investment project materials have the largest value (32%), followed by fuels and electricity (28%), materials for industry and construction (19%), consumer goods (7%), machinery and its parts (7%), and luxury goods (2%). Major import commodities and their shares were as follows:

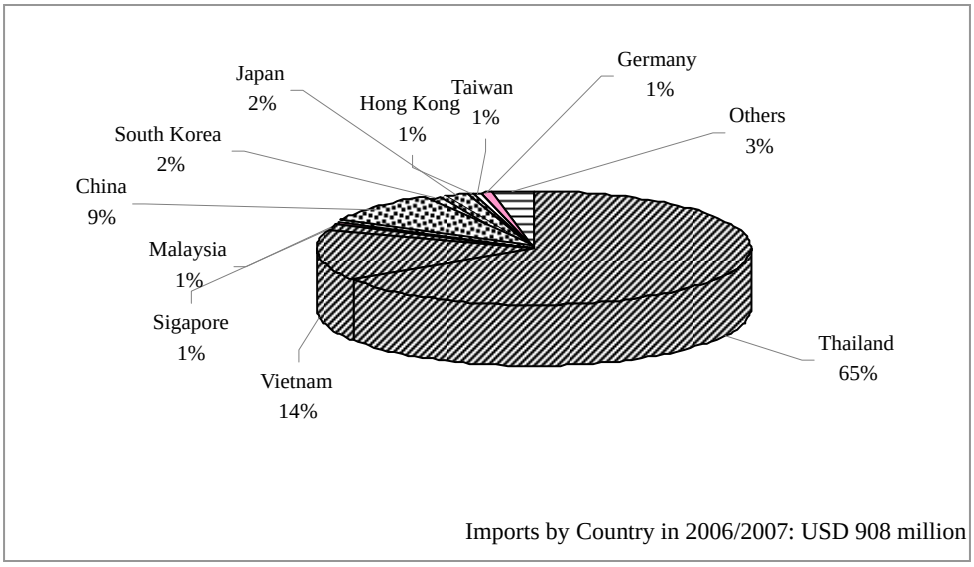
- Investment projects materials: 32%;
- Fuels and electricity: 28% (fuel and gas: 26%; and electricity: 2%);
- Materials for industry and construction: 19% (garment raw materials: 7%; other industrial materials: 10%; and construction materials: 2%);
- Consumer goods: 7% (food: 3%; garments, textile and other consumer's goods: 2%; medical goods: 1%; and electrical appliances: 1%);
- Machinery and its parts: 7% (automobiles and parts: 5%; agricultural machine and input goods: 2%; and office and sports equipment: negligible, small); and
- Luxury goods: 2%.




Source: Prepared by JICA Survey Team based on the internal data of MoIC

**Figure 1.4.3: Imports by Commodity (2006/2007)**

Figure 1.4.4 shows the imports to the Lao PDR in 2006/2007 by country. The largest partner region for imports was ASEAN (81% of total imports to Laos), followed by other countries in the Asia-Pacific region (13%).




Source: Prepared by JICA Survey Team based on the internal data of MoIC

**Figure 1.4.4: Imports by Country (2006-2007)**

Major partner countries for import and their shares were as follows:

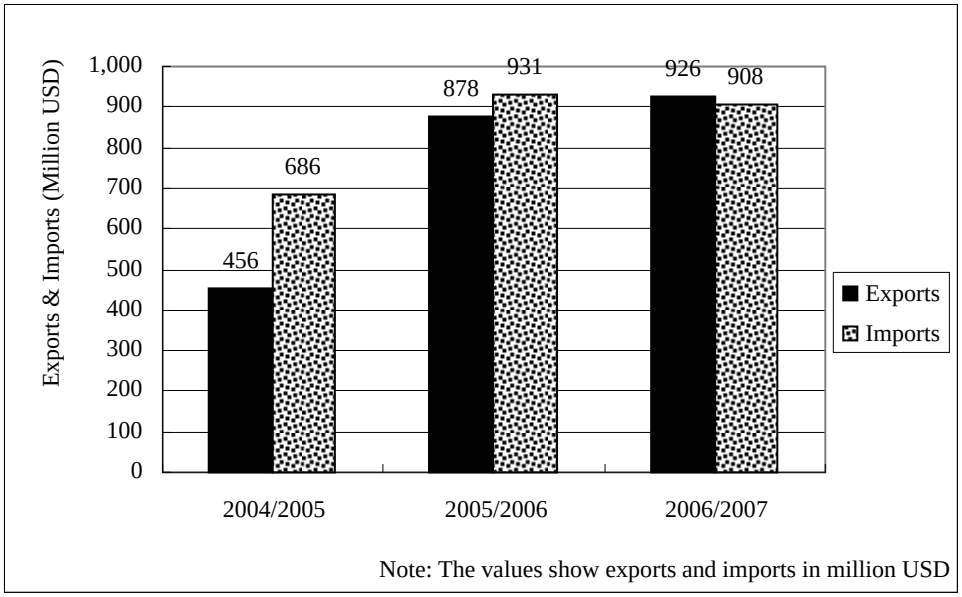
- ASEAN: 81% (Thailand: 65%; Vietnam: 14%; Singapore: 1%; and Malaysia: 1%); and
- Other countries in the Asia-Pacific region: 15% (China: 9%; South Korea: 2%; Japan: 2%; Hong Kong: 1%; and Taiwan: 1%).

(3) Export-Import Balance

Export-import balance of the Lao PDR has improved during the three years up to 2006/2007, as shown in Figure 1.4.5. The approximate value of exports was USD456 million, and that of imports was USD686 million in 2004/2005. As a result, the trade deficit was about USD230 million in that year.

Until 2006/2007, the value of exports has increased to USD926 million, double of the value in 2004/2005. Rapid growth of exports has been achieved mainly through the expansion of copper and gold production at Sepon Mine during the period.

In contrast, the value of imports has increased to USD908 million in 2006/2007, which is only 1.3 times of the value in 2004/2005. Accordingly, the Lao PDR has a trade surplus of approximately USD18 million for the first time in that year.




Source: Prepared by JICA Survey Team based on the internal data of MoIC

**Figure 1.4.5: Change in Export-Import Balance**

### 1.4.2 Customs

(1) General

As part of the Ministry of Finance, the Customs Department is responsible for ensuring that all legislation governing the importation and exportation of the Lao PDR are fully complied with. The Customs Department is also responsible for ensuring that all applicable duties and taxes have been paid.

The Lao PDR uses the Harmonized System (HS) at an eight-digit level. Customs duties are calculated according to the value on c.i.f.

(2) Common Effective Preferential Tariff

In 1997, the Lao PDR became a member of ASEAN and committed to fully implement the ASEAN Free Trade Area (AFTA) in 2008. The backbone of AFTA is tariff reduction through the mechanism of the common effective preferential tariff (CEPT). Under CEPT, tariffs on goods traded between the Lao PDR and the ASEAN region will be reduced to 0-5% by 2008.

It was agreed that ASEAN 6 countries (the initial members of ASEAN consisting of Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand) enact zero tariff rates on virtually all imports from the ASEAN region by 2010; and CLMV (the four newer ASEAN members consisting of Cambodia, Laos, Myanmar and Vietnam) enact zero tariff rates on virtually all imports from the region by 2015. Figure 1.4.6 shows the road map of the phased implementation program of CEPT for ASEAN 6 countries and CLMV.

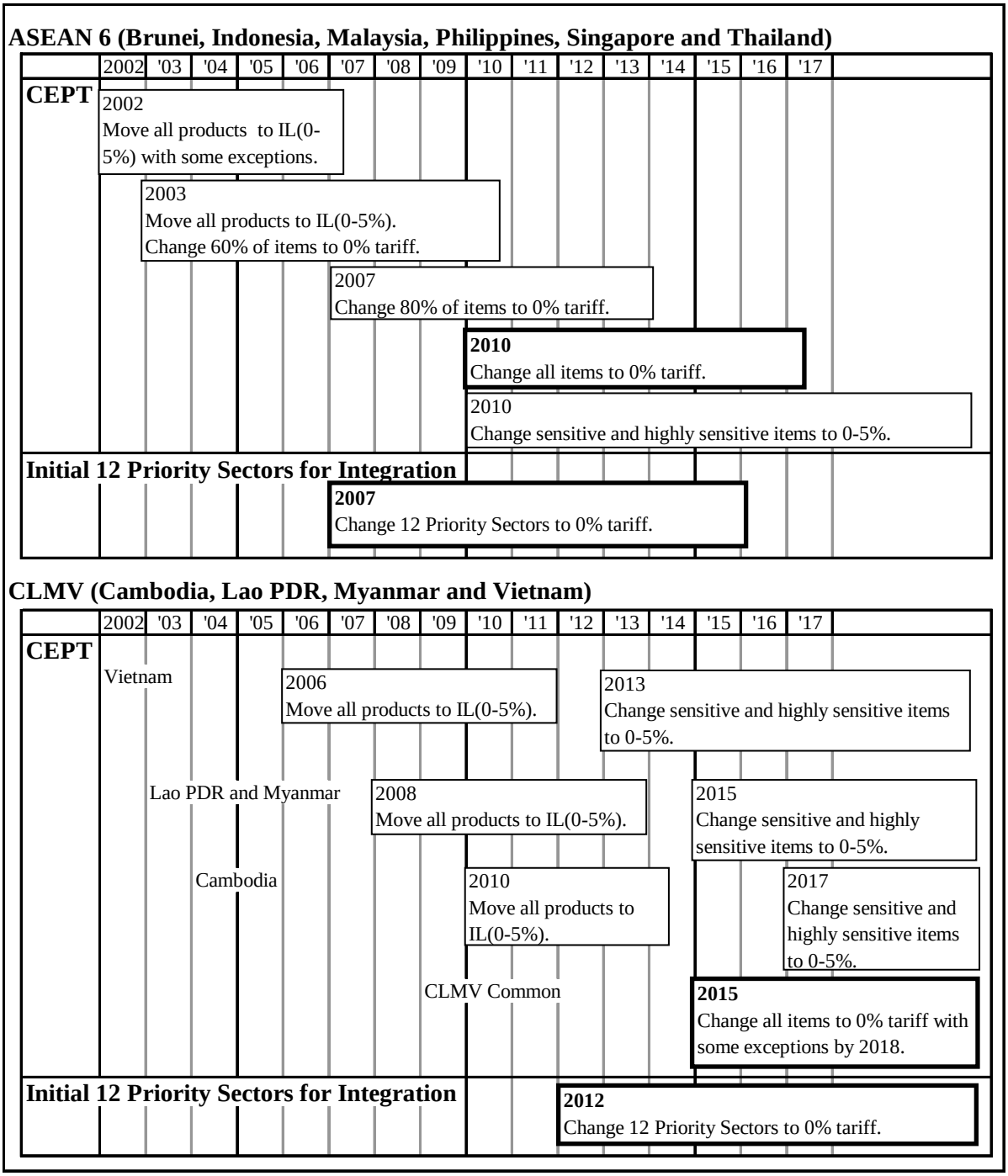
Under CEPT, goods are classified into four categories, namely:

- Inclusion List (IL): goods that will have a 0% to 5% tariff rate by the deadline for each country. The Lao PDR has to bring down the tariff of 98% of the products in the IL to duty of no more than 5% until 2008.
- Temporary Exclusion List (TEL): sensitive goods that are temporarily excluded from the IL, and will be subject to 0% or 5% tariff rates within the following seven years.
- Sensitive List (SL): goods that are given a longer time to transfer to the IL (by 2015 for the Lao PDR), including unprocessed agricultural products.
- General Exception List (GEL): goods that are not subject to tariff reduction or elimination for reasons of national security, human, animal and plant life and health, including articles of artistic, historic and archaeological values.

The following summarizes the state of tariff reduction in the Lao PDR as of July 2007[17]:

- The IL of the Lao PDR consists of 10,023 items (about 94% of the total 10,690 items).
- 9,960 items (99.4%) in the IL have duties of no more than 5%.
- 629 items (6.3%) in the IL have zero tariff rates.
- The Lao PDR has 203 items in SL and 464 items in GEL.

[17] Source: JETRO (March 2008) based on Consolidated 2007 CEPT Package of ASEAN




Source: Prepared by JICA Survey Team based on materials prepared by ASEAN, JETRO and ASEAN-Japan Center.

**Figure 1.4.6: Roadmap of CEPT**

(3) 12 Priority Sectors for Integration

ASEAN gave priorities on 12 sectors to accelerate economic integration towards a single market and production base. For full integration of ASEAN by 2015, the following priority sectors have been identified by the Vientiane Action Program agreed at the 10th ASEAN Summit held in November 2004:

- Agro-Based Products
- Automotive Products

- Electronics
- Fisheries
- Rubber-Based Products
- Textiles and Apparels
- Wood-Based Products
- Air Travel
- e-ASEAN (ICT)
- Healthcare
- Tourism
- Logistics Services (added at the 39th Meeting of the ASEAN Economic Ministers held in August 2007)

The tariff of goods in the priority sectors has to be eliminated by 3 years ahead of CEPT as shown in Figure 1.4.6.

(4) Trade Preferences Granted to the Lao PDR

As a least developed country, the Lao PDR has been granted the following trade preferences from different countries.

*1) General System of Preference (GSP)*

The tariff is exempted or reduced when the special goods originating from the Lao PDR are exported to countries granting GSP privilege to the country. There are 42 countries including the EU, Japan, Australia, Canada and China that have granted GSP privilege to the Lao PDR as of May 2007[18].

*2) ASEAN Integrated System of Preferences (AISP)*

Beginning on 1 January 2002, ASEAN adopted the AISP scheme whereby preferential tariffs are offered to new members (CLMV countries) by the older members on a voluntary and bilateral basis.

Thus far, Thailand, Philippines and Malaysia have issued their legal enactments to implement the AISP. Each of the three countries has granted preferential tariffs on the following numbers of items to the Lao PDR:

- Thailand: 242 items[19]
- Philippines: 74 items
- Malaysia: 83 items

The Lao National Chamber of Commerce and Industry (LNCCI) cooperates with governmental organizations with a view to obtaining GSP from various countries and acts as the responsible authority for the Certificate of Origin and forms of Lao products by cooperating with international bodies.

[18] Dr. Nam Viyaketh, Minister of Industry and Commerce, the Lao PDR (May 2007, Presentation at the investment promotion seminar for the Lao PDR, in Tokyo)
[19] Dr. Nam Viyaketh, Minister of Industry and Commerce, the Lao PDR (September 2007, Presentation for Trade and Investment Promotion in the Lao PDR, in Bangkok)

### 1.4.3 Foreign Trade in Neighboring Countries

(1) Foreign Trade in Thailand

Regarding export in 2007, computer and car ranked high among the export items followed by industrial materials such as natural rubber, plastic resin, and iron & steel, as shown in the following Table 1.4.1.

As for import in 2007, crude oil was the largest import item as fuel and raw material of petrochemical industry. In addition, a large amount of industrial machine, chemicals and integrated circuit (IC) were imported, reflecting the above export items.

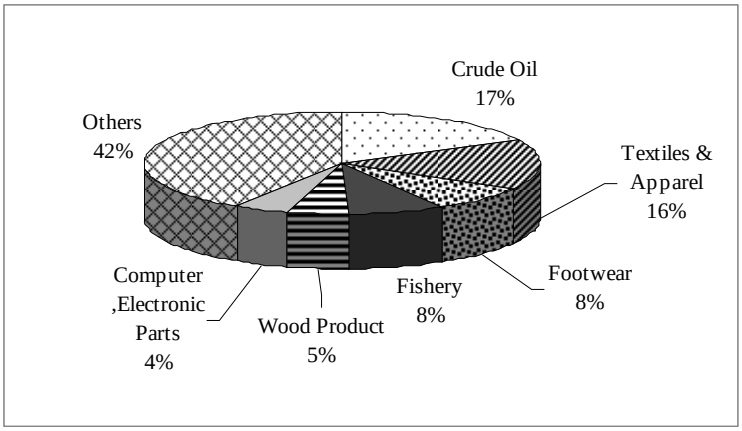
**Table 1.4.1: Export and Import by Item in Thailand (2007)**

| Export Value in 2007 (Million USD) | | Import Value in 2007 (Million USD) | |
|---|---|---|---|
| Computer and its part | 14,869 | Crude Oil | 20,406 |
| Car and its part | 9,524 | Industrial Machine | 12,172 |
| IC | 7,030 | Chemicals | 10,021 |
| Natural Rubber | 5,397 | IC | 9,823 |
| Jewel and Jewelry Goods | 3,668 | Electric Machine and its part | 9,503 |
| Plastic Resin | 4,498 | Iron and Steel | 8,575 |
| Iron and Steel | 3,529 | Computer and its part | 7,520 |
| Machine and its part | 2,655 | Waste Metal and Scrap Metal | 7,130 |
| Refined Fuel | 3,649 | Jewel and Bullion | 4,117 |
| Chemicals | 3,434 | Auto parts | 3,337 |
| Others | 71,467 | Others | 47,355 |
| Total | 129,720 | Total | 139,959 |

Source: JETRO based on data of Ministry of Commerce, Thailand

(2) Foreign Trade in Vietnam

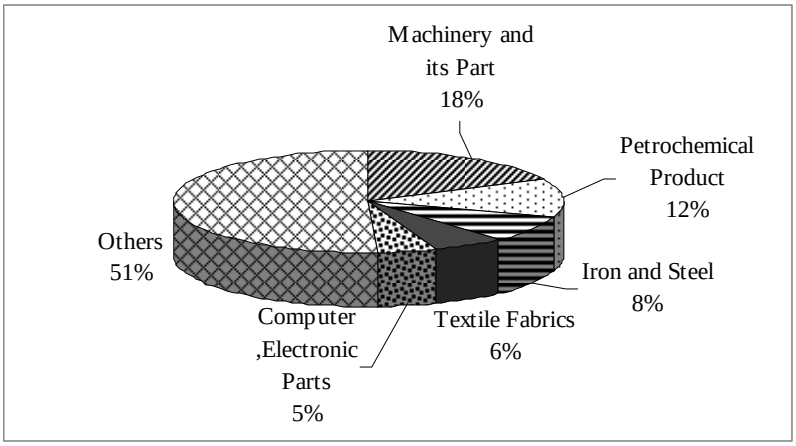
In terms of export amount, the light industry products such as textile, apparel and footwear ranked higher as shown in Figure 1.4.7. With regards to export counterparts, advanced countries with high labor costs such as USA, Japan and Australia ranked higher than others.




Source: JETRO

**Figure 1.4.7: Export Value by Item (Vietnam, 2007)**

A large amount of textile fabrics was imported to be used by the apparel industry. Other major import items were mainly products of the heavy and chemical industries such as machinery, petrochemical products, iron and steel products as shown in Figure 1.4.8.




Source：JETRO

**Figure 1.4.8: Import Value by Item (Vietnam, 2007)**

## 1.5. National Development Plans

Understanding the existing policies and plans for industrial development is important for preparing the industrial development plan. For this purpose, this section reviews two plans, namely, the Sixth Five-Year National Socioeconomic Development Plan (NSEDP) for 2006-2010 and the Sixth Five-Year Industry and Commerce Development Plan (draft) for 2006-2010.

NSEDP formulated for the whole country is reviewed with a focus on the industrial sector. The draft of the Sixth Five-Year Industry and Commerce Development Plan was prepared by the Ministry of Industry and Commerce (MoIC) combining the two plans that were formulated by the Ministry of Industry and Handicrafts and the Ministry of Commerce and Tourism.

### 1.5.1 Sixth Five-Year National Socioeconomic Development Plan (2006-2010)

(1) Overall Goals

The Lao government has a vision that the country will outgrow the Least Developed Country (LDC) status by 2020. The vision was set in the 6$^{th}$ Party Congress in 1996, and was the basis of overall goals in the National Growth and Poverty Eradication Strategy 2001-2010 and the Sixth Five-Year NSEDP. The other major goals of development plans are to achieve targets in the Millennium Development Goals (MDGs) and the Brussels Programme of Action for the Least Developed Countries (2001-2010).

In this context, NSEDP sets the following goals:

- Accelerate economic growth and improve the people's quality of life by restructuring the economy and providing employment based on the countries' rich resources and international integration;
- Further build the market economy with a socialist orientation;
- Continue to enlarge and develop effective external economic relations; and
- Continue strengthening the socioeconomic infrastructure as fundamentals for development in the Sixth Five-Year Plan and the next (Seventh) Five-Year Plan.

In order to achieve the goals mentioned above, GDP growth rate is set at an average of 7.5-8% per annum.

(2) Economic Targets

In 2010, GDP at current prices is projected to be LAK59,500 billion, equivalent to USD4.97 billion. The average GDP per capita will reach USD827. The GDP annual average growth rate should reach 7.5-8%, with agriculture and forestry increasing by 3-3.4%, industry by 13-14%, and services by 7.5-8%.

In particular, the growth rate in industry will be considerably accelerated as there will be more industrial opportunities, especially since hydropower dams and cement factories will begin operation at the end of NSEDP.

By 2010, the agriculture sector is projected to account for about 36% of GDP, while industry for about 36.4% and services for about 27.6%. The projected changes in the economic structure are shown in Table 1.5.1.

**Table 1.5.1: Projected Structure of the Economy (2006-2010)**

| Sector | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|
| Agriculture | 43.1% | 41.3% | 39.6% | 37.8% | 36.0% |
| Industry | 29.9% | 31.4% | 33.0% | 34.6% | 36.4% |
| Services | 27.0% | 27.3% | 27.4% | 27.6% | 27.6% |
| GDP | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

Source: The Sixth Five-Year National Socio-Economic Development Plan (2006-2010)

(3) Industry and Minerals

- Give priority on electricity and processing industries such as fertilizer, machinery, electronics, garments, footwear, and food processing.
- Promote the private sector and encourage foreign investors; implement development policies for industries using domestic materials to increase the value-added and promote potential strengths; and establish an investment promotion policy for regions with difficulties and mountainous regions.
- Speed up the revitalization and development of state-owned sectors; and formulate and implement the supporting programs for small- and medium-sized enterprises.
- Encourage technology transfer in production to improve the competitive ability of products; increase the usage of quality control systems and modern environmental management (ISO 9000 and ISO 14000); and pay attention to product standards, packaging, and habits and traditions of each region so as to penetrate and enlarge markets.
- Fight against smuggled goods, imitation products, and products with imitated labels; and simplify customs formalities and procedures for export and import of production materials.

### 1.5.2 Sixth Five-Year Industry and Commerce Development Plan (2006-2010)

(1) Direction of Industry and Commerce Development

Direction and general duties of the industry and commerce development plan was set at the 8th Party Congress (2006). Priorities are given to the following matters:

- To develop the potentials of domestic resource and Lao people,
- To increase the cooperation with other countries,

- To increase the ability to compete and strengthen ties with foreign countries in the region and the world in order to improve production and service, and
- To make all necessary efforts to push forward the industrialization and modernization of the industry by employing new technology in some sectors, viable divisions and rural economy such as the processing industry sector, by establishing the structure that will link the agriculture with the industry & services sectors, and by forming economic zone in the whole country.

The goals of the industry and commerce sector are set forth as shown in Table 1.5.2.

**Table 1.5.2: Goals of Sixth Five-Year Industry and Commerce Development Plan (2006-2010)**

| Sector | Items of Goal | Target Values |
|---|---|---|
| Manufacturing | Annual growth rate in 2006-2010 | 11.52% per year |
| Export | Annual growth rate in 2006-2010 | 18.10% per year |
| | Total value of exports in 2006-2010 | USD3.48 billion |
| | Expected value of exports in 2010 | USD1,046 million |
| | Per capita exports in 2010 | USD187, corresponding to 2.29 times in 2005 |
| Import | Annual growth rate in 2006-2010 | 8.8% per year |

Source: The Sixth Five-Year Industry and Commerce Development Plan (2006-2010)

The Party commission has set up the plan for enhancing the organizational reform of the Ministry of Industry and Commerce (MoIC) so that it could make the general guidelines and goals as follows:

- To play the role of macro-management completely and effectively, in accordance with the Prime Minister's decree on the organization and activities of the MoIC, and
- To complete the restructuring of the MoIC including the following aspects:
  - all levels from the Ministry to the local organizations associated with the industry and commerce section,
  - tasks of plans, projects, and works assigned,
  - budget plan, and
  - people taking responsibilities and supervising the implementation and monitoring of the action plan.

(2) Exports

During the 2006-2010 period, exports will be expanded depending on the characteristics of each product category as shown in Table 1.5.3.

The main market during the five-year period will be Asia (accounting for 55-60% of Laos's exports), followed by the EU (28-30%), Oceania (10-12%), and America & Africa (3-4%). In Asian markets, attention needs to be paid to ASEAN countries, China, Taiwan and South Korea, while for European markets, EU, Switzerland, and Russia should be prioritized. Other significant markets are Australia in the Oceania Region, USA in the American Region and South Africa in the African Region.

**Table 1.5.3: Expected Growth of Exports in 2006-2010**

| Category | Expected Growth per year | Main Market | Remarks |
|---|---|---|---|
| Electricity | 34.5% | ✓ Thailand, Vietnam and Cambodia | ✓ Total in the period will be USD850 million<br>✓ The value in 2010 will be USD420 million |
| Mineral (metal and non-metal minerals) | 12% | ✓ Australia (gold),<br>✓ Thailand and Malaysia (copper)<br>✓ Thailand, Vietnam, Cambodia (tin),<br>✓ China, Vietnam (limestone) | ✓ Total in the period will be USD950 million<br>✓ The value in 2010 will be USD226 million<br>✓ Metal includes gold, bronze, diamond (import for processing, and re-export), tin, lead, zinc.<br>✓ Non-metal includes, coal, limestone, construction stone, salt etc. |
| Textile and Garment | 12% | ✓ EU (Laos has the special treatment rights.) and USA | ✓ Total in the period will be USD780 million<br>✓ The value in 2010 will be USD190 million |
| Other industrial products | 14% | ✓ EU (canned food)<br>✓ Japan, USA, and France (liquor) | ✓ Including electronic parts, electrical appliances, shoes, bags, agriculture processing, liquor, etc. |
| Handicraft products | 12% | ✓ Thailand and Japan (expected)<br>✓ EU, Japan, and USA (high potential market) | ✓ Total in the period will be USD20 million<br>✓ The value in 2010 will be USD5 million |
| Wood and wood products | 10% | ✓ Thailand, Vietnam, China, Japan, and Taiwan | ✓ Total in the period will be USD500 million<br>✓ The value in 2010 will be USD120 million |
| Coffee | 10% | ✓ EU and Switzerland<br>✓ China and Russia (new markets) | ✓ Total in the period will be USD62 million<br>✓ The value in 2010 will be USD15 million |
| Other agriculture products | 13% | ✓ China and Thailand (tea) Singapore and Pakistan (herbals, pepper)<br>✓ Thailand (ginger, etc.)<br>✓ Thailand, China, Italy, Taiwan (vegetable oil)<br>✓ Thailand (beans)<br>✓ China, Vietnam and Thailand (rubber)<br>✓ Thailand, Vietnam, China, and EU (rice)<br>✓ Thailand, Vietnam, and China (corn)<br>✓ Thailand and China (vegetable such as cabbage, potato, sweet potato and garlic; and fruits)<br>✓ Vietnam and Thailand (livestock)<br>✓ Thailand (animal's skin) | ✓ Total in the period will be USD228 million<br>✓ The value in 2010 will be USD60 million<br>✓ Including corn, sticky rice, beans, cigarette leaves, tea, herbals (peppers), vegetables (potatoes, gingers, cabbages, garlic, young corn, bamboo, tomatoes, etc.), vegetable oil for cooking and for bio-diesel production, livestock, animal's skin, fiber, cotton and silk, rubber, other organic agriculture products |
| Forestry products | 5% | ✓ Thailand, China, France, Japan and Korea (medical plants) | ✓ Medical plant (forestry products from both natural and planting; currently there are 23 types and can be expanded to 43 types) |

Source: The Sixth Five-Year Industry and Commerce Development Plan (2006-2010)

(3) Imports

In order to balance imports and exports in 2010, import growth rate needs to be kept at 8.8% per year. Priorities should be given to the import of machinery, raw materials and equipment required for production, as well as the import of advanced technology utilized for industrialization and modernization of industry.

Import from Asian countries will still be the largest for the Lao PDR but efforts should be made to reduce the share of Asia from 80% to 75% in 2006-2010, while share of import from EU should be increased from 18% to 20%.

## 1.6 Legal and Institutional System

### 1.6.1 Current Legal System for Industrial Development

(1) Current Legal Acts Related to Development of Industries and Special and Specific Economic Zones

The legal acts related to development of industries and special and specific economic zones in terms of (a) definitions, (b) investment or registration procedures, (c) implementation and management of economic zones, (d) incentives including tax and import duties, and (e) employment of foreigners are shown in Table 1.6.1.

**Table 1.6.1: Legal Acts Related to Development of Industries and Economic zones**

| | Law on Investment Promotion | Land Law | Urban Law | Processing Law | Enterprise Law | Customs Law | Tax Law | Labor Law | Savan-SENO decree |
|---|---|---|---|---|---|---|---|---|---|
| Definition of special & specific economic zones / land use | X | X | X | X | | | | | X |
| Investment or registration procedures including development of special & specific economic zones | X | | | | X | | | | X |
| Implementation and management on special & specific economic zones | X | | | | | | | | X |
| Incentives including tax and customs duties | X | | | | | X | X | | X |
| Employment of foreigners | X | | | | | | | X | X |

Source: JICA Survey Team

Provisions (articles) of each act, except the Law on Investment Promotion and Savan-SENO Decree which will be discussed later, related to the development of industries and economic zones are summarized in Table 1.6.2.

The following shall be taken into consideration to avoid conflict among the related legal acts:

(a) The definitions of terminology shall be harmonized among the laws.

(b) The registration and investment procedures shall be changed according to the Law on Investment Promotion. The modifications or amendments of the related laws are needed.

(c) The incentives provided by a law or decree shall be reflected in the related laws such as Tax Law and Customs Law as soon as possible.

**Table 1.6.2: Provisions Related to Development of Industries and Economic Zones**

| Legal Act | Provisions Which are Primarily Related |
|---|---|
| Land Law | (Definitions)<br>Article 27. Industrial Land<br>Industrial land is the land area or region which is determined by the State to be the location of workshops [and] factories[,] including the housing places for workers, industrial centers, industrial zones, industrial estates, places for industrial, technical and scientific research, wastewater treatment stations, industrial waste disposal sites, energy sources, electricity transmission lines, energy and gas pipe-lines, pipe-lines for water supply, mining areas, and other land used for industrial purposes. |
| Urban Law | (Definitions and others)<br>Article 10. Urban Planning at the District Level<br>Urban Planning at the district level is the determination of land demarcation for the construction and expansion of cities by the allocation of areas for residences, offices, agriculture, industry, trade and services, road networks, transport, culture, sports, public parks, military and defense zones, public utilities, and others.<br><br>Article 12. Reservation and Transfer of Land<br>The State has the right to reserve or transfer land to the public domain and for future development such as: new community development areas, roads, industrial zones, agriculture zones, conservation forests, tourism areas, military and defense zones, and others. |
| Industrial Processing Law | (Definitions)<br>Article 24. Industrial Locations<br>Industrial locations [refers to] areas of land outside of industrial zones and industrial estates for which approval has been given to establish a factory.<br><br>Article 25. Industrial Zones<br>Industrial zones [refers to] areas of land reserved by the State for the establishment of industrial and handicrafts factories as provided for in the Urban Planning Law.<br><br>Article 26. Industrial Estates<br>Industrial estates [refers to] areas of land in industrial zones upon which are built basic infrastructure, such as roads, electricity, municipal water supply, telecommunications, buildings, and others, necessary for factory operations or for lease or concession to business people. |

| Legal Act | Provisions Which are Primarily Related |
|---|---|
| Enterprise Law | (Registrations and others)<br>Article 3. Right to Establish Enterprise<br>Lao citizens, foreign residents, apatrids12 residing in the Lao PDR and foreigners, including their organizations, are entitled to establish enterprises or participate in business transactions in accordance with the laws and regulations of the Lao PDR.<br><br>Article 12. Registration of Enterprises<br>Enterprise registration [refers to] the acceptance of a notification for enterprise registration as lawful recognition by the State of an individual or legal entity, either domestic or foreign, that is established and is operating a business in the Lao PDR. |
| Custom Law | (Incentives)<br>Article 46. Rules Relating to Customs Duties for Special Economic Zone and Specific Economic Zones<br>Goods in the special economic zone shall be subject to suspension of customs duties and shall not be under the regular control of customs officers.<br>Goods in specific economic zones are governed by relevant laws and regulations.<br>Goods to be taken out of the special economic zone and specific economic zones for use within the country shall be subject to Article 7 of the Customs Law. |
| Tax Law | (Incentives)<br>Article 34. Exemption from or Reduction of Profit Tax<br>Persons who have been licensed by the government to invest in projects and other priority areas in the Lao PDR shall receive tax exemptions or shall pay profit tax at a reduced rate on a case by case basis in accordance with the law on promotion of investment. |
| Labor Law | (Employment of foreign labor)<br>Article 25. Acceptance of Employees to Work<br>The labor unit has the right to accept such employee as it requires but shall give priority to Lao citizens, especially persons who are targets under poverty alleviation programs.<br>In the case of necessity, the labor unit may accept foreign employees but they must be a select [group] and be approved by the labor administration agency. [Such acceptance] shall be in the following proportion:<br>• For physical laborers, it is permitted to accept not more than 10% of the number of total employees in that labor unit;<br>• For workers having intellectual expertise to work, it is permitted to accept not more than 20% of the number of total employees in that labor unit.<br>In the case of necessity, the import of foreign labor may exceed the proportions mentioned above, but approval from the Government must be obtained. |

Source: JICA Survey Team based on each law

### (2) Current Legal Acts Directly Related to Development of Special and Specific Economic Zones

In this section, two legal acts shown in Table 1.6.3, which are the most important acts for the development of special and specific economic zones, are discussed and analyzed. They are (a) Law on Investment Promotion, which was officially promulgated in July 2009, and (b) Decree of Prime Minister on the Savan-SENO Special Economic Zone.

**Table 1.6.3: Current Legal Acts Related to Development of Specific Economic Zones**

| Name of the Law/Decree | Law on Investment Promotion (2009) | Decree of Prime Minister (No. 148/PM) on the Savan-Seco Special Economic Zone (2003) |
|---|---|---|
| Major contents | Number of articles amounts to 99. The law consists of 11 parts. Large parts are allocated for incentives, procedures and management for investment. | The Decree consists of 12 articles and defined the duties and responsibility of the zone. Details are stipulated in the Implementation Decree. |
| Implementation Decree (Management Regulations) on the Laws | Not yet formulated. The draft is under preparation by MPI. | Decree of the Prime Minister (No. 177/PM) on the Management Regulations and Incentive Policies was already promulgated. |
| Governing structure and management body | Ministry of Planning and Investment (MPI) is in charge of this law. | Prime Minister's Office and Savan-SENO Special Economic Zone Authority (SEZA) are involved in this decree. |

Source: JICA Survey Team

The recent movement on the formulation of the legal acts on investment promotion is shown in Table 1.6.4. The most current Law on Investment Promotion was promulgated in July 2009 although it was announced by the government in March 2010. The foreign investment promotion law of 2004 and the domestic investment promotion law of 2004 were replaced by this new law.

**Table 1.6.4: Recent Movement on the Formulation of the New Investment Promotion Law**

| | |
|---|---|
| 1988 | Law on the Promotion and Management of Foreign Investment |
| 1994 | Revised Law on the Promotion and Management of Foreign Investment |
| 2003 | Decree of the Prime Minister( No. 64/PM) on the Roles, Responsibilities and Rights of the Committee for Investment Management, Foreign Cooperation and Domestic Investment at Central and Local Levels |
| 2004 | Revised Law on the Promotion of Foreign Investment<br>Revised Law on the Promotion of Domestic Investment |
| 2005 | Decree of the Prime Minister (No. 31/PM) on the Management Regulations regarding Revised Law on the Promotion of Foreign Investment |
| 2009 | The Law on Investment Promotion was promulgated in July 2009 although it was announced by the government in March 2010. |

Source: JICA Survey Team

*1) Law on Investment Promotion (2009)*

The summary of the Law on Investment Promotion is as follows:

*i) Form of Investment*

The legal form of investment permitted includes the following:

- A wholly domestic or foreign-owned investment
- A joint venture between domestic and foreign investors
- A business cooperation investment by contract

*ii) Type of Investment*

The investors can invest in (a) General business, (b) Concession and (c) Activities in the development of special and specific economic zones.

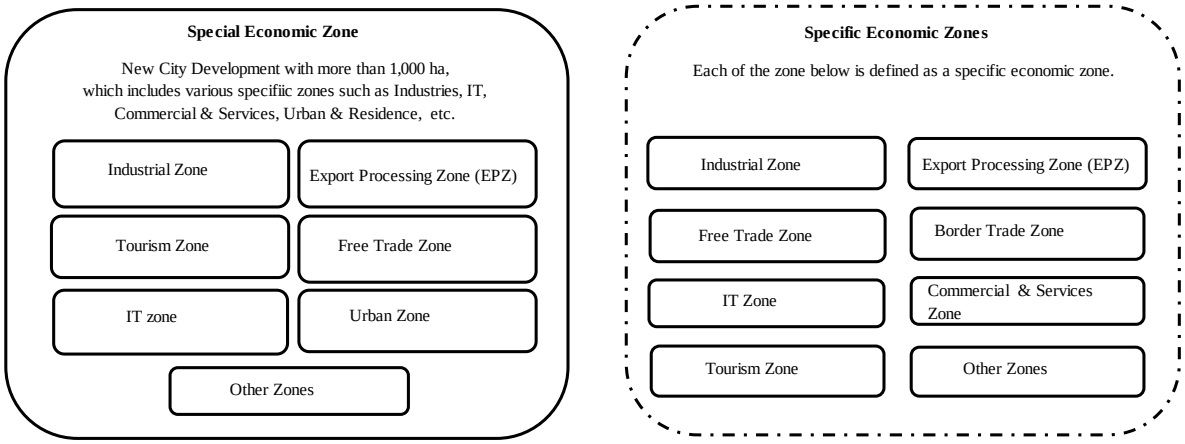
*iii) Special and Specific Economic Zones*

Under Article 3 and Article 33, the special economic zone is defined as an economic zone in which the government allows investors to develop and build a sort of a New City with more than 1,000 ha including various specific economic zones such as industrial zones, export processing zones, tourism zones, duty free commercial zones, zones for the development of information technology, and so on. This definition of the special economic zone is not common when compared to that of other countries. According to MPI, there are three special economic zones in the country as of March 2010, namely: Savan-SENO, Borten Dankham (Luangnamtha Province) and Golden Triangle (Bokeo Province). The latter two zones are located in the border area with China and Thailand-Myanmar, respectively. Major activities there are tourism, trade and commerce.

On the other hand, the specific economic zone is defined as the collective term for a rather single-functional economic zone such as an industrial zone, export processing zone, tourism zone, duty free commercial zone and so on.

The law stipulates that the organization, activities and management of special and specific economic zones are described in separate regulations.

Based on the description of the law, the definition of the zones shall be envisaged as shown in Figure 1.6.1.




Source: JICA Survey Team based on the Law of Investment Promotion (2009)

**Figure 1.6.1: Economic Zones under the Definition of Special and Specific Economic Zones**

*iv) Investment Incentives*

- Profit tax

A variety of patterns for exemption on profit tax (corporate income tax) is provided according to the promoted sectors and zones as shown in Tables 1.6.5 to 1.6.7.

**Table 1.6.5: Profit Tax Exemption Period**

| Promoted zones | | Zone 1 | Zone 2 | Zone 3 |
|---|---|---|---|---|
| Promoted sector | Level-1 | 10 years | 8 years | 6 years |
| | Level-2 | 6 years | 4 years | 2 years |
| | Level-3 | 4 years | 2 years | 1 year |

Source: The Law on Investment Promotion

Notes: 1) Exemption on profit tax period starts from the date the enterprise carries out operations. For the production of new products, research and creation of new technology activities, the profit tax exemption commences from the date the enterprise starts making a profit.
2) After finishing the period of the profit tax exemption as mentioned above, the enterprises shall pay the profit tax in accordance with the Tax Law (No.04/NA 19 May 2005). According to the Article 40 of this Law, tax rates are divided into six levels, namely: 0%, 10%, 15%, 20%, 30% and 35% (in the case of more than 60 million kip), based on the taxable profit. The Law on Investment Promotion does not provide incentives for the tax reduction after completion of the exemption period, although Law of Foreign Investment Promotion (2004) did.
3) Details of promoted zones and sectors are decided by the implementation decree. Vientiane Industrial Park (VIP) will be located in Xaisettha District, which is designated as Zone 3 according to the Law of Foreign Investment Promotion (2004).

**Table 1.6.6: Definition of Promoted Sector**

| Promoted Sector | Definition of the Sector |
|---|---|
| Level 1 | Activities with high level of promotion |
| Level 2 | Activities with moderate level of promotion |
| Level 3 | Activities with low level of promotion |

Source: The Law on Investment Promotion

**Table 1.6.7: Definition of Promoted Zone**

| Investment Zone | Definition of the Zone |
|---|---|
| Zone 1 | Zones with no socio-economic infrastructure to facilitate investments, which mostly are remote areas. These zones will get high level of investment promotion. |
| Zone 2 | Zones with a moderate level of socio-economic infrastructure suitable to accommodate investments to some extent. These zones will get intermediate level of investment promotion. |
| Zone 3 | Zones with good infrastructure to support investments. These zones will get low level of investment promotion. |

Source: The Law on Investment Promotion

- Other incentives

In addition to the profit tax incentive, the enterprise will also be entitled to receive additional duties and tax incentives as follows:

- The profit used for the expansion of business activities shall be exempted from profit tax during the accounting year;
- Import duties on equipment, spare parts and vehicles directly used for production shall be exempted. As for tax exemption, it must follow specific regulations;
- Investor can transfer annual loss to the following year to be deducted from profit within the period of three years, but must be certified by the tax officer. After that, the remaining loss is not allowed to be deducted from the profit anymore. In the case of special and specific economic zones, the incentives related to other duties and taxes shall follow the decree on the organization and activities of each zone.

*v) Terms of Investment*

The Law on Investment Promotion stipulates the term of investment as follows:

**Table 1.6.8: Terms of Investment**

| Type of Investment | Term of Investment |
|---|---|
| Investment in general activities | No limit |
| Investment in concession activities | Not exceed 99 years |
| Investment in special and specific economic zones activities | Not exceed 99 years |

Source: The Law on Investment Promotion

*vi) Management*

The division of management level is based on the type of the investment; (a) the investment in general activities shall be managed by the Industrial and Commercial Sector, (b) the investment in concession activities and special & specific economic zones shall be managed by the Planning and Investment Sector and (c) the investment within the special & specific economic zone shall be managed by the management committee in the zones.

*vii) One-stop Service*

The offices of one-stop service will be established in the (a) Planning and Investment Sector for the investment in concession and special and specific economic zones, (b) Industrial and Commercial Sector for the investment in general businesses and, (c) special and specific economic zones for the investment in these zones.

The demarcation of steps of investment procedures by authority is summarized in Table 1.6.9 below.

**Table 1.6.9: Demarcation of Steps of Investment Procedures by Authority According to the Law on Investment Promotion**

| Type of investment | First Door for Investment Application | Review and screening of the application | Final Approval | Authority which issue Licenses | Investment Management Authority and Monitoring Authority |
|---|---|---|---|---|---|
| (1) General businesses | OSU at MoIC | MoIC | MoIC | MoIC | MoIC |
| (2) Concession activities | OSU at MPI | MPI | Government | MPI | MPI |
| (3) Development of special and specific economic zones | | | | | |
| As for the establishment of the zone | - | - | Government | - | - |
| As for developer of the zone | OSU at MPI | MPI | Government | (No license) Promulgation of the decree | Establishment Committee & Management Committee of the zone |
| As for investors within the zone | OSU at Management Committee of the zone | Management Committee of the zone | Management Committee of the zone | Management Committee of the zone | Management Committee of the zone |

Source: JICA Survey Team based on the Law on Investment Promotion

Notes: 1) OSU means One-Stop Services Unit
2) MPI and MoIC above include their local agencies/offices in the provinces.
3) "The Government is the person who approves the establishment of special & specific economic zones pursuant to the proposal of MPI based on the examination, coordination with concerned sector…. (Article 35: the Law of Investment Promotion)

*viii) Employment*

The law does not state that investors/enterprises must give preference to Lao workers in terms of employment although there is a quota of foreign labors described in the Labor Law.

*ix) Comparison with Incentives of Law of Foreign Investment Promotion (2004)*

Incentives stipulated in the Foreign Investment Promotion Law (2004) are summarized in Table 1.6.10. It should be noted that the incentives stated in the new law are rather weak compared to those in the old law.

**Table 1.6.10: Incentives on Profit Tax in the Foreign Investment Law (2004)**

| Investment zone | Definition of the zone | Profit Tax Exemption Period | Profit tax reduction period/ rates | Tax rate after expiration of profit tax reduction period |
|---|---|---|---|---|
| Zone 1 | Mountainous, plain and plateau zones with no economic infrastructure to facilitate investments. | 7 years | None | 10% |
| Zone 2 | Mountainous, plain and plateau zones with a certain level of economic infrastructure suitable to accommodate investments to some extent. | 5 years | 3 years, 7.5% | 15% |
| Zone 3 | Mountainous, plain and plateau zones with good infrastructure to support investments. | 2 years | 2 years, 10% | 20% |

Source: Law of Foreign Investment Promotion, 2004

*x) Comparison with Incentives of Laws in Neighboring Countries*

Incentives on tax in neighboring countries are shown in Table 1.6.11. According to this table, incentives stipulated in the Law on Investment Promotion are not attractive for potential investors who are looking for investment sites in this region.

On this point, MPI stresses that each economic zone is able to provide more incentives by each decree beyond the ones stipulated in the New Law.

**Table 1.6.11: Investment Incentives in Neighboring Countries**

<table>
<tr><th>Country</th><th>Incentives for Profit Tax and Others</th></tr>
<tr><td>Thailand</td><td>- Basic Profit Tax Rate: 30%
<table>
<tr><td rowspan="2">Items/Conditions</td><td colspan="2">Zone 1</td><td colspan="2">Zone 2</td><td colspan="2">Zone 3</td></tr>
<tr><td colspan="2">Bangkok Metropolitan Area</td><td colspan="2">Provinces near Bangkok, Phuket</td><td colspan="2">Other Provinces</td></tr>
<tr><td>Within Industrial Estate*</td><td>Inside</td><td>Outside</td><td>Inside</td><td>Outside</td><td>Inside</td><td>Outside</td></tr>
<tr><td>Exemption on Profit Tax</td><td>3 years</td><td>NA</td><td>7 years</td><td>3 years</td><td>8 years</td><td>8 years</td></tr>
<tr><td>50% Reduction on Profit Tax</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>5 years</td><td>NA</td></tr>
</table>
*Industrial Estate here means industrial estates under Industrial Estate Authority of Thailand (IEAT) or designated industrial zone for public facilities.<br>IEAT does not provide incentives for profit tax exemption although it gives other types of incentives.</td></tr>
<tr><td>Vietnam</td><td>- Basic Profit Tax Rate: 25%
<table>
<tr><th>Tax rates</th><th>Conditions/Requirements</th><th>Preferential period</th><th>Exemption period</th><th>50% Tax reduction period</th></tr>
<tr><td>20%</td><td>Promotion Area</td><td>10 years</td><td>2 years</td><td>4 years (10%)</td></tr>
<tr><td>10%</td><td>Special Promotion Area (High-technology Industrial Park, SEZ, Least developed area, etc.)</td><td>15 years</td><td>4 years</td><td>9 years (5%)</td></tr>
<tr><td>10%</td><td>Special Promotion Sector (High Technology, Science, Infrastructure Development, etc.)</td><td>15 years (May be extended up to 30 years by approval of prime minister)</td><td>4 years</td><td>9 years (5%)</td></tr>
<tr><td>10%</td><td>Special Promotion Sector (Education, Vocational Training, Medicine, Culture & Sports, Environment Protection, etc,)</td><td>All periods</td><td>4 years</td><td>9 years (5%)</td></tr>
</table>
When Vietnam became a member of WTO, direct subsidies on export promotion for garment sector are abolished. Also, incentives related to export performance for garment sector were abolished as of January 2007. Other similar types of incentives for other sectors will be abolished in a phased manner by January 2012.</td></tr>
</table>

| Country | Incentives for Profit Tax and Others |
|---|---|
| Philippines | - Basic Profit Tax Rate: 30% (from January 2009)<br>1. Fiscal Incentives by the Board of Investments (BOI) pursuant to the 1987 Omnibus Investments Code<br>(1) Income Tax Holiday<br>BOI-registered enterprise shall be exempt from the payment of income taxes reckoned from the scheduled start of commercial operations, as follows:<br>(a) New projects with a pioneer status for six (6) years;<br>(b) New projects with a non-pioneer status for four (4) years;<br>(c) Expansion projects for three (3) years;<br>(d) New or expansion projects in less developed areas for six (6) years, regardless of status;<br>(e) Modernization projects for three (3) years;<br>(2) Tax credit on raw materials, supplies and semi-manufactured products;<br>(3) Additional deduction from taxable income for labor expense;<br>(4) Additional deduction from taxable income for necessary and major infrastructure works;<br>(5) Exemption from wharfage dues and export tax, duty, impost and fees;<br>(6) Modified duty rate for capital equipment by virtue of E.O. No. 313<br><br>Effective June 06, 2004, BOI registered enterprises may import machinery, equipment, spare parts and accessories subject to zero percent (0%) duty for export-oriented enterprises and one percent (1%) duty for domestic-oriented enterprises.<br><br>2. Incentives for Ecozone developers/operators by Philippine Economic Zone Authority (PEZA)<br>(1) Income Tax Holiday<br>(a) 4 years for IT Parks/Buildings located outside of Metro Manila;<br>(b) 6 years for manufacturing located in less developed area;<br>(2) Incentives under the Build-Operate-Transfer Law, which includes government support for accessing Official Development Assistance and other sources of financing;<br>(3) Provision of vital off-site infrastructure facilities;<br>(4) Option to pay a special 5% Gross Income Tax, in lieu of all national and local taxes;<br>(5) Permanent resident status for foreign investors and immediate family members;<br>(6) Employment of foreign nationals;<br>(7) Assistance in the promotion of economic zones to local and foreign locator enterprises |

Source: JICA Survey Team based on JETRO, ASEAN Center and websites in each agency concerned

*2) Savan-SENO Special Economic Zone Decree*

The Decree of the Prime Minister on Savan-SENO Special Economic Zone (SASEZ) (No. 148/PM) and the Decree of the Prime Minister on the management regulations and incentives policies regarding the Savan-SENO Special Economic Zone (No. 177/PM) came into effect in 2003. The objective of the decree is to determine the organization, activities and basic policies on SASEZ in order to attract foreign and domestic investments.

*i) Scope of Decree*

First, the decree stipulates the location and area size of SASEZ. Then, types of promoted economic zones are stated, namely: export processing zone, free trade zone and free services and logistics center. Consequently, SASEZ was shaped to be a multi-functional economic zone, which includes the functions of processing/production, commerce and services.

*ii) Management Body of SASEZ*

Savan-SENO Special Economic Zone Authority (SEZA) is designated as a state-run management body for SASEZ under the Prime Minister's Office. Concrete duties of SEZA include the following: (a) to provide information to domestic and foreign investors, (b) to promote the growth of business entities located in SASEZ, (c) to administer the organization and supervise the staff, (d) to manage the budget, and so on.

*iii) Investment Incentives*

Various preferential policies for investors are adopted in SASEZ. Among them, the tax incentives granted to the SASEZ-registered enterprise are as follows:

- Business Turnover Tax

Investors that have been authorized to operate business activities in SASEZ shall be exempted from turnover tax for the goods or commodities imported from foreign countries for use, processing, production or sale in SASEZ.

(Note: On January 1, 2009, the government has introduced a value-added tax (VAT), which requires consumers to pay an additional 10% of the basic purchase price of certain products bought in the Lao PDR. VAT would replace the business turnover tax, under which the government charged companies 5 to 10% of their business profits. For the time being, the government will apply both the new and old tax systems until everyone is ready to use VAT.)

- Excise Tax

A SASEZ-registered enterprise shall be exempted from excise tax for the goods and commodities which are imported from foreign countries or from inside the country territory, for the purpose of utilization, services, processing, production and purchase/sale in SASEZ.

- Profit Tax

Rules on profit tax exemption and reduced rates after the exemption period are summarized in Table 1.6.12.

**Table 1.6.12: Incentives on Profit Tax in SASEZ**

| Requirement | Profit tax exemption period from the first profit-making year | Profit tax rate to be collected after the tax exemption period |
|---|---|---|
| 1. Industry sector | | |
| Production business exporting at least 70% of its production | 10 years | 8% |
| Production business in high-technology | 10 years | 8% |
| Production business exporting at least 30% to 69% of its production | 7 years | 8% |
| Production business exporting less than 30% of its production | 5 years | 8% |
| Other production business | 5 years | 8% |
| 2. Services and development sectors | | |
| Business having an investment capital of at least USD 2 million | 10 years | 8% |
| Business having an investment capital of at least USD 500,000-1,999,999 | 8 years | 8% |
| Business having an investment capital of at least USD 300,000-499,999 | 6 years | 10% |
| Business having an investment capital of at least USD 150,000-299,999 | 4 years | 10% |
| Business having an investment capital of at least USD 50,000-149,999 | 2 years | 10% |
| 3. Trade sector | | |
| Trade business dealing with exportation of products made in the Lao PDR | 5 years | 10% |
| Trade business dealing with re-exportation of imported goods | 3 years | 10% |
| Trade business dealing with general trading activities except above | 2 years | 10% |

Source: Decree No. 177 of the Prime Minister on the Management Regulations and Incentives Policies regarding the Savan SENO Special Economic Zone (Nov. 2003)

- Personal Income Tax

Investors with a post at the SASEZ-registered enterprise, employees, technicians and workers earning salary, allowances, wages and other payment, for which the total amount is called personal income, shall be subject to a personal income tax according to the following rates:

- 5% of the personal income for an expatriate or foreign citizen;
- The rate of personal income tax for a Lao citizen and a foreigner residing permanently in the Lao PDR shall be subject to a reduced basic rate consisting of a personal income tax exemption for the "basic amount" of 200,000 kips of their monthly personal income and a payment of personal income tax at the rate of 5% for the remaining monthly personal income, once the above basic amount has been deducted.

- Tax on Dividend (or Dividend Tax)

At the end of the period of tax exemption, all SASEZ-registered joint-venture enterprises (i.e., enterprises having two or more partners) shall be subject to a dividend tax of 5%.

- Minimum Tax

All SASEZ-registered business enterprises shall be exempted from the minimum tax.

- Import Duties

For a production business in SAZEZ, the products and merchandise, including the following: all raw materials, semi-finished products and finished products to be utilized in the processing or production; machines; and vehicles and spare parts to be used in the production for export, shall be exempted from import customs duties. A SASEZ product which is authorized to be exported out of the SASEZ for sale/distribution in the domestic market outside the SASEZ shall be subject to an import customs duty only with regards to the raw materials and semi-finished products which exist inside the country but are still being imported for production use as a result of a request made on the basis of certification and authorization by the SEZA.

*iv) Investment Procedures*

Enterprises and individuals from both domestic and foreign origins, which will create and operate a business in SASEZ, have to address their application directly to SEZA. SEZA shall be the sole authority responsible for the granting of the investment license. The investors can also obtain business registration certificate at SEZA. SEZA shall issue the applied investment license or give a negative reply to the investor's application within five official working days.

*v) Land Management*

A SASEZ-registered business enterprise which desires to lease land and buildings in SASEZ is required to directly apply to SEZA for authorization and signature of the lease contract. The investor may lease land in SASEZ for a maximum period of 75 years.

*vi) Labor Relations and Employment*

Staff and workers employed by the SASEZ-registered enterprise shall be granted salary, interests and working conditions of standards not lower than the ones fixed by the Labor Law. Appointment of foreign employees for managers, advisors, consultants, technical experts or other vacant posts for full time activities of the SASEZ-registered enterprise shall not comprise more than 30% of the total number of employees.

*vii) Other Characteristics*

SEZA shall establish a One-Stop Service Bureau or Unit to facilitate the issuance of investment license, registration of the business enterprise, export license, import license as

well as the issuance of other types of license in order to achieve high efficiency of business operations in the zone.

*4) Other Related Acts for Industrial Zones*

In addition to the laws and decrees discussed above, the draft decrees on (a) Industrial Zone and Industrial Estate Development, (b) Export Processing Zone (EPZ) Development, and (c) Vientiane Export Processing Zone (VEPZ) have been prepared by MoIC utilizing the provisions that have been drafted by JBIC/MoIC Study Team in 2008.

However, the prioritization of these decrees is being reviewed by MoIC since the Law on Investment Promotion designates that each special and specific economic zone should formulate its own decree. As a result, the formulation of these decrees shown in Table 1.6.13 may be suspended or postponed for a while.

**Table 1.6.13: Essential Features of Draft Decrees on Industrial Zone and EPZ**

| | Draft Decree on Industrial Zone and Industrial Estate | Draft EPZ Decree for the whole country | Draft Vientiane EPZ (VEPZ) Decree |
|---|---|---|---|
| Location/Target | Whole country | Whole country | Vientiane |
| Management body | Three levels of management and administrative bodies will be established. Highest level is an inter-ministerial national committee. Under this committee, Laos Industrial Estate Promotion and Development Authority (LIEPDA) that covers all types of economic zones including industrial zones/industrial estates will be established as a permanent managing body. Under this authority, the field office for the zone will be set up. | Three levels of management and administrative bodies will be established. Highest level is an inter-ministerial national committee which consists of representatives from MoIC, MoPI, MPWT, MoF, Ministry of Justice and so on. Under this committee, Laos Industrial Estate Promotion and Development Authority (LIEPDA) that that covers all types of economic zones including EPZ will be established as a permanent managing body. Under this authority, the field office for the zone will be set up. | Similarly, three levels of management and administrative bodies will be established. Highest level is an inter-ministerial national committee which consists of representatives from MoIC, MoPI, MPWT, MoF, Ministry of Justice and so on. Under this committee, a sort of economic zone authority will be established as a permanent managing body and a developer for VEPZ. Under this authority, the field office for VEPZ will be set up. |
| Incentives for land user/investors | Not clearly defined. | Profit tax: Exemption for 10 years<br>Personal income tax: 5%<br>Tax on dividend: 5%<br>Minimum tax: Exempted<br>Import duties: Exempted | Same as EPZ decree |
| Incentives for developer | Import duties: Exempted<br>Profit tax: Exemption for 3-5 years<br>Land Lease Fee/Land Concession Fee: Exempted for 5-10 years | Import duties: Exempted<br>Profit tax: Exemption for 3-5 years<br>Land Lease Fee/Land Concession Fee: Exempted for 5-10 years | Not stipulated |
| Envisaged developer | Various types of developers (public, private or J/V) are taken into consideration with incentives and land management. | Various types of developers (public, private or J/V) are taken into consideration with incentives and land management. | The proposed authority under MoIC shall be functioning as a developer. |

Source: JICA Survey Team based on interviews with MoIC

Notes: (1) The final drafts are not completed and not officially released.
(2) Large part of the draft decree on Industrial Zone and Industrial Estate and draft EPZ decree are coming from the drafts formulated by JBIC/MoIC Study (2008).
(3) The draft Vientiane EPZ decree is a basis for VIP decree.

(4) Current Legal Framework for Development of Special and Specific Economic Zones

The current legal framework for the development of special and specific economic zones comprises of the Decision of Formulation of the National Steering Committee, the Law on Investment Promotion and other decrees shown in Table 1.6.14. Some legal acts are already discussed in the preceding sections.

For a certain period, the development and management of the special and specific economic zones will be controlled based on the provisions of these legal acts.

The movement for setting up a permanent office (or authority) under the National Steering Committee is seen in order to promote the comprehensive and consistent development and management of special and specific economic zones, but it may take time to build a consensus among ministries and agencies concerned.

*1) The National Steering Committee for the Development of Special and Specific Economic Zones*

The National Steering Committee for the development of the special and specific economic zones, which is chaired by the deputy prime minister, was established in June 2009 according to the Decision (No.057/PMO) issued on 11/06/2009 by the Prime Minister's Office. Thereafter, this Decision was replaced by the new Decision (No.165/PMO) in December 2009.

The objective of the committee is to guide the development of Special Economic Zone, Industrial Zone, Export Processing Zone (EPZ), Logistic Center, Tourism City, Free Trade Zone, Border Economic Zone, and so on.

According to the Decision in December 2009, the committee members are (a) Vice Prime Minister as chairman, (b) Minister of Ministry of Planning and Investment as vice chairman, (c) Minister of Ministry of Industry and Commerce as vice chairman, (d) Minister of Ministry of Public Work and Transport as vice chairman, (e) Minister of Ministry of Finance, (f) Minister of Ministry of Justice and (g) Deputy Director General of the National Land Management Authority.

The committee has the following tasks and duties:

(a) To consult and manage Special Economic Zones and Specific Economic Zones such as Industrial Zone and Industrial Estate, EPZ, Free Trade Zone, Border Economic Zone, Logistic Center, and Tourism City in the country;

(b) To analyze the policies and legal system on the development and management of such zones;

(c) To create the plans and general strategies for the development and management of such zones;

(d) To consult about the fund resources and cooperation with foreign donors for developing the zones;

(e) To consult the tasks of Savan-Seno Special Economic Zone; and

(f) To analyze the institutional structure, personnel, and roles and duties of the administrative committee in each zone.

The Decision assigns the Investment Promotion Department, MPI as the Secretariat for the committee.

*2) The Law on Investment Promotion*

As already discussed in the preceding section, each economic zone to be developed is required (i) to set up the establishment committee, (ii) to formulate the Prime Minister's decree for development and management and (iii) to set up the management committee of the zone according to the Law on Investment Promotion.

**Table 1.6.14: Current Legal Acts for Development of Special & Specific Economic Zones**

| Competent Ministry | Name of law/decree | Status | Remarks |
|---|---|---|---|
| MPI | Law of Investment Promotion | Existing | Promulgated in July 2009 |
| | Decree of Implementation of the Law on Investment Promotion | In-preparation | |
| | Law of Foreign Investment Promotion (2004) | Repealed | Replaced by Law of Investment Promotion |
| | Decree regarding the Implementation of the Law on the Promotion of Foreign Investment (2005) | Repealed | Replaced by Decree of Implementation of Law of Investment Promotion |
| MoIC/ Department of Industry | Decree on Industrial Zones and Industrial Estates | Drafted *1) | |
| | Decree on Export Processing Zones (EPZ) | Drafted *1) | |
| | Decree of Vientiane Export Processing Zones (EPZ) | Drafted *1) | Base of VIP decree |
| | Decree on Vientiane Industrial Park (VIP) | In-preparation | A draft is proposed by JICA Study Team. |
| | Decree on Vientiane Industrial Zone | In-preparation | Decree on VIP may be integrated into Decree on Vientiane Industrial Zone |
| PMO | Decree on Savan-SENO SEZ (No. 148/PM) (2003) | Existing | |
| | Decree on the Management Regulations and Incentive Policies regarding Savan-SENO SEZ (No. 177/PM) (2003) | Existing | |
| | Decision on the National Steering Committee for Special & Specific Economic Zone (No.165/PMO) (December/2009) | Existing | The secretariat of the committee is the Department of Investment Promotion of MPI. |
| | Decree on Special Economic Zone | In-preparation? | ADB/UNIDO TA (2009/2010) |

Source: JICA Survey Team

Notes: 1) The Department of Industry of MoIC does not take steps for authorization of these drafted decrees at this moment.
2) Decrees on Borten Dankhan and Golden Triangle as Special Economic Zones/Border Trade Zones are not included in this table.

### 1.6.2 Institutions

The following are, more or less, the government organizations concerned with industrial zone development in the Lao PDR.

- Ministry of Industry and Commerce (MoIC): It is responsible for policy formulation and management of industrial development in the Lao PDR.

- Prime Minister's Office (PMO): It is the organization to support the Prime Minister in coordinating with various government agencies. Its tasks include reviewing policies and legislative drafts from line ministries and monitoring the operation of the organization, which implements specific issues, such as Savan-SENO Special Economic Zone Authority (Savan-SENO SEZA).

- Savan-SENO SEZA: It is the only organization managing the special economic zone in the Lao PDR.

- Ministry of Public Works and Transport (MPWT): It is responsible for development and management of transport, communication, water supply and urban sector.

- Ministry of Planning and Investment (MPI): It is responsible for investment policy formulation and investment approval for foreign direct investors.

- Ministry of Finance: It is responsible for policy formulation and management of tax and customs.

- Water Resources and Environment Administration (WREA): It is responsible for formulating and guiding environmental policy.

- Land Management Authority (LMA): It is responsible for land management.

The roles and responsibilities of the main organizations such as MoIC, Savan-SENO SEZA, PMO, and MPWT are described in Appendix 1.3.

# CHAPTER 2 INDUSTRIAL DEVELOPMENT FRAMEWORK

## 2.1 Demographic Framework

### 2.1.1 Two Population Scenarios

There are two future population projections available in Lao PDR. The first one is prepared by the Steering Committee of the Population and Housing Census (hereinafter referred to as the "Steering Committee"), and the second one is prepared by the Population Division of United Nations (hereinafter referred to as the "Population Division").

Table 2.1.1 indicates the basic parameters to calculate the future population until 2020 in the Steering Committee's projection. The Steering Committee prepared two scenarios, namely: (1) normal scenario with parameters indicated in the table, and (2) constant valuable scenario in which basic parameters continue to be constant after 2006.

**Table 2.1.1: Basic Parameters of the Steering Committee's Projection**

| | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|
| Total Fertility Rate | 4.5 | 3.7 | 2.9 | 2.1 |
| Crude Birth Rate (per 1000 persons) | 34.7 | 29.9 | 25.1 | 18.7 |
| Crude Death Rate (per 1000 persons) | 9.8 | 8.0 | 6.5 | 5.3 |
| Annual Growth Rate (%) | 2.4 | 2.2 | 1.9 | 1.4 |

Source: Results of the Population and Housing Census 2005, the Steering Committee Population and Housing Census

**Table 2.1.2: Basic Parameters of the UN Population Division's Projection**

| | | 2005-2010 | 2010-2015 | 2015-2020 | 2020-2025 | 2025-2030 |
|---|---|---|---|---|---|---|
| Total Fertility Ratio (TFR, per person) | Low | 3.5 | 2.9 | 2.5 | 2.2 | 2.0 |
| | Medium | 3.5 | 3.2 | 2.9 | 2.7 | 2.5 |
| | High | 3.5 | 3.4 | 3.3 | 3.2 | 3.0 |
| | Fixed TFR | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| Crude Birth Rate (per 1000 persons) | Low | 27.6 | 24.3 | 21.9 | 19.5 | 17.5 |
| | Medium | 27.6 | 26.3 | 25.0 | 23.1 | 20.8 |
| | High | 27.6 | 28.2 | 27.9 | 26.5 | 23.8 |
| | Fixed TFR | 27.6 | 28.9 | 29.3 | 28.5 | 26.8 |
| Crude Death Rate (per 1000 persons) | Low | 7.1 | 6.5 | 5.9 | 5.7 | 5.6 |
| | Medium | 7.1 | 6.4 | 6.0 | 5.6 | 5.5 |
| | High | 7.1 | 6.5 | 6.0 | 5.6 | 5.3 |
| | Fixed TFR | 7.1 | 6.5 | 6.0 | 5.6 | 5.3 |
| Annual Growth Rate (%) | Low | 1.8 | 1.6 | 1.4 | 1.2 | 1.0 |
| | Medium | 1.8 | 1.8 | 1.7 | 1.6 | 1.4 |
| | High | 1.8 | 2.0 | 2.0 | 1.9 | 1.7 |
| | Fixed TFR | 1.8 | 2.1 | 2.1 | 2.1 | 2.0 |

Source: Results of the Population and Housing Census 2005, the Steering Committee Population and Housing Census

The other projection is prepared by the Population Division, Department of Economy and Social Affairs of the United Nations as part of the "World Population Prospects: The 2008 Revision[1]", which is published in the web (http://www.un.org/esa/population/unpop.htm). This projection consists of four scenarios, namely: low variant, medium variant, high variant and constant-fertility variant. Table 2.1.2 indicates the basic parameters of each scenario.

The Steering Committee's projection covers only until 2020; therefore, it is necessary to extend the projection until 2025 under the consistent premises. On the other hand, the population in recent years is not consistent with the real population in the Population Division's projection. It is necessary to re-calculate the population projection using the census data in 2005 and the same parameters.

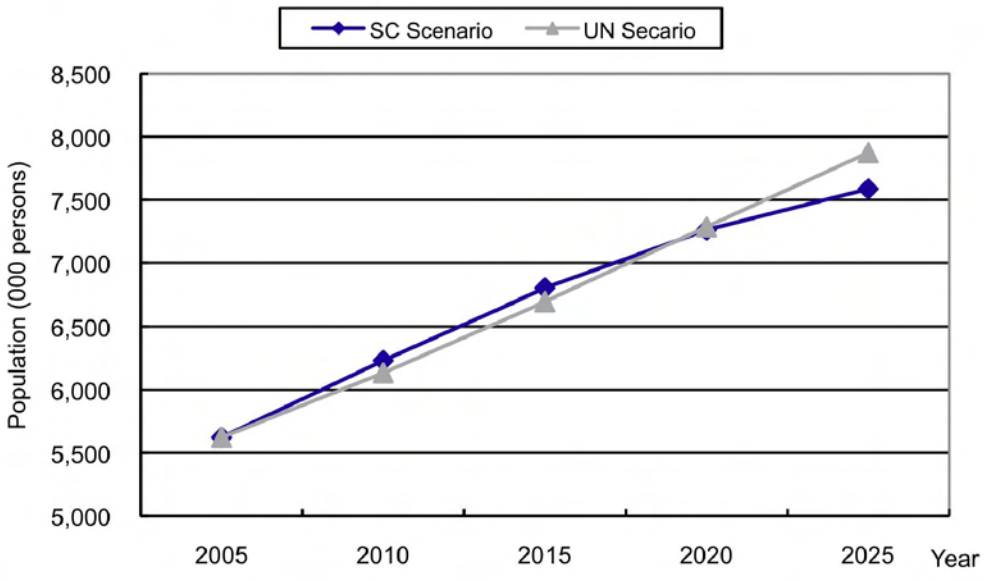
### 2.1.2 Future National Population until 2025

Table 2.1.3 and Figure 2.1.1 indicate the population projections re-calculated by the JICA Survey Team (JST), with two scenarios, namely: normal scenario of the Steering Committee (SC Scenario) and medium variant scenario of the UN Population Division (UN Scenario).

**Table 2.1.3 Population Projection until 2025**

| | Scenarios | 2005 | 2010 | 2015 | 2020 | 2025 |
|---|---|---|---|---|---|---|
| Population (000 persons) | SC Scenario | 5,622 | 6,231 | 6,802 | 7,262 | 7,586 |
| | UN Scenario | 5,622 | 6,133 | 6,696 | 7,286 | 7,874 |
| Annual average population growth rate (%) | SC Scenario | | 2.1 | 1.8 | 1.3 | 0.9 |
| | UN Scenario | | 1.8 | 1.8 | 1.7 | 1.6 |

Source: JICA Survey Team




Source: JICA Survey Team

**Figure 2.1.1: Two Population Projection Scenarios**

In the UN scenario, TFR will drop by 0.8 point, from 3.5 in 2005-10 to 2.7 in 2020-25. Annual growth rate will also drop from 1.8% to 1.6%, and population will be 7.8 million in 2025. In SC scenario, the annual growth rate will drop rapidly from 2.1% in 2010 to 0.9% in 2025 due to rapid decrease of the

[1] The newest version is posted on 11th March 2009 as of July 2009.

TFR, which will be 2.1 in 2020. The estimated population is larger than that of the UN scenario until 2020 but loses the lead after that. Population in 2025 is 7.6 million in this scenario.

In the two population growth scenarios, JST selects the UN scenario as the optimum scenario. Considering the stage of economic development of the Lao PDR in 2025, the assumption of the SC scenario that TFR drops to 2.1 in 2020 seems to be a premature assumption, and breaking of the growth ratio after 2020 seems to be drastic. On the other hand, the pace of the dropping population growth rate and population growth observed in Figure 2.1.1 of the UN scenario looks natural and a more likely outcome.

### 2.1.3 Urban Population

In order to logically distribute the future national population into the provinces, JST utilizes the following methodology:

- In the first step, total population is divided into urban population and rural population.
- In the second step, urban population until 2025 is estimated.
- Finally in the third step, urban population and rural population are broken down at the provincial level.

JST estimates that the urban proportion will increase to 40% of the total in 2025. According to FAO statistics, arable land per rural inhabitant is 0.19 ha, which is lower than Thailand, Cambodia and Myanmar (Table 2.1.5). Due to demographic pressure, the shift of population from rural area to urban area will continue. In addition to that, it is necessary to increase the workforce who will engage in the secondary sector to achieve higher economic growth. This will be analyzed in Section 2.1.4. Moreover, rural villages will change to urban villages due to economic development and provision of infrastructure/social services. This estimation is also similar to the projection of "World Urbanization Prospects", which describes that the percentage of urban population will increase from 27% in 2008 to 49% in 2025.

**Table 2.1.4: Urban Population and Rural Population**

(Unit: 000 persons)

| Year | Total Population | Urban Population | Rural Population |
|---|---|---|---|
| 1995 | 4,575 | 782 | 3,793 |
| 2005 | 5,622 | 1,523 | 4,092 |
| 2015 | 6,696 | 2,204 | 4,491 |
| 2025 | 7,874 | 3,149 | 4,724 |

Source: Census 1995 and 2005; JICA Survey Team

**Table 2.1.5 :Arable Land per Rural Inhabitant in 2004**

| | Arable land per rural inhabitant (ha) |
|---|---|
| Lao PDR | 0.19 |
| Thailand | 0.37 |
| Vietnam | 0.10 |
| Cambodia | 0.32 |
| Myanmar | 0.28 |

Source: State of Food and Agriculture, Food and Agriculture Organization of the United Nations

### 2.1.4 Population Growth by Province

Table 2.1.6 indicates the population by provinces up to 2025 prepared by JST. The projection is calculated by summing up the urban and rural populations at the provincial level.

**Table 2.1.6: Population by Provinces up to 2025**

(Unit: 000 persons)

| Province | 1995 | 2005 | 2015 | 2025 |
|---|---|---|---|---|
| Vientiane Capital | 524 | 692 | 927 | 1,244 |
| Phongsaly | 153 | 166 | 202 | 220 |
| Luang Namtha | 115 | 145 | 201 | 268 |
| Oudomxay | 210 | 265 | 291 | 331 |
| Bokeo | 114 | 145 | 157 | 205 |
| Luangprabang | 365 | 407 | 470 | 504 |
| Huaphanh | 245 | 281 | 314 | 315 |
| Xayaboury | 292 | 339 | 380 | 441 |
| Xiengkhuang | 210 | 241 | 291 | 331 |
| Vientiane | 331 | 417 | 492 | 567 |
| Borikhamxay | 164 | 225 | 268 | 315 |
| Khammuane | 272 | 337 | 380 | 441 |
| Savannakhet | 672 | 826 | 983 | 1,134 |
| Saravane | 256 | 324 | 358 | 394 |
| Sekong | 64 | 85 | 112 | 126 |
| Champasak | 501 | 607 | 760 | 913 |
| Attapeu | 87 | 112 | 112 | 126 |
| Total of Lao PDR | 4,575 | 5,615 | 6,696 | 7,874 |

Source: JICA Survey Team

In Vientiane Capital, the population will total 1.2 million in 2025 with an increase of 1.8 times in 20 years. Savannakhet (1.1 million), Champasak (0.9 million) and Vientiane (0.6 million) will follow Vientiane Capital. The future population will be concentrated in the plain region of Vientiane Capital and along the Mekong River and National Road 13S (NR-13S). On the other hand, population increase will be limited in the mountainous provinces.

### 2.1.5 Labor Force

Table 2.1.7 indicates the increase of the labor force and change of the percentage share of sectors. The population of working ages, defined as those with ages from 15 to 64, will increase from 3.2 million in 2005 to 5.0 million in 2025. The working population, which excludes students, household duties, retired, old and disabled persons, etc. will also increase by 1.7 times during the same period. It is necessary to prepare 73,000 new job opportunities annually until 2025.

Table 2.1.7 indicates the labor force by sectors. In accordance with economic development, the percentage share of labor force in the secondary and tertiary sectors will increase as indicated in the table. The labor force will also shift from the primary sector to the secondary and tertiary sectors. That is why the percentage share of the primary sector will drop from 82% in 2005 to 60% in 2025. On the other hand, the percentage shares of the secondary and tertiary sectors will increase from 10% and 8%, respectively, in 2005 to both 20% in 2025.

**Table 2.1.7: Future Labor Force and Percentage Share of Sectors**

(Unit: 000 persons)

| | 2005 | 2010 | 2015 | 2025 |
|---|---|---|---|---|
| Population and Labor Force (000 persons) | | | | |
| Total Population | 5,622 | 6,133 | 6,696 | 7,874 |
| Population from 15 to 64 (Population of Working Ages) | 3,187 | 3,713 | 4,200 | 5,013 |
| Working Population | 2,197 | 2,704 | 3,058 | 3,650 |
| Average Increase of Working Population | | 101 | 71 | 59 |
| Primary | 1,817 | 2,063 | 2,154 | 2,190 |
| Secondary | 214 | 312 | 424 | 730 |
| Tertiary | 172 | 329 | 481 | 730 |
| Percentage Share of Sectors (%) | | | | |
| Primary (Agriculture) | 82 | 76 | 70 | 60 |
| Secondary (Industry) | 10 | 12 | 14 | 20 |
| Tertiary (Service) | 8 | 12 | 16 | 20 |

Source: JICA Survey Team

## 2.2 Economic Development Framework

### 2.2.1 Three Development Scenarios

In order to set the GDP growth projection, JST prepared the following three GDP development scenarios: (i) high growth scenario, (ii) moderate growth scenario, and (iii) low growth scenario as indicated in Table 2.2.1 and Figure 2.2.1. In the high growth scenario, GDP growth rate will accelerate and record higher growth rate than in recent years. In the moderate growth scenario, it will follow the current growth rate. In the low growth scenario, GDP growth rate will slow down and record lower growth rate than in recent years.

The growth rate of each scenario changes across three periods, namely: 2009-10, 2011-2020 and 2021-2025. Due to the global financial crisis since October 2008, it is anticipated that the world GDP growth will be limited in 2009 and 2010. After 2011, most countries, including the Lao PDR, are expected to return to the original economic growth pace.

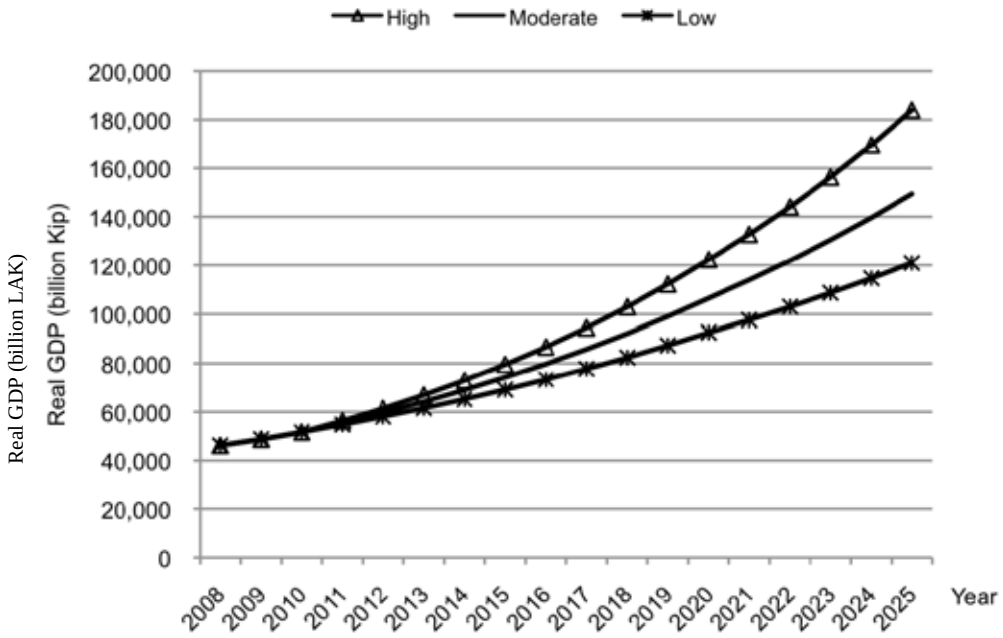
In general, the GDP growth rate will be saturated in accordance with the maturation of economic activities. Thus, the GDP growth rate in 2021-25 will be more moderate than the growth rate in 2011-2020.

**Table 2.2.1: Three GDP Growth Scenarios until 2025**

(Unit: percent)

| | 2009 | 2010 | 2011-20 | 2021-25 |
|---|---|---|---|---|
| High growth scenario | 5.5 | 6.0 | 9.0 | 8.5 |
| Moderate growth scenario | 5.5 | 6.0 | 7.5 | 7.0 |
| Low growth scenario | 5.5 | 6.0 | 6.0 | 5.5 |

Source: JICA Survey Team




Source: JICA Survey Team

**Figure 2.2.1: Three GDP Growth Scenarios until 2025**

In the high growth scenario, GDP growth rates will accelerate to 9.0% in 2011-20 and change to 8.5% in 2021-25. In the recent five-year development plans, the Lao government raised the target GDP growth rate from 7% in the Fifth Five-Year Plan (2001-2005) to 7.5% in the Sixth Five-Year Plan (2006-2010). The GDP growth rate was recorded at 8.3% in 2006 and 7.9% in 2007 and 2008, meeting the expectation of the government. Therefore, the government would set a higher target in the coming five-year development plan (2011-2015). In this scenario, hydropower projects, which will be implemented on time, and development of new large-scale copper and gold mines like Sepon and Phu Bia are expected to accelerate economic development.

In the moderate growth scenario, GDP will reach 7.5% in 2011-20, and decelerate to 7.0% in 2021-25. In this scenario, some planned power plant projects will not be carried out and some of the new large-scale mining sites illustrated in Figure 1.2.5 will not be developed. Regarding the development of other industries such as agriculture, manufacturing and service industries, the moderate growth scenario has almost the same performance as the high growth scenario.

Growth rates in the moderate scenario are consistent with GDP projections by donors. According to "Lao PDR Economic Monitor 2009 End-Year Update" published by the World Bank, the projected GDP in 2010 is 7.5% and the projected average GDP from 2011 to 2015 is 7.8%. It is projected that the mining and power sectors would lead the economic development while the growth of the agriculture, manufacturing and construction sectors would be limited.

**Table 2.2.2: Projection of GDP Growth until 2015**

(Unit: percent)

| | 2008 (actual) | 2009 (estimation) | 2010 (projection) | 2011-15 (projection) |
|---|---|---|---|---|
| GDP growth rate | 7.3 | 6.4 | 7.5 | 7.8 |
| Mining and Power Sectors | 2.0 | 3.3 | 4.0 | 3.4 |
| Other Sectors | 5.3 | 3.1 | 3.5 | 4.4 |

Source: Lao PDR Economic Monitor June 2009, World Bank Vientiane Office

The International Monetary Fund (IMF) conducted the consultation on Article IV and reported the result in September 2009. Although the GDP growth rates from 2010 to 2012 would fluctuate after

recovering from the world financial crisis, the rate after 2013 would be expected at around 7.3% to 7.4%. After 2014, average GDP growth rate of 6.6% is expected until 2029. Out of the 7% to 8% GDP growth during the period, the contribution of resource projects, which consist of the operation of new hydropower plants and production expansion of new mining sites, is expected to be around 1% to 3%.

**Table 2.2.3: Projection of Future GDP Growth until 2014 (as of September 2009)**

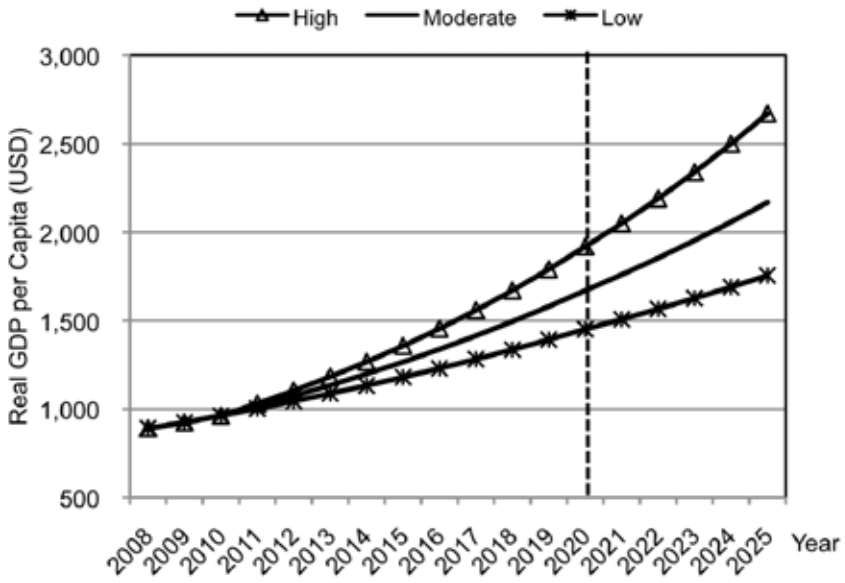
(Unit: percent)

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2009-14 Average | 2015-29 Average |
|---|---|---|---|---|---|---|---|---|
| GDP growth rate | 4.6* | 5.4 | 8.4 | 6.7 | 7.4 | 7.3 | 6.6 | 6.6 |
| GDP growth rate excluding resource projects | 3.1 | 3.0 | 5.4 | 5.7 | 6.3 | 6.5 | - | - |

Note: * Estimation of GDP growth rate in 2009 was calculated in July 2009 when available data for estimation is limited. Therefore, the estimated growth rate in 2009 is lower than the estimate of Table 2.2.2.
Source: 2009 Article IV Consultation Report, International Monetary Fund

In the low growth scenario in Table 2.2.1, the GDP growth rate will be 6.0% in 2011-20 and then decrease to 5.5% in 2021-2025. The growth rates in this scenario have the lowest levels in the country's economic performance after 1990 but the likelihood of this scenario is not high. However, it could occur in case the Lao Government doesn't conduct any reform to invite FDI and stimulate economic activity, or when there is limited FDI due to prolonged and deepened stagnation of the country's economy.

Even if the Lao PDR follows the low growth scenario, it can still achieve the target of the national vision 2020, which is its graduation from LDC status in terms of income per capita. As indicated in Figure 2.2.2, the GDP per capita in the low growth scenario will reach to USD 1,450 in 2020. The value of high growth scenario and moderate growth scenario are USD 1,920 and USD1,671, respectively. In order to graduate from LDC status, GNI[2] per capita must exceed USD 900.




Source: JICA Survey Team

**Figure 2.2.2: Change of GDP per capita in the Three Scenarios**

[2] Gross National Income (GNI) is calculated as Gross Domestic Product plus net income from foreign countries. In the case of the Lao PDR, money remittance by foreign labors is plus factor, and dividend and interest to foreign investors and financial institutions are minus factors for GNI. According to the World Development Indicators (WDI) 2009, GNI per capita (Atlas method) of the Lao PDR was USD 740 in 2008. Considering the gap between GDP per capita and GNI per capita, GNI per capita would be over USD 900 even if the GDP growth would follow the "low growth scenario."

### 2.2.2 Selection of the Optimum Scenario

The JST selects the moderate growth scenario based on past performance, consistency with donors' GDP growth projections, and the necessary investment amount to achieve each GDP growth target.

**Table 2.2.4: Investment Amount and Percentage Share in GDP**

| | Investment Amount (billion kip) | | | Percentage Share in GDP (%) | | |
|---|---|---|---|---|---|---|
| | High | Moderate | Low | High | Moderate | Low |
| 2009 | 11,263 | 11,263 | 11,263 | 23 | 23 | 23 |
| 2015 | 30,058 | 23,372 | 17,429 | 38 | 32 | 25 |
| 2020 | 46,248 | 33,553 | 23,324 | 38 | 32 | 25 |
| 2025 | 65,678 | 43,923 | 27,943 | 36 | 29 | 23 |

Source: JICA Survey Team

Table 2.2.4 indicates the investment amount and percentage share of investment in GDP for each growth scenario. Investment amount is calculated based on the premise that incremental capital-output ratio is 4.2, which is the same value as in the Sixth Five-Year Plan (2006-2010). The percentage share of investment will reach 36-38% for the high growth scenario, 29-32% for the moderate growth scenario and 23-25% for the low growth scenario. In the Sixth Five-Year Plan, the average percentage share of investment is set at 32% and the expected investment amount is 16,189 billion kip in FY2008-09. In the same fiscal year, 14% of the total investment is expected from foreign funds (grant and loan) and 33% is expected from FDI. It is impossible to keep such high percentage in case the investment amount increases by 3 to 4 times in the future.

In the optimum scenario, each industry will have the following performance:

- Agriculture: Production of cereal crops like rice will increase to keep self-sufficiency in the nation's food. Production of cash crops such as vegetables, fruits and plantation will increase across the country.
- Manufacturing: Manufacturing of garment and wood and wood products will spread to major towns such as Savannakhet and Pakse, and other cities. In Vientiane, new labor-intensive factories, e.g., factories assembling automobile and electronic equipment, will increase.
- Mining: Major mines such as Sepon and Phu Bia will expand their production capacity, and some of the new mining sites such as for anthracite coal and potassium will start operations.
- Power plants: All power plants under construction will be completed as scheduled. Some planned power plants will be carried out but other plants will be terminated.
- Investment and trade: FDI will increase smoothly accompanied by the balanced growth of mining, power plant, plantation and manufacturing. Merchandise trade will be balanced due to the steady growth of exports consisting of electricity, manufacturing goods and mining, as well as import of various goods.

### 2.2.3 Industrial Composition and Growth Rates of Sectors

In 2008, the percentage shares of each economic sector are: 32% for agriculture, 28% for industry and 40% for service[3]. In accordance with the acceleration of economic development, agriculture will lose its share; on the other hand, industry and service will generally raise their shares. Experiences of the surrounding countries show the same trend. The JST estimates that the percentage share of the agriculture, industry and service sectors will respectively change to 20%, 41% and 39% in 2020 and to

[3] Classification of industries is based on ISIC Rev3. For example, agricultural processing industry is classified under 15 "Manufacture of food and beverage", which is inside "manufacturing".

17%, 45% and 38% in 2025 based on the observations of the growth rate of each industry and performance of the surrounding countries (Table 2.2.5).

**Table 2.2.5: Change of Industrial Component**

(Unit: percent)

| | GDP at Factor Cost (billion LAK) | GDP Growth Rate | Agriculture | Industry | Service |
|---|---|---|---|---|---|
| 2008 | 43,125 | 7.8 | 32 | 28 | 40 |
| 2015 | 69,236 | 7.5 | 24 | 34 | 39 |
| 2020 | 99,397 | 7.5 | 20 | 41 | 39 |
| 2025 | 139,409 | 7.0 | 17 | 45 | 38 |

Source: Statistical Yearbook 2008; JST

Table 2.2.6 indicates the annual growth rates of the agriculture, industry and service sectors.

**Table 2.2.6: Growth Rates of Industries**

(Unit: percent)

| | Agriculture | Industry | Service |
|---|---|---|---|
| 2009-10 | 1.6 | 9.0 | 5.5 |
| 2011-20 | 3.3 | 10.8 | 7.3 |
| 2021-25 | 3.6 | 9.6 | 6.4 |

Source: JICA Survey Team

### 2.2.4 Provincial GRDP

Official data on regional or provincial gross regional domestic product (GRDP) have not been prepared in the Lao PDR. Therefore, the JST estimates the provincial GRDP based on "The Household the Lao PDR Social and Economic Indicators Lao Expenditure and Consumption Survey 20002/03" (hereinafter referred to as "LECS 3") and "Report of Economic Census, 2006".

Table 2.2.7 indicates the GRDP by province in 2008, 2015 and 2025. Figures in 2008 are calculated from the methodology mentioned above. Vientiane Capital has 23% of GDP, followed by Savannakhet (12%) and Champasak (10%). The figures in 2015 and 2025 were estimated based on future development potential, population growth and other factors.

**Table 2.2.7: Change of GRDP**

| Province | GRDP (billion LAK) | | |
|---|---|---|---|
| | 2008 | 2015 | 2025 |
| Lao PDR | 46,215 | 74,196 | 149,397 |
| Phongsaly | 896 | 1,484 | 2,988 |
| Luang Namtha | 1,118 | 2,226 | 5,976 |
| Oudomxay | 1,533 | 2,226 | 4,482 |
| Bokeo | 972 | 1,484 | 2,988 |
| Luangprabang | 3,448 | 5,194 | 8,964 |
| Huaphanh | 1,703 | 2,226 | 2,988 |
| Xayabury | 3,054 | 5,194 | 10,458 |
| Vientiane Capital | 10,574 | 17,807 | 37,349 |
| Xiengkhuang | 1,653 | 2,226 | 2,988 |
| Vientiane | 3,961 | 6,678 | 14,940 |
| Borikhamxay | 1,851 | 2,968 | 5,976 |
| Khammuane | 2,407 | 3,710 | 7,470 |
| Savanakhet | 5,499 | 8,904 | 16,434 |
| Saravane | 1,607 | 1,484 | 2,988 |
| Sekong | 450 | 742 | 1,494 |
| Champasak | 4,736 | 8,904 | 19,422 |
| Attapeu | 736 | 742 | 1,494 |

Source: JICA Survey Team

### 2.2.5 Labor Productivity by Industry

Table 2.2.8 indicates the labor productivity by industry calculated from the GDP by industry in Section 2.2.3 and labor force by industry in Section 2.1.5. In comparison with the industry and service sectors, the labor productivity of the agriculture sector in 2010 is very low because even if its share in the working population is estimated at 76%, its share in GDP is estimated at only 30%.

The labor productivity of the industry and agriculture sectors will increase by 1.9 and 1.6 times, respectively. On the other hand, the labor productivity of the service sector will be limited to only 1.2 times during the same period. As a result, the service sector, which has the highest labor productivity at present, will lose its lead to the industry sector between 2015 and 2020.

**Table 2.2.8: Labor Productivity by Industries**

| | | 2010 | 2015 | 2020 | 2025 |
|---|---|---|---|---|---|
| Labor Productivity (USD in 2008) | Agriculture | 813 | 916 | 1,067 | 1,262 |
| | Industry | 5,279 | 6,588 | 8,507 | 10,022 |
| | Service | 6,801 | 6,626 | 7,375 | 8,463 |
| Annual Increase of Rate of Labor Productivity (%) | Agriculture | - | 2.4 | 3.1 | 3.4 |
| | Industry | - | 4.5 | 5.2 | 3.3 |
| | Service | - | -0.5 | 2.2 | 2.8 |

Source: JICA Survey Team

## 2.3 Industrial Development Framework

### 2.3.1 Framework Basis

The basis of the development framework is listed below:

1) The target year is 2015 for short-term and 2025 for mid-long term.

2) The required industrial area development is estimated based on the demographic framework (number of employment) and Japanese Guideline for Industrial Estate Planning (JGIEP) prepared by Regional Development Corporation, 1980.

3) The direction of industrial sector development is decided based on labor productivity (refer to Section 2.2.5).

### 2.3.2 Industrial Development Framework

(1) Required Industrial Area Development

Based on the national working population forecasted by MPI (Socioeconomic Development Report 2006-2007), the JST estimates the employed population in 2015 and 2025 as follows:

**Table 2.3.1: Forecasted Employed Population (000 persons)**

| | **Working Population** | **2005 (real)** | | **2010** | | **2015** | | **2025** | |
|---|---|---|---|---|---|---|---|---|---|
| 1. | Agriculture | 1,817 | *82%* | 2,063 | *76%* | 2,154 | *70%* | 2,190 | *60%* |
| 2. | Industry | 214 | *10%* | 312 | *12%* | 424 | *14%* | 730 | *20%* |
| 3. | Services | 172 | *8%* | 329 | *12%* | 481 | *16%* | 730 | *20%* |
| | **TOTAL** | **2,203** | ***100%*** | **2,704** | *100%* | **3,059** | *100%* | **3,650** | *100%* |

Source: JICA Survey Team

As a result, the incremental employment of the industrial sector from 2010 is shown in Table 2.3.2.

**Table 2.3.2: Incremental Employment from 2010 (000 persons)**

| 2015 | 2025 |
|---|---|
| 112 | 418 |

Source: JICA Survey Team

According to the JGIEP, the average required employee per hectare is 81.7 persons. As a result, the required industrial area to be developed after 2010 is estimated in Table 2.3.3.

**Table 2.3.3: Required Industrial Development Area (ha; rounded figure)**

| 2015 | 2025 |
|---|---|
| 1,370 | 5,120 |

Source: JICA Survey Team

(2) Direction of Industrial Sector Development

The economic development framework sets a growing target on labor productivity for the industrial sector as summarized in Table 2.3.4.

**Table 2.3.4: Annual Increase Rate of Labor Productivity**

| 2010-2015 | 2015-2020 | 2020-2025 |
|---|---|---|
| 4.5% | 5.2% | 3.3% |

Source: JICA Survey Team

To achieve the above targets, the industrial sector, which is currently focused on the garment/apparel industry, should be improved through the following methods:

(i) Heighten the value-added on the garment/apparel industry.

(ii) Diversify the industrial sector into value-added industries, such as electricity parts and precision equipment.

# CHAPTER 3 INVESTMENT DEMAND SURVEY

## 3.1 Objectives and Methodology

### 3.1.1 Objectives

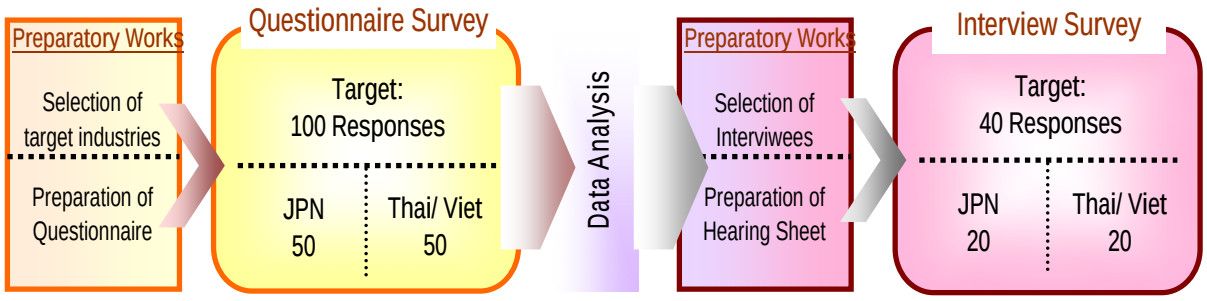
An investment demand survey (hereinafter referred to as "the Survey") has been carried out to analyze the investment demand during the period from the beginning of April 2009 until the end of June 2009 in Japan, Vietnam and Thailand. The main objectives of the Survey are:

- To investigate what kind of incentives, both hardware and software, are required to attract investment from potential foreign investors;
- To investigate the trend of investment demand in the Lao PDR according to the types of business and size of enterprises, as well as the interest in locations in the Lao PDR (Vientiane Capital, Savannakhet, Pakse, etc.); and
- To investigate the investment demand and/or relocation of factories to the Lao PDR by enterprises currently operating in neighboring countries like Vietnam and Thailand.

The abovementioned information is necessary for preparing the basic plan of industrial development in the Lao PDR. The results of the Survey shall also be utilized to roughly estimate the potential demand on land, utilities, and other facilities for the proposed Vientiane Industrial Park.

### 3.1.2 Methodology

The Survey consisted of two main activities, i.e.: i) a questionnaire survey was conducted initially, and then, ii) a follow-up interview survey was done with the selected enterprises in accordance with the questionnaire survey results. As mentioned in the foregoing section, both the questionnaire and interview surveys were done in three countries, namely: Japan, Vietnam and Thailand.




Source: JICA Survey Team

**Figure 3.1.1: Work Flow of the Investment Demand Survey**

(1) Questionnaire Survey

Prior to the conduct of the Survey, the target sample for the questionnaire survey was set at 100, which are broken down into 50 Japanese, 25 Vietnamese and 25 Thai enterprises.

For the surveyed Japanese enterprises, enterprises which have already operated or invested in either Thailand or Vietnam[1] were selected. Investment from Japanese enterprises in the Lao PDR generally involves the relocation of or additional investment from factories or sales offices already operating in its neighboring countries. After receiving the permission through initial contact by telephone, questionnaires were addressed to each headquarter or designated office of target enterprises in Japan. The total contacted number of enterprises initially was 1,158. The actual number of responses was 179, which exceeded the target number of responses of 50.

For the questionnaire surveys in both Vietnam and Thailand, the subcontracted local surveyors directly visited the contacted enterprises and filled out each questionnaire via interview. The surveys in the two countries have been completed and each achieved the targeted 25 responses.

Finally, the sample size of the questionnaire survey is summarized in the following Table 3.1.1.

**Table 3.1.1: Sample Size of Questionnaire Survey**

| Country | Contacted Enterprises | Actual Responses | Interested | |
|---|---|---|---|---|
| | | | Numbers | % |
| Japan | 1,158* | 179 | 44 | 3.8 |
| Vietnam | 84 | 25 | 25 | 29.8 |
| Thailand | 126 | 26 | 26 | 20.6 |
| Total | 1,368 | 227 | 95 | 6.9 |

Note: *The actual number of Japanese enterprises allowed to receive the questionnaire was 965.
Source: JICA Survey Team

(2) Interview Survey

In order to acquire more detailed information, which was not possible through the questionnaire survey, a follow-up interview survey has been conducted. The target sample size of the interview survey was set at 40 enterprises in total, i.e., 20 Japanese enterprises, 10 enterprises in Vietnam and 10 enterprises in Thailand.

The enterprises, which have shown interest in investing in the Lao PDR, were basically selected for the interview survey. Prior to carrying out of the interview survey, a hearing sheet was prepared to understand not only the detailed information about the answers to the questionnaire but also the exact demand for the location in an industrial park and the kind of incentives that shall be provided to attract investment in the industrial park.

## 3.2 Survey Results

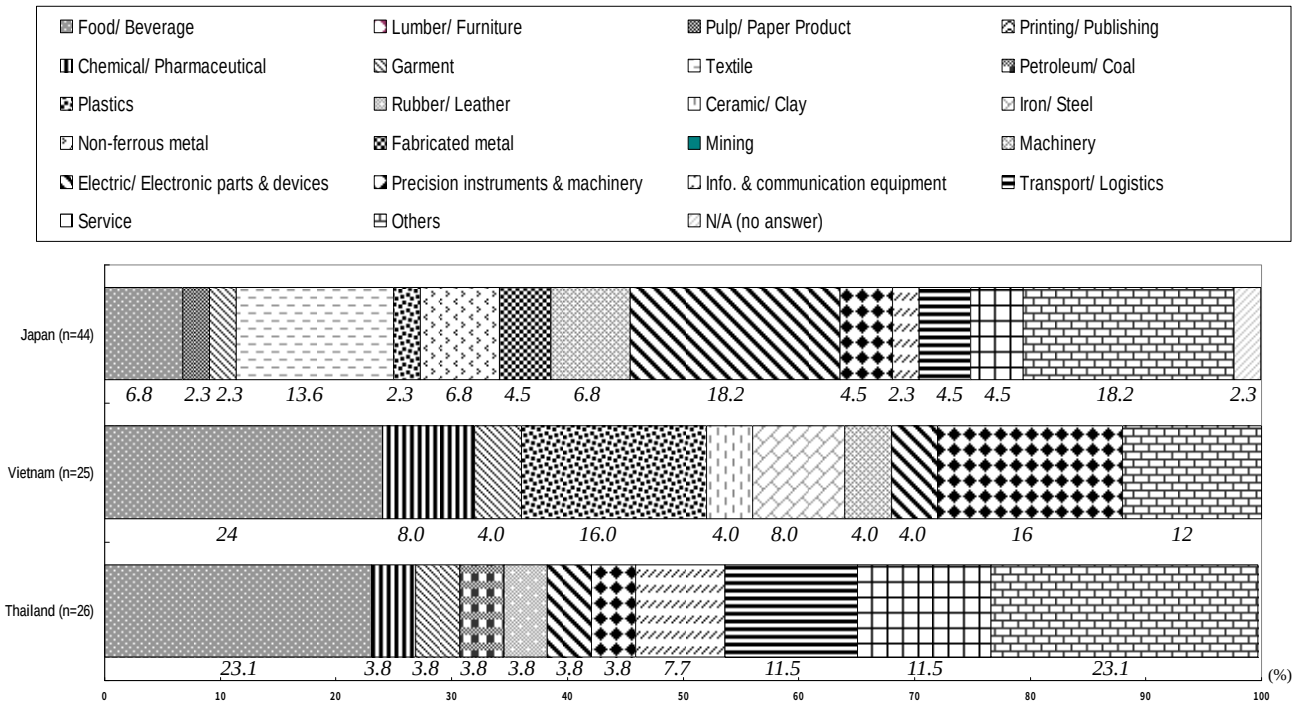
The major survey results are summarized in this section[2].

[1] The garment as well as food processing-related Japanese enterprises, which are operating in China, have also been included in the Survey since a certain demand for the relocation or additional investment from these Japanese enterprises can be expected according to the discussions with various intellectuals.
[2] A detailed review of the investment demand survey will be explicated in the Appendix of the Interim Report.

### 3.2.1 Information on Respondents

As mentioned in the foregoing Table 3.1.1, a total of 95 enterprises have shown interest in investing in the Lao PDR consisting of 44 Japanese enterprises, 25 enterprises in Vietnam, and 26 enterprises in Thailand.

The types of industry for these 95 potential investors are eclectic, as shown in Figure 3.2.1. For Japanese enterprises, i) "electric/electronic parts and devices" industry with 18.2% share has formed the majority group; ii) industry labeled "others", which is composed of trading firms, accessories distributors and others, also shares 18.2% of the total; and iii) "textile" industry ranks third with 13.6%. According to the questionnaire survey, most of them are export-oriented enterprises and consider the Lao PDR as their export production base. On the other hand, the "food and beverage" industry is the largest industrial category for Vietnam and Thailand, respectively sharing 24% and 23% of the total in each country. In Vietnam, "precision instruments and machinery" and "rubber/leather" industries also have huge interests in investing in the Lao PDR. In the case of Thailand, "service" and "transport/logistics" industries as well as various software industries such as IT and entertainment companies, which are counted in "others", likewise have strong interests in investing in the Lao PDR.




Source: JICA Survey Team

**Figure 3.2.1: Types of Industry of the Potential Investors in the Lao PDR**

The company size of the respondents is concentrated on the "100 to 999" category, in terms of the number of employees, as well as on the "2 to 9 ha" category, in terms of the company's lot area. Although this factory size is larger than that of the (officially categorized) large factories currently operating in the Lao PDR, it is a recommendable size for locating in a typical industrial park. The following Table 3.2.1 summarizes the sizes of the factories of the respondents that showed interest in investing in the Lao PDR.

**Table 3.2.1: Size of the Factory of the Respondents Operating in Neighboring Countries**

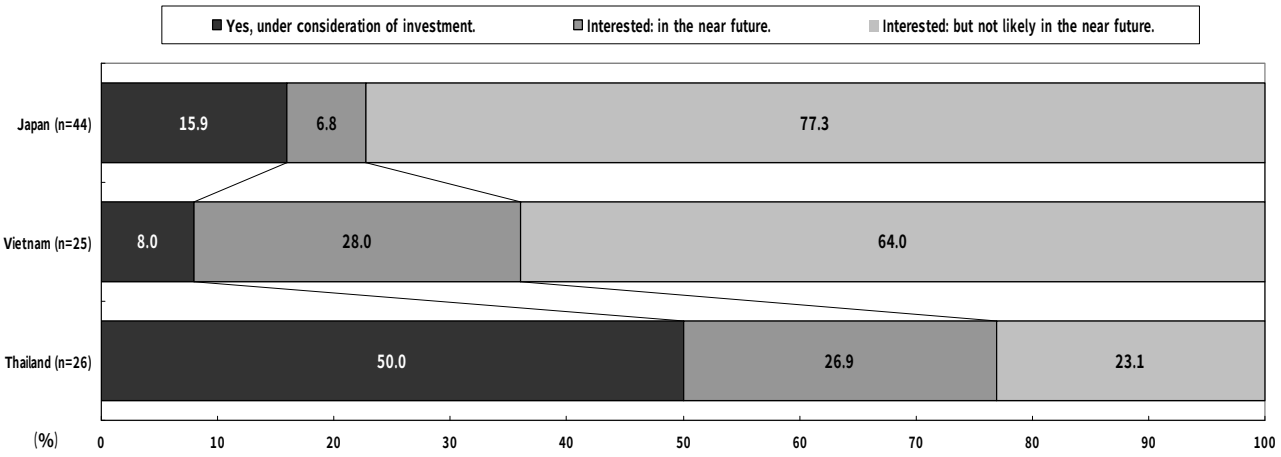
| | | Response | Employee | | | | | Factory area (ha) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-29 | 30-99 | 100-999 | above 1,000 | N/A | less than 1ha | 2-9ha | 10-49ha | above 50ha | N/A |
| Operated countries | Thailand | Japan (n=44) | 9.1 | 9.1 | 34.1 | 18.2 | 29.5 | 22.7 | 22.7 | 9.1 | 11.4 | 34.1 |
| | | Vietnam (n=25) | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| | | Thailand (n=26) | 26.9 | 15.4 | 34.6 | 19.2 | 6.7 | 42.3 | 23.1 | 26.9 | 3.8 | 13.3 |
| | Vietnam | Japan (n=44) | 6.8 | 9.1 | 13.6 | 9.1 | 61.4 | 11.4 | 13.6 | 6.8 | 4.5 | 63.6 |
| | | Vietnam (n=25) | 12.0 | 8.0 | 60.0 | 20.0 | 0.0 | 28.0 | 60.0 | 12.0 | 0.0 | 0.0 |
| | | Thailand (n=26) | 0.0 | 3.8 | 0.0 | 0.0 | 93.3 | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 |
| | China | Japan (n=44) | 9.1 | 9.1 | 38.6 | 13.6 | 29.5 | 18.2 | 25.0 | 6.8 | 9.1 | 40.9 |
| | | Vietnam (n=25) | 0.0 | 0.0 | 4.0 | 0.0 | 96.0 | 0.0 | 4.0 | 0.0 | 0.0 | 96.0 |
| | | Thailand (n=26) | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 |
| | Other Asian Countries | Japan (n=44) | 6.8 | 6.8 | 20.5 | 13.6 | 52.3 | 6.8 | 22.7 | 2.3 | 9.1 | 59.1 |
| | | Vietnam (n=25) | 0.0 | 4.0 | 0.0 | 0.0 | 96.0 | 4.0 | 0.0 | 0.0 | 0.0 | 96.0 |
| | | Thailand (n=26) | 7.7 | 7.7 | 7.7 | 7.7 | 73.3 | 7.7 | 11.5 | 3.8 | 3.8 | 73.3 |

(%)

Source: JICA Survey Team

Of the 95 respondents, 22 respondents mentioned that they are currently considering investing in the country. Especially for the enterprises in Thailand, half of the respondents or 13 out of the 26 showed their high investment demand. On the other hand, most of the Japanese enterprises, about 80% of the total, have shown humble interest in investing in the Lao PDR. Meanwhile, the respondents from Vietnam have shown moderate interest.

It seems that varying degrees of knowledge and understandings among the three countries for the business environment in the Lao PDR have brought the above mentioned results[3].




| | Considering Investing in the Lao PDR | | Interested in investing in the near future | | Interested but less likely in the near future | | Total | |
|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % |
| Japan | 7 | 15.9 | 3 | 6.8 | **34** | **77.3** | 44 | 100 |
| Vietnam | 2 | 8.0 | 7 | 28.0 | **16** | **64.0** | 25 | 100 |
| Thailand | **13** | **50.0** | 7 | 26.9 | 6 | 23.1 | 26 | 100 |
| Total | 22 | 23.2 | 17 | 17.9 | 56 | 58.9 | 95 | 100 |

Source: JICA Survey Team

**Figure 3.2.2: Degree of Investment Demand in the Lao PDR**

### 3.2.2 Factor for Inducement of FDI

In order to understand the important factors for attracting foreign investment in the Lao PDR, six major factors, which are expected to induce FDI in the country, were presented to the respondents.

[3] Many of the interviewees of Japanese enterprises have claimed the lack and difficulties of getting information of business opportunities as well as investment environment of the Lao PDR, whereas most of interviewees of Thailand have frequently either attended Thai-Lao trade fairs or business trips to the Lao PDR.

The respondents have been requested to rank the factors based on their necessity. Table 3.2.2 summarizes the overall survey results of the major six factors prioritized by the respondents.

**Table 3.2.2: Factors Prioritized for FDI Inducement**

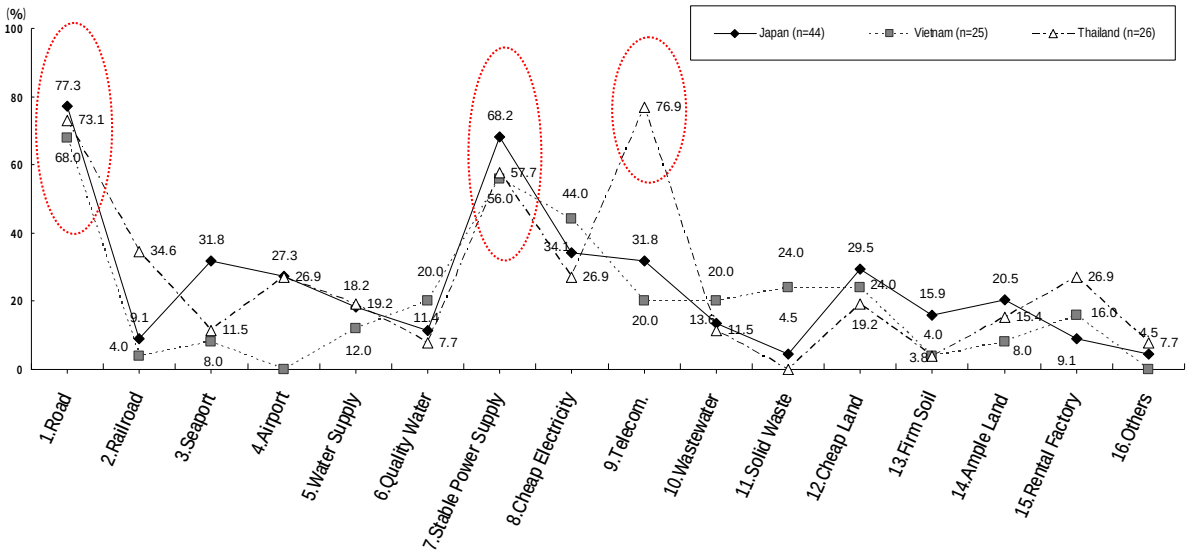
| | Infrastructure | Human Resources | Logistics | Incentives for Investment | Geographic Condition | Industrial Estate |
|---|---|---|---|---|---|---|
| Japan | **2.0** | **2.9** | 3.8 | **3.3** | 4.5 | 4.2 |
| Vietnam | **1.9** | 2.5 | 3.1 | **2.3** | **2.0** | 2.6 |
| Thailand | **3.0** | **2.9** | 3.1 | **2.5** | 4.2 | 4.5 |
| Avg. | **2.3** | **2.8** | 3.3 | **2.7** | 3.6 | 3.8 |

Note: *Shadowed items are the top three priority items
**The highest priority scored one (1); the lowest priority scored six (6); The above figure for each item is an average score. (The lower the score that the item received, the higher its priority.)
Source: JICA Survey Team

The survey results have revealed that future investors considered infrastructure as the most important factor to determine their investments in the Lao PDR. Secondly, incentives for investment are required. Thirdly, they also consider human resources as an important factor for them to invest in the Lao PDR.

For each major factor, an additional demand analysis was conducted. The results are summarized as follows:

*1) Infrastructure*




Source: JICA Survey Team

**Figure 3.2.3: Needs Analysis for Infrastructure**

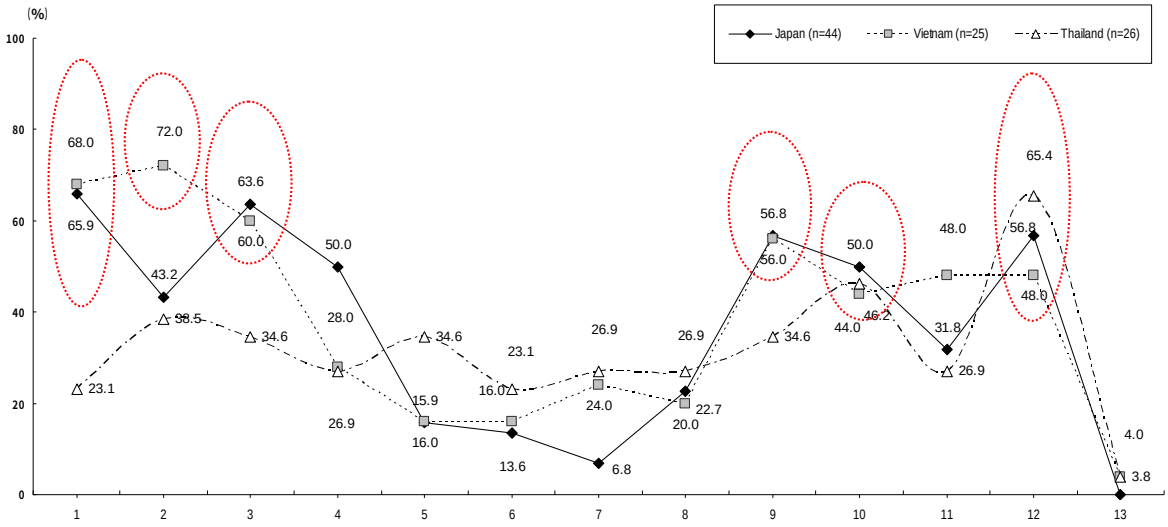
Infrastructure is believed to be the highest priority for the potential investors in the Lao PDR. As shown in Figure 3.2.3, the need for a good road transportation network was the highest priority. Stable power supply was considered as the second highest priority for the respondents in the three countries. For the investors from Thailand, the need for high speed telecommunication facilities was also very high. Therefore, the investors' requirements for infrastructure development are summarized as follows:

- Road transportation network is a prerequisite condition for investing in the Lao PDR as most of the investors import and/or export the raw materials as well as their products.

- Stable power supply is indispensable as most of the potential investors are in the manufacturing sector. However, tariff should be cheap as electricity is not so expensive in Vietnam and Thailand.

- High-speed telecommunication system is also important especially for Thai investors since the telecommunication network has already been set up in Thailand and they would like to link the existing telecommunication system for the O&M of their products as well as transportation.

*2) Incentives for Investment*




1.Rapid screening and approval of investment 2.Transparent procedures for approval 3.Fast customs clearance 4.Accurate customs 5.Incentive for H/R 6.Easiness on concession 7.Longer time of concession 8.Longer land use right 9.Exemption from export tax, 10.Exemption from import tax 11.Income tax reduction 12.Corporate tax reduction 13.Others
Source: JICA Survey Team

**Figure 3.2.4: Needs Analysis for Incentives for Investment**

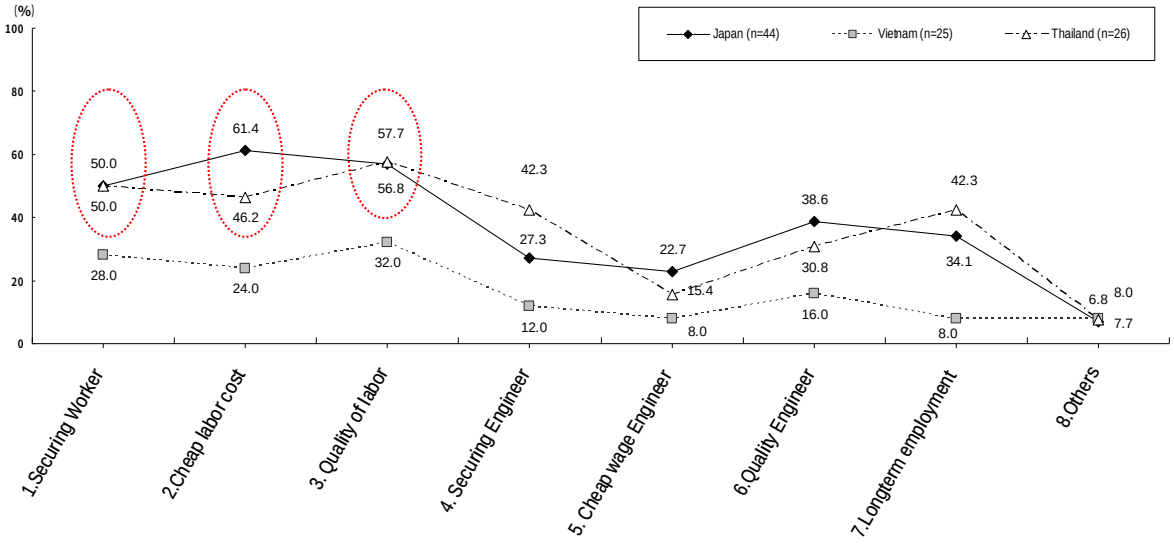
Incentives for investment are also very important factors to attract FDI. As shown in Figure 3.2.4, the potential investors mainly put high value on issues regarding procedures as well as taxes. The major findings are summarized as follows:

- Potential Japanese investors place emphasis on "*1. Rapid screening and approval of investment*", "*3. Fast customs clearance*" and "*9. Exemption from export tax*" since most of them considers the Lao PDR as production base for export. These conditions directly benefit the operation of export-oriented industries;

- Investors from Vietnam have also similar priorities as Japanese investors, which are fast procedures and tax exemption for export. They also indicated that "*2. Transparent procedures for approval*" is the most important factor. Some respondents mentioned during the interview survey that agreements officially set by AFTA or CBTA have not been practiced by the customs officers.

- Reduction of corporate tax is another high priority for all the potential investors. Therefore, if the Lao government will provide better incentives on corporate tax reduction to foreign investors than those of its neighboring countries, these incentives shall certainly attract FDI.

*3) Human Resources*




Source: JICA Survey Team

**Figure 3.2.5: Needs Analysis for Human Resources**

The third highest factor for inducing investment is human resources. The results of the needs analysis for the human resources issue revealed that the potential investors obviously set a higher value on workers rather than on engineers or technicians, as shown in Figure 3.2.5.

- Japanese investors believed that "*2. Cheap labor cost*" is more important than the quality or security of workers whereas the investors from Thailand thought that "*3. Quality of labor*" is the highest priority.
- In general, investors from Vietnam had rather humble interest in the human resources issue because many of the investors think that labor cost of the Lao PDR is not so cheap compared with that of Vietnam. However, there is much difference on labor quality between the two countries.

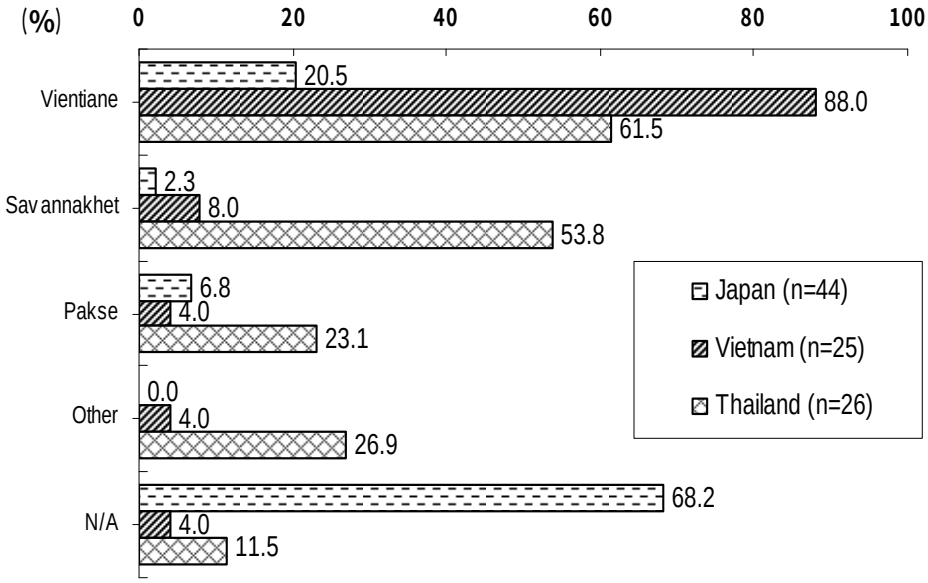
### 3.2.3 Investment Demand by Location

For the preference of location in the Lao PDR, almost half of the respondents, i.e., 47 respondents out of the total 95, mentioned their preference of investing in Vientiane Capital. The investors from both Vietnam and Thailand have shown quite high demand for investment in Vientiane Capital, i.e., 88% and 61.5%, respectively. The investors mentioned through the interview survey that most of the competent business partners, public authorities concerned with business administration, demand for domestic market, and workers are concentrated in Vientiane Capital.

Savannakhet and Pakse are adjacent to the northeastern areas of Thailand. Their local economies have already been integrated with the Thai economy, and the local people have quite similar lifestyles as they are already speaking almost the same language. In this regard, Thai investors have well understood the business environment and opportunities in these places. However, Vietnamese

investors, especially those located in Hanoi, have little information about these two cities. In the case of Japan, most of the investors do not even know their names and locations.

Finally, many Japanese investors have mentioned through the interview surveys that they also consider the living condition, such as housing, hospital, restaurants, food, sport facilities, etc., in addition to the business environment. In this regard, the urban infrastructure of Savannakhet and Pakse is still primitive to meet the demands of Japanese investors.




Note: Multiple answers
Source: JICA Survey Team

**Figure 3.2.6: Preference of Location for Investment in the Lao PDR**

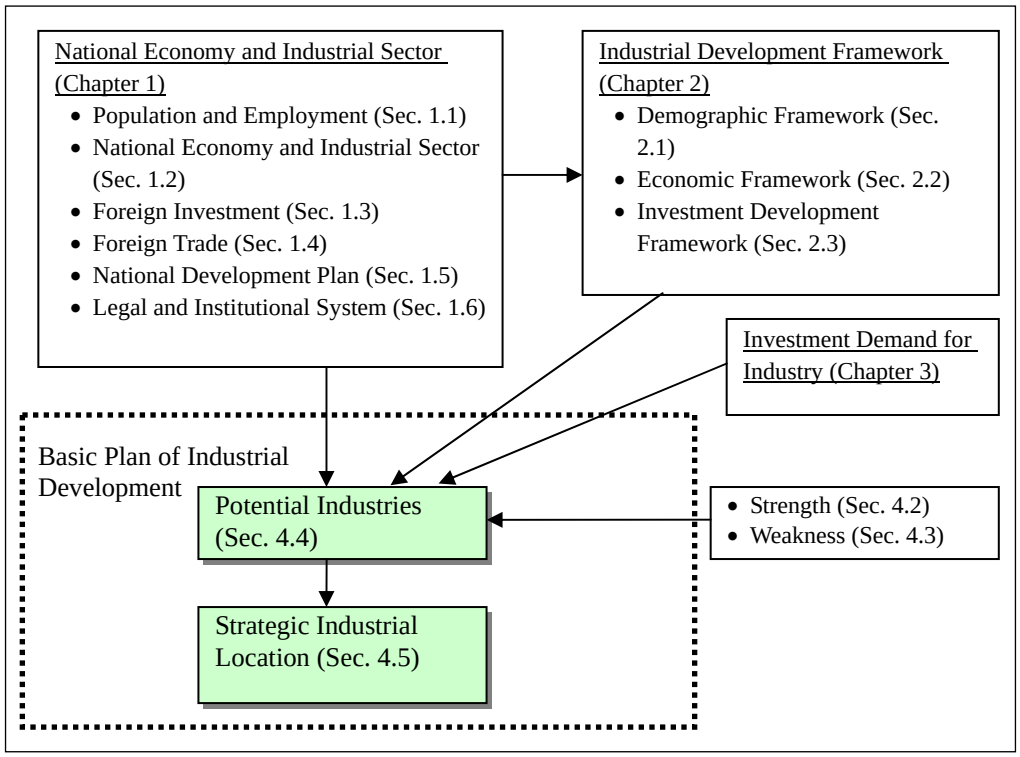
# CHAPTER 4 BASIC PLAN OF INDUSTRIAL DEVELOPMENT

## 4.1 Formulation of Basic Plan

The basic plan of industrial development is formulated as shown in Figure 4.1.1.

The current situations of national economy and industrial sectors were analyzed in Chapter 1. Then, the industrial development framework was set up for various aspects in Chapter 2. Investment demand based on the questionnaire survey was analyzed in Chapter 3.

In this chapter, the potential industries for the country are discussed, in light of the strengths and weaknesses of industrial development as well as the results of previous chapters. Then, considerations are given to the strategic locations of these potential industries.




Source: JICA Survey Team

**Figure 4.1.1: Flow for Formulating Basic Plan of Industrial Development**

## 4.2 Strength of the Lao PDR

### 4.2.1 Political Stability and Well-maintained Public Order

Political stability and well-maintained public order are prerequisites of investment in the manufacturing fields. In the Lao PDR, the political environment is stable and public order is maintained.

Furthermore, institutional reform has been implemented in the Lao PDR to attract foreign direct investment. The Japan-Laos Investment Agreement was enforced in August 2008 for liberalization, promotion and protection of investment. The Lao PDR has concluded similar investment agreements with 24 countries.

### 4.2.2 Gentle Character of Lao People

According to Japanese-affiliated enterprises, the reasons for investment in the Lao PDR often include the gentle character of Lao people. Sometimes, foreign enterprises have troubles of labor control in different counties. In the Lao PDR, there is hardly any labor trouble.

### 4.2.3 Low Labor Cost

(1) Minimum Wage in the Lao PDR

Inexpensive labor force is also one of the largest attractions of the Lao PDR for industrial development. However, the minimum wage was raised by the decree of the Ministry of Labor and Social Welfare (No. 1450/MLW) dated April 30, 2009, which was enforced from May 2009. The minimum wage was changed as follows:

- Minimum monthly wage was increased from LAK 290,000 to LAK 348,000 for unskilled workers with no professional experience who work eight hours a day and 26 days a month.
- Business units, manufacturers and service providers are obliged to pay an extra supporting amount of LAK 8,500 per worker per day or LAK 221,000 per month.
- This means that they must pay at least LAK 569,000 (348,000 + 221,000) per month to an unskilled worker with no professional experience who works during a regular eight-hour day for 26 days a month.

(2) Lower Minimum Wage than Thailand

The above new wage in the Lao PDR is compared with the minimum wage in the metropolitan areas of Vietnam and Thailand in Table 4.2.1.

**Table 4.2.1: Comparison of Minimum Wage**

| | Lao PDR | Vietnam (Center of Hanoi) | Thailand (Bangkok) |
|---|---|---|---|
| Minimum Wage (USD per month) | 66.94 | 67.42 | 149.26 |
| Comparison | 1.0 | 1.0 | 2.2 |
| Minimum Wage (Local Currency ) | LAK 569,000/month | VND 1,200,000/month | THB 203/day |
| Remarks | LAK 8,500 = USD 1 | VND 17,800 = USD1 | THB 34 = USD 1<br>25 days / month |

Source: Vietnam (from January 1, 2009): Kyoshiro ICHIKAWA, Investment Seminar in February 2009
Thailand (from June 2008): Government Public Relation Department, Thailand (12/05/2008)

The comparison revealed the following:

- The new minimum wage of the Lao PDR is the same level as in the central area of Hanoi. In Vietnam, a lot of factories are recently built in the suburbs of Hanoi or neighboring provinces, where the minimum wage level is between USD 52 and USD 61. Therefore, the new minimum wage of the Lao PDR is as high as 110-130% of that of new industrial areas in northern Vietnam. It is concluded that the Lao PDR has no advantage over Vietnam in terms of the minimum wage.
- The new minimum wage of the Lao PDR is 45% higher as that in Bangkok. In the northeastern region of Thailand that faces the Lao PDR, the minimum wage level is USD 113-115 per month. Therefore, the new minimum wage of the Lao PDR is as high as approximately 60% of the northeastern region of Thailand. It is concluded that the Lao PDR has comparative advantage in terms of the minimum wage over Thailand, even in its northeastern region.

(3) Lower Real Wage than Thailand and Vietnam

In addition to minimum wage, comparison is made for real wage containing basic wage, bonus, social insurance contribution, overtime allowance, and other allowances.

Real wage in the Lao PDR is estimated at roughly USD 90 per month or USD 1,080 per year according to the interview although there is no statistical data on real wage. Meanwhile, Japanese-affiliated enterprises paid USD 5,877 per year for one factory worker with about three years experience in Bangkok; and USD 1,578 per year in Hanoi, according to research on actual business situation of Japanese-affiliated enterprises in the Asia and Oceania regions conducted by JETRO in October 2008.

In comparison with the real wage in the Lao PDR, the real wage in Bangkok and Hanoi is 5.4 times and 1.5 times higher, respectively, as illustrated in Figure 4.2.1.

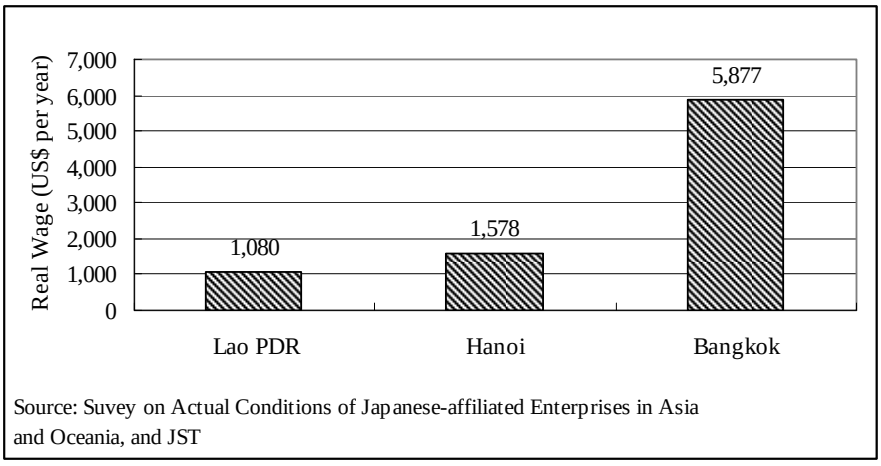



**Figure 4.2.1: Comparison of Real Wage**

### 4.2.4 Inexpensive Electricity

Figure 4.2.2 shows the comparison of electricity tariff in the Lao PDR, Japan, Vietnam, Cambodia, Thailand, and three major cities in China (Shanghai, Dalian and Canton).

Electricity tariff is 6.3 cent/kWh, which is the lowest among the cities. It is lower than one-quarter of the tariff in Japan; and about half of that in Cambodia and Chinese cities. It is lower than that in Thailand and Vietnam by only less than 1 cent/kWh. It is expected that electricity tariff will rise after 2009 in the Lao PDR, which may exceed the tariff in Vietnam.

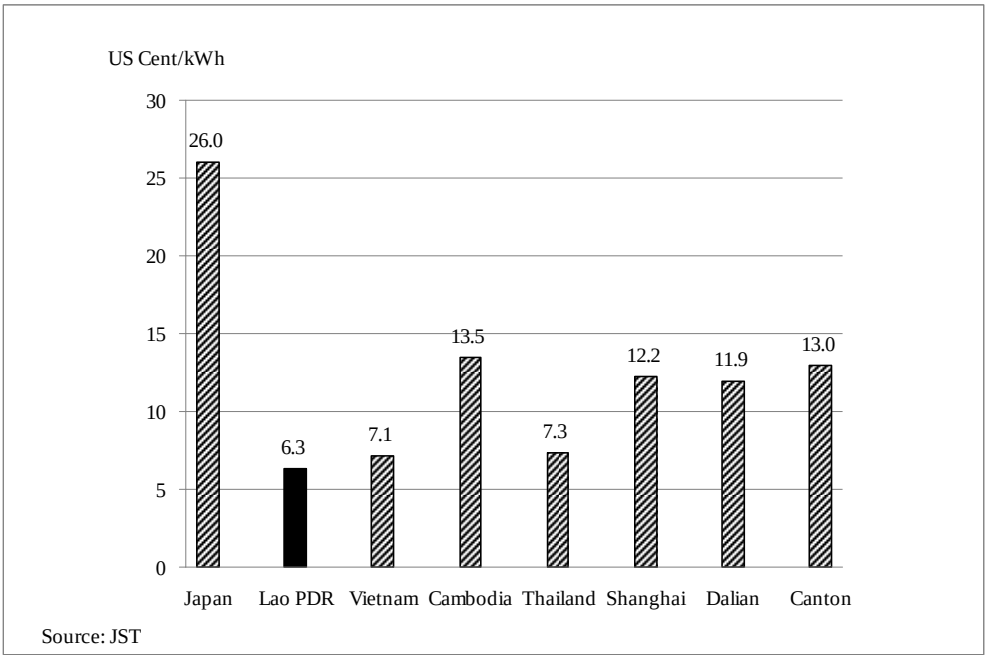



**Figure 4.2.2: Comparison of Electricity Rate**

### 4.2.5 Abundance of Mineral Resources and Crops

(1) Abundance of Mineral Resources

The Lao PDR is rich in mineral resources such as gold, silver, copper, sapphire, bauxite, coal, lead, zinc, tin, iron and gypsum.

However, these mineral resources have not been exploited in the past because of various reasons such as the long-standing civil war, birth of a socialist country after the revolution, and the deterioration of investment climate due to the Asian currency crisis.

In these years, gold and copper have been produced in full scale at Sepon mine, which is boosting the economy. Mineral resource development has been attracting lots of attention. The government has granted 237 mining concessions for reconnaissance survey, exploration and development phases to approximately 100 enterprises since May 2008[1].

(2) Abundance of Agriculture Products

Rice is the most important crop for Lao people as a staple diet. In order to attain self-sufficiency in rice, its planting area was increased from 525,000 ha in 1976 to 560,000 ha in 1995 and further to 781,000 ha in 2007. Meanwhile, the planting areas of rice accounted for 90% of all crops in 1976, but decreased to 69% in 2007. Instead, planting areas were increased for cash crops such as corn, vegetable, bean, potato and coffee. Vegetable farming has increased among suburban farmers to

[1] Professor Motoyoshi Suzuki, Basic knowledge on Lao Economy (March 2009, JETRO)

satisfy the ever-increasing demand in the urban area, in line with the shift to a market economy. Therefore, current agriculture is of a different type from the traditional self-sufficient agriculture.

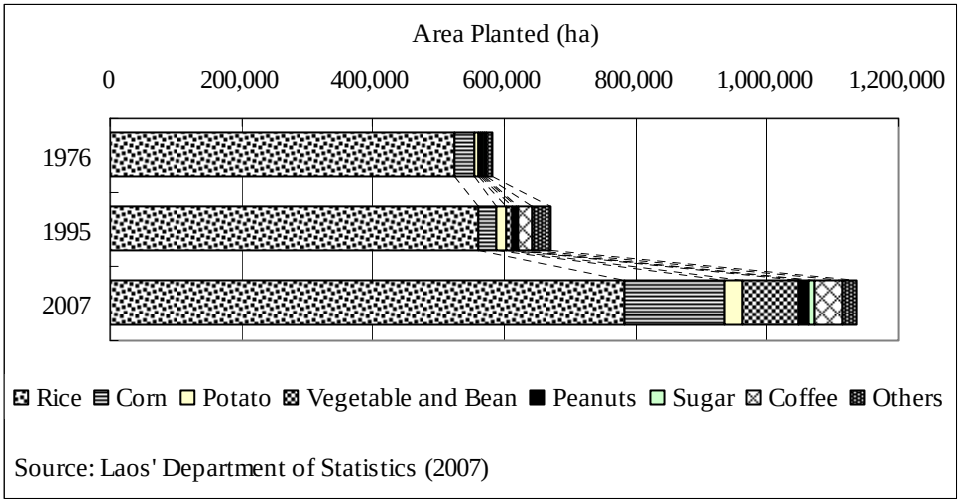



**Figure 4.2.3: Area under Crops in 1976, 1995 and 2007**

Major crops by region are: soybeans and corn that can be cultivated at the fertile farmland in the northern region; rice, vegetable and beans in the central region; and vegetable, fruits, coffee, cabbage, potato, sweet corn, etc. in the southern region where farmlands are fertile.

### 4.2.6 Similar in Language and Culture to Thailand

The Lao PDR and Thailand have similarity in language; and people of the two countries can communicate with each other using their own language. They have similarity in culture as well. Therefore, if a foreign affiliate company in Thailand invests in the Lao PDR, it is relatively easy to perform factory management and technical transfer by dispatching well-experienced employees from the affiliate in Thailand. It might be that the country's strength for industrialization lies not only on the intellectuals but also on most workers that have similar language and culture as Thai people.

### 4.2.7 Close Relations with Vietnam

The Lao PDR has close political ties with Vietnam. In addition, Vietnamese enterprises have increased investment in the Lao PDR in recent years. The possibility that experts of foreign affiliates in Hanoi or Ho Chi Minh City can come to Vientiane by air in order to perform factory management, technical transfer and technical training might be one of the country's strengths for industrialization.

### 4.2.8 Improvement of Access with Neighboring Countries

As a landlocked country, the Lao PDR had bad access to sea ports, which is an obstacle to trade. In these years, however, access to the neighboring countries is being improved through development projects such as the East-West Corridor, North-South Corridor, Bangkok–Thakhek–Hanoi Road via the Third Friendship Bridge between Thakhek and Nakhon Panom, and the railway from Bangkok to Vientiane Capital. It is expected that transportation costs to neighboring countries will be reduced through the improved access due to these development projects and increase in the number of users.

### 4.2.9 Trade Preference Systems

As a least developed country, the Lao PDR has been granted trade preference systems such as General System of Preference (GSP) and ASEAN Integrated System of Preferences (AISP).

GSP privilege has been granted by 42 countries such as EU, Japan, Australia, Canada and China.

Thailand, Philippines and Malaysia have issued their legal enactments to implement the AISP. The Lao PDR has been granted preferential tariffs on 242 items by Thailand; 74 items by Philippines; and 83 items by Malaysia.

## 4.3 Weakness of the Lao PDR

### 4.3.1 Small Domestic Market

Market in the Lao PDR is small because of small population and low income level. It is generally difficult to promote import substitution industry for manufacturing consumable goods in the country. In addition, under the CEPT scheme, trade will be activated within ASEAN countries more and more. As a result, export-oriented industry is a dominant direction of industrial development in the Lao PDR.

Meanwhile, there is some potential for manufacturing construction materials such as cement, bar steel and galvanized steel plate, which are needed for constructing infrastructure and buildings, if there is sufficient demand from the local market.

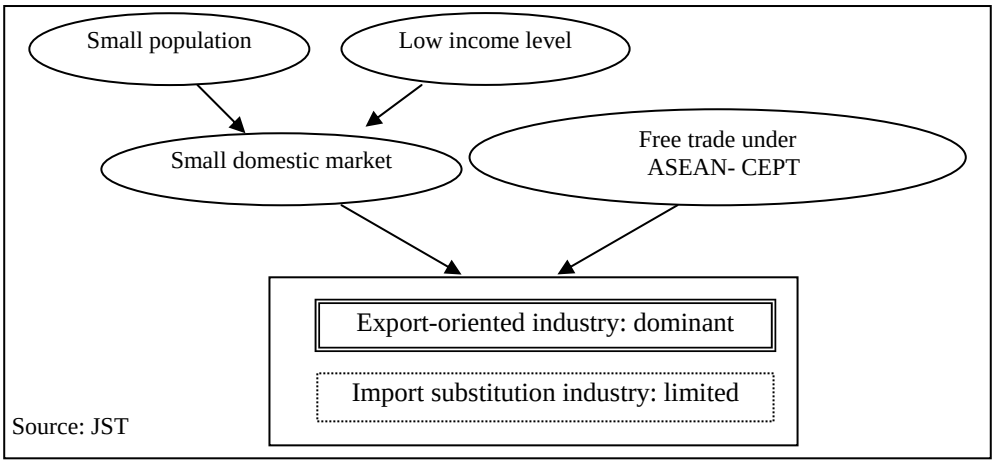



**Figure 4.3.1: Direction of Export-Oriented Industry**

### 4.3.2 Difficult Recruitment

Some foreign affiliates in the Lao PDR have pointed out the difficulty in bringing up skilled labors because Lao workers quit jobs soon. Manufacturers in Vientiane Capital often employ workers coming from other provinces. Young workers who come from other provinces and work at factories for the first time are unfamiliar with both city life, being far away from their families, and work in factories. Workers often quit their jobs soon after being hired because of difficulties caused by unfamiliar life and work. It is not acceptable in the Lao PDR that trainers slap workers for discipline, according to a Lao manager who employs more than 1,200 workers. He said that workers continued to work for his factory by practicing the following methods:

- Inviting school teachers from the rural areas for the teachers to achieve understanding of the work environment. Then, teachers will be asked to introduce graduates from their school.
- In the factory, training the new employees in order to be familiar with city life and to obtain sewing techniques during the first three to four months. He emphasized to focus on taking care of the new employees during this period; otherwise, they would get homesick and go home.
- After the first three to four months, continue providing on-the-job training at an easy pace; holding birthday parties; and encouraging them to get in touch with their families.
- Providing dormitories for the employees coming from provinces.

### 4.3.3 Complicated and Unclear Procedure for Export and Import

Problems with the uncertainty, complexity, and length of the required time of export and import procedures have often been pointed out. They are obstacles to attracting foreign investment and purchasing foreign goods. The government needs to take measures such as introduction of e-customs to solve these problems on export and import procedures.

It should be investigated that e-customs should be introduced to one of the industrial estates to be developed by the government as a pilot project in collaboration with the Ministry of Finance.

### 4.3.4 Expensive Transportation Costs

Foreign affiliates in the Lao PDR often pointed out high transportation costs. Export from the Lao PDR is quite small compared with import from Thailand. Transport between the Lao PDR and Thailand is rather imbalanced. Therefore, container transport costs to the Lao PDR are quite expensive. In addition, it is normally required to pay some expenses for customs clearance.

In order to decrease transportation costs, it is required to simplify the export and import procedures, and to increase exportation from the Lao PDR to rectify the imbalance.

### 4.3.5 Insufficient Financial Infrastructure

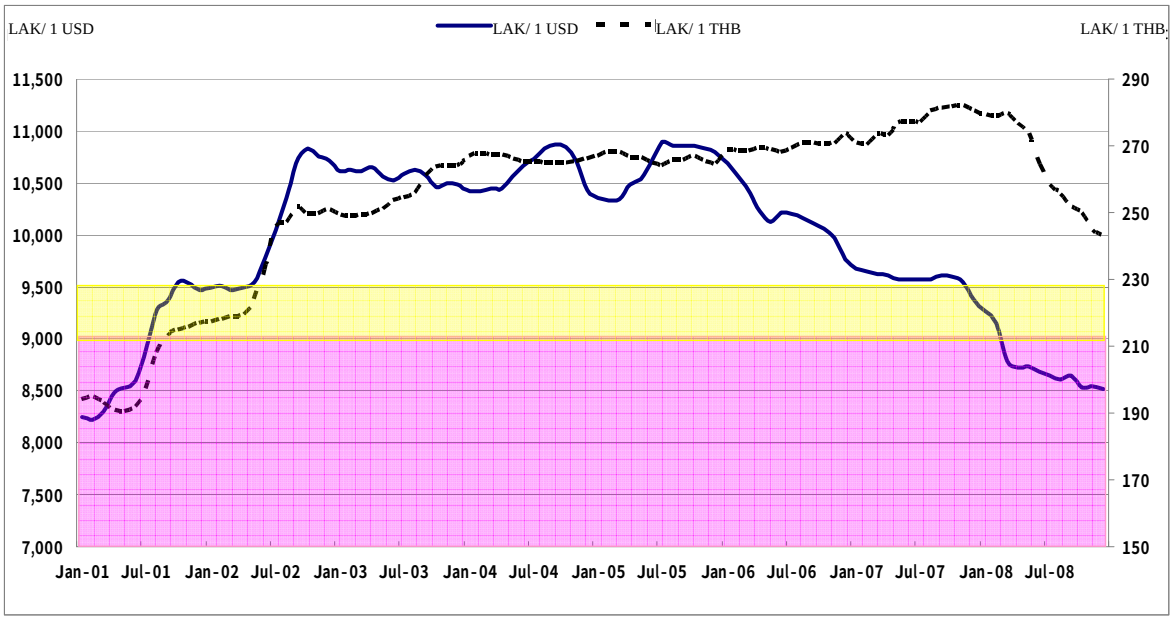
Letter of credit (LC) transactions are commonly used for the settlement of trade accounts. An importer usually asks a LC to be issued by the bank in the country where the importer has an account. However, banks in the Lao PDR have no sufficient financial power, therefore banks cannot issue any LC. It is said that an importer should pay extra costs as it reluctantly asks for a LC to be issued by foreign banks.

### 4.3.6 Weak Export Competitiveness Due to Appreciation of Kip

As Figure 4.3.2 shows, the appreciation of the kip against the US dollar has continued since July 2005; and since July 2007 against the Thai baht.

Exporters wanted the kip to have a value of 9,000 kip per one US dollar. Otherwise, many of them would be forced to close as they will be unable to shoulder the increasing production costs due to the rising strength of the kip. Exporters earn US dollars but pay their operating costs and local expenses in kip. This means that they have to pay more in US dollars to maintain the same production capacity.

The Lao government should address this issue as early as possible.



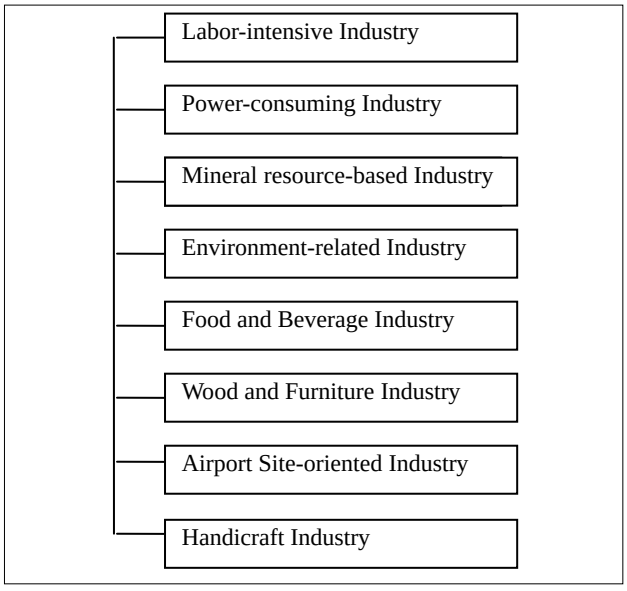

Source: Bank of Lao PDR
Note: According to the Association of Lao Garment Industry, the range of LAK 9,000 – 9,500 per one USD (yellow zone) is a warning level, and the area lower than LAK 9,000 per one USD (red zone) is the dangerous level.

**Figure 4.3.2: Trend in Exchange Rate**

## 4.4 Potential Industries

### 4.4.1 Potential Industries

Potentials of industries are described in this section in line with the categories in the following Figure 4.4.1:




Source: JICA Survey Team

**Figure 4.4.1: Potential Industry**

### 4.4.2 Labor-Intensive Industry

(1) Labor-Intensive Industry

The key industry of the Lao PDR is centered on the labor-intensive garment industry. It is expected that further growth of the labor-intensive industry will contribute to employment creation for Lao people. The following Table 4.4.1 shows the potential labor-intensive industries:

**Table 4.4.1: Potential Labor-Intensive Industries**

| | |
|---|---|
| 1. | Wearing apparel |
| 2. | Shoes and bags |
| 3. | Parts of electric and electronic appliances |
| 4. | Assembly of motorbike and bicycle |
| 5. | Wire harness |
| 6. | Precision apparatus and medical equipment |
| 7. | Lace, embroidery, weaving and wig |

Source: JICA Survey Team

(2) Wearing Apparel

*1) Largest Manufacturing Industry*

The garment industry is the largest export-oriented manufacturing industry in the Lao PDR. Exports to the European Union (EU) account for the largest portion. Privilege is granted from foreign countries such as EU and Japan under the GSP. Most manufacturers are enjoying the privilege. Therefore, factories are concentrated in Vientiane Capital where manufacturers can easily contact with MoIC.

*2) Issues to be Addressed*

In accordance with the global trend, garment factories have began to relocate from China, particularly from Canton Province, to other countries because of the change in investment climate caused by high labor cost. The Lao PDR is expected to be one of the candidate countries for relocation destination. However, the Lao PDR cannot compete in labor cost with Bangladesh, India, Myanmar, and others.

*3) Growth Strategy*

Most manufacturers are exporting low-priced goods only through the cut, make and trim (CMT) procedure. The garment industry needs to grow in the following direction:

- To increase apparel makers that complete tasks including procurement of raw materials, design, sewing, and exportation, and
- To change the products into more value-added products.

The government needs to overcome the following weaknesses in order to develop the garment industry in the above direction: difficult recruitment, insufficient financial infrastructure, weak export competitiveness due to the appreciation of the kip, and expensive transportation cost.

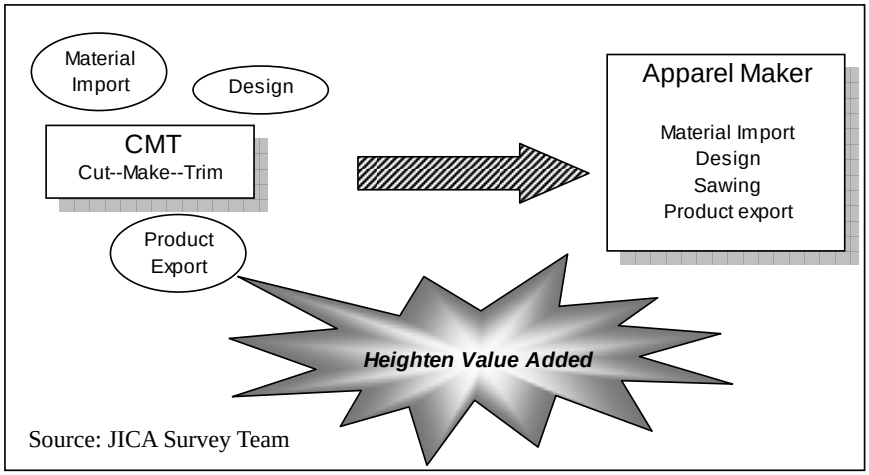



**Figure 4.4.2: Growth Strategy of the Apparel Industry**

(3) Shoes and Bags

*1) Manufacturing Utilizing GSP*

Two Japanese-affiliated enterprises are manufacturing leather shoes in Vientiane Capital. All raw materials are imported from foreign countries and finished products are mainly exported to Japan utilizing the GSP. They selected the Lao PDR as the factories' location because of GSP, cheap labor cost and stable electricity at low tariff.

*2) Issues to be Addressed*

The Lao government needs to overcome the following weaknesses in order to develop the shoe industry: difficult recruitment, longer time required for customs clearance due to working hours of customs office, and interruption of power supply in some places.

*3) Growth Strategy*

Vientiane Capital has an advantage as the location of leather shoes manufacturing industry due to the privilege granted by GSP.

If there are factories of supporting industries specializing in the manufacture of shoe sole from chemicals such as polyurethane, the leather shoe manufacturers have a better incentive to invest in Vientiane Capital. In Japan, there are specialized factories for shoe sole in the agglomerated areas to keep the division of labor.

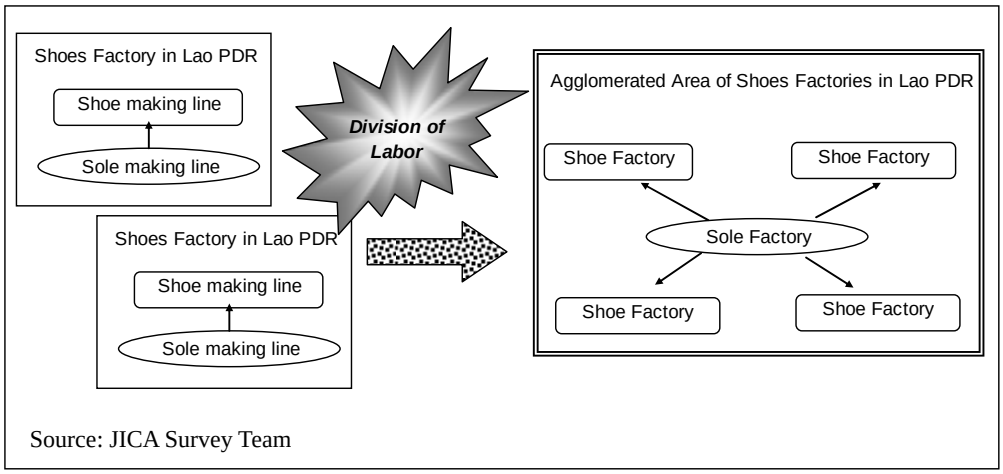



**Figure 4.4.3: Growth Strategy of the Shoes Industry**

(4) Parts of Electric and Electronic Appliance; Precision Apparatus and Medical Equipment

*1) Convenience in Transportation*

There are some Japanese-affiliates that manufacture electronic parts in Vientiane Capital. Small electronic parts are convenient for transportation; therefore, disadvantages from being a landlocked country can be compensated.

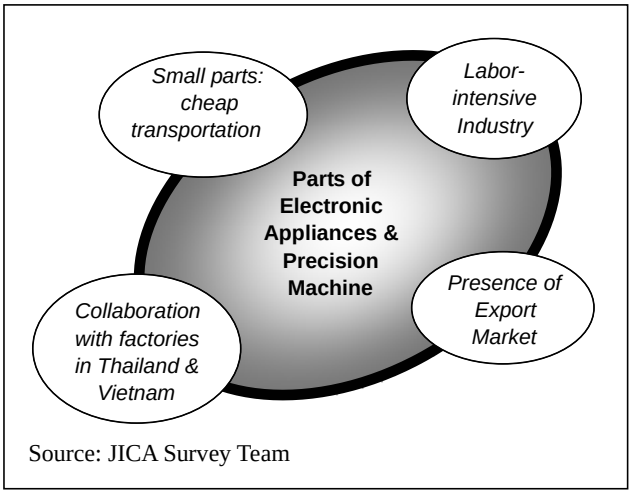
*2) Issues to be Addressed*

The government needs to overcome the various weaknesses in order to develop this kind of industry. In particular, it is desirable to improve the customs clearance for air cargo and establish flights between Vientiane and Chiang Mai for better access of engineers and rapid transport between factories.

*3) Growth Strategy*

This kind of industry is definitely needed for industrial growth in Vientiane Capital. The existing factories of parts for electronic appliances and precision machines are operated in collaboration with their parent companies in Thailand and Vietnam.

In the future, it is expected that other manufacturers in Thailand or Vietnam will invest in Vientiane Capital so that they could operate the new factories in collaboration with factories in Thailand or Vietnam in the same way as the existing ones.




Source: JICA Survey Team

**Figure 4.4.4: Growth Strategy of the Electronic and Precision Parts Industry**

(5) Assembly of Motorbike and Bicycle

*1) Motorbike Assembling Protected by Taxation System*

The motorbike makers are assembling motorbikes using the complete knock down (CKD) system in the Lao PDR. The government specifies finished motorbikes as items under the general exception list (GEL) to protect the motorbike assembling industry. As a result of the industry protection policy, imported finished motorbikes are subject to 50% lump-sum tax consisting of 20% import tariff, 20% excise tax, and 10% transaction tax. On the other hand, since parts of motorbikes are specified as items under the inclusion list (IL), imported parts are only subject to 5% tariff. Through this industrial protection policy taken by the government, the motorbike assembling industry is a commercially viable business.

*2) Future Prospect*

It is expected that the number of motorbikes will rapidly increase in the Lao PDR when the GDP per capita exceeds USD 1,000, according to the experience in other Asian countries. When the CEPT scheme is completely implemented in ASEAN members by 2015, the import customs duty on motorbike and its parts will probably be abolished. What industrial policy will be employed for the motorbike industry by the government? What strategy will be taken by the motorbike manufacturers in the ASEAN market after 2015? Which direction will be undertaken by the motorbike industry in the Lao PDR? There is no forecast on the future direction of the motorbike industry.

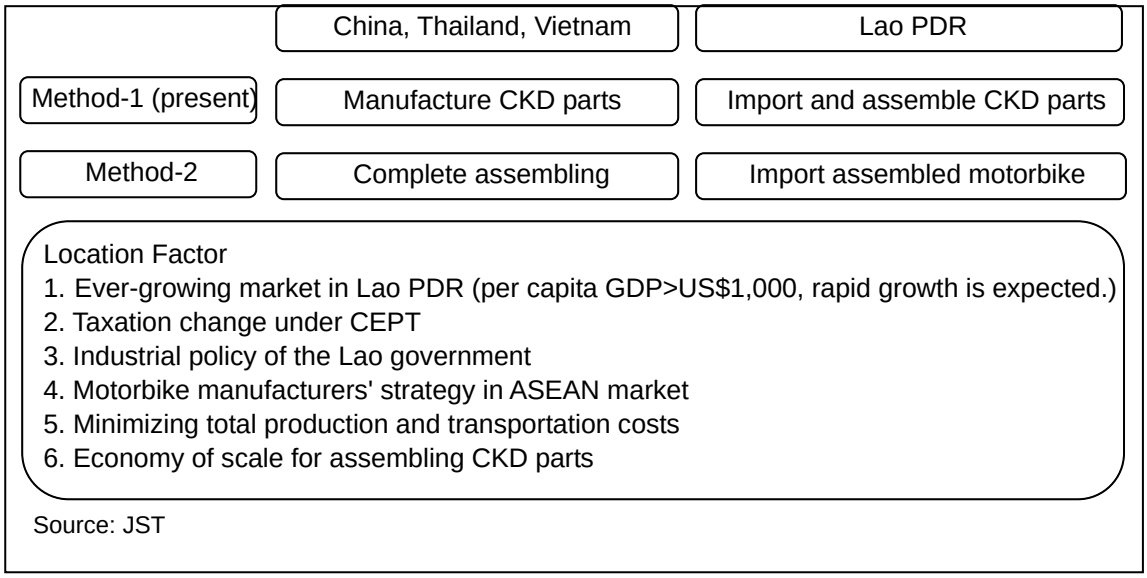



**Figure 4.4.5: Future Prospect of the Motorbike Industry**

(6) Others

It is expected that there is potential for manufacturing using manual skills such as lace, embroidery, weaving and wig. A Japanese company that manufactures wire harness has an affiliate factory in Vientiane Capital. The wire harness industry requires manual skills.

### 4.4.3 Power-consuming Industry

(1) Power-consuming Industry

*1) Power-consuming Industry*

With rich hydropower potential and mineral resource in the country, the metal smelting industry has a large potential. In addition, there is an investment opportunity for cold warehouses and freezing factories so that agriculture products could be exported to the distant markets.

**Table 4.4.2: Potential Power-consuming Industries**

| |
|---|
| 1. Metal silicon |
| 2. Copper smelting and refining |
| 3. Electric furnace steel |
| 4. Aluminum smelting |
| 5. Cold food storage and frozen food |

Source: JICA Survey Team

*2) Industries Dominated by Power*

Rich power is the dominant factor for the location of aluminum smelting and metal silicon industries. Therefore, these industries are described here. Other industries listed above are described in "the mineral-based industry" or "food and beverage industry".

(2) Metal Silicon

*1) Industrial Location Factor*

Manufacture of metal silicon needs silica sand or silica rock as well as much electric power. As silica sand and silica rock have a wide distribution in the world, industrial location of the manufacture of metal silicon is dominated by power supply at low price. Major producing countries of metal silicon are Canada, United States, Brazil, Norway, France and China.

*2) Existing Factory*

There is a Chinese factory manufacturing metal silicon in the Vientiane Industrial Zone.

*3) Future Prospect*

Site selection study for metal silicon factory was conducted in the Lao PDR by a Japanese company in the past. Eventually, however, the company did not select the Lao PDR because electric power was more expensive than expected. The future prospect of metal silicon industry is largely dependent on electric power price.

(3) Aluminum Smelting

*1) Exploration of Bauxite*

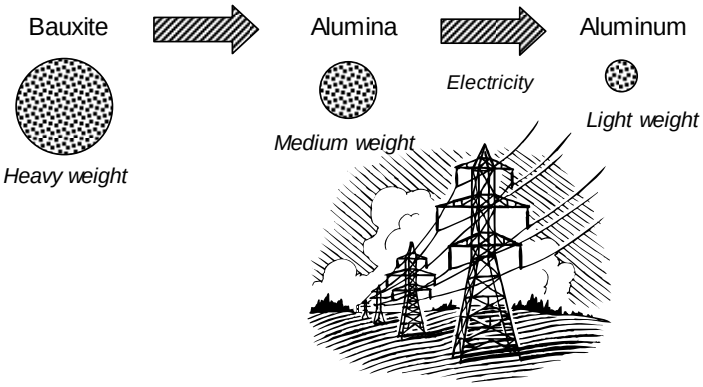
Foreign companies began exploration of bauxite in the Lao PDR. If economic production of bauxite is confirmed by the exploration, a feasibility study on the production of bauxite and aluminum smelting factory is expected to be conducted.

*2) Aluminum Smelting*

Aluminum smelting consists of two steps. In the first step, alumina (aluminum oxide) is extracted from bauxite using caustic soda. Then in the second step, aluminum is produced through the decomposition of alumina using electric current. Therefore, a large amount of electric power is needed during the second step.

*3) Potential Location of Aluminum Smelting*

The weight of bauxite is heavier than the weight of aluminum; therefore, it would be very expensive to bring heavy bauxite to the market for smelting. In addition, a large amount of electric power is required for aluminum smelting as mentioned above. It is thus considered reasonable to set up an aluminum smelting factory near raw materials in the Lao PDR. It is envisaged that infrastructure should be developed, including power supply for smelting and roads connecting to a port for exporting aluminum.




Source: JICA Survey Team

**Figure 4.4.6: Location Factor of Aluminum Smelting**

### 4.4.4 Mineral Resource-based Industry

(1) Mineral Resource-based Industry

*1) Mineral Resource-based Industry*

Metal smelting, cement, galvanized steel plate and chemical fertilizer have potential as mineral resource-based industries. The potential industries listed in Table 4.4.3 are described below except for metal silicon and aluminum smelting, which are described in the section on power-consuming industry.

**Table 4.4.3: Potential Mineral Resource-based Industries**

| |
|---|
| 1. Copper smelting and refining |
| 2. Metal silicon |
| 3. Electric furnace steel |
| 4. Aluminum smelting |
| 5. Electric cable |
| 6. Galvanized steel plate |
| 7. Cement |
| 8. Hume pipe |
| 9. Chemical fertilizer (potash and NPK fertilizer) |

Source: JICA Survey Team

*2) Generally to be Located Near Mineral Resource Producing Places*

In the case of the mineral resource-based industry, the weight of the final product is generally less than the weight of the raw material. It would be very expensive to bring heavy raw materials to the market for processing. Therefore, processing should be carried out near raw materials.

*3) Environmental Protection to be Respected*

Historically speaking, pollution has been sometimes caused by the mineral resource-based industries. Mineral resources always contain many elements including those that are unwanted. Unwanted elements sometimes cause serious pollution, unless they are properly treated. It is essential to undertake extensive environmental impact assessment, take adequate environmental protection measures, and make environmental measurement at required intervals.

(2) Copper Smelting and Refining and Electric Cable

*1) Sepon Mine*

Mined copper ore is smelted and refined to produce pure copper plates at Sepon mines. Copper plates are exported via ports in Thailand.

*2) Copper Cable Production*

In case copperware is processed from copper plates, the weight of the finished product is basically the same as that of the raw material. Therefore, the processing factory can be located either near the raw material or the market, from the viewpoint of minimizing transportation cost. If there is sufficient demand for copperware in the Lao PDR, then it is reasonable to build a copperware factory.

It is envisaged that a lot of electric power cable will be installed throughout the country; and accordingly, demand for copper cable will increase. If there is a copper cable factory in the country, it will contribute to foreign currency savings. It is recommended that the government encourage foreign investments of copper cable manufacturers.

(3) Construction Materials (electric furnace steel, galvanized steel plate, cement)

*1) Necessity of Construction Materials*

Surprisingly, more than 30% of imports to the Lao PDR in 2006/2007 were investment project materials. If these materials continue to rely on importation, foreign currency loss will increase. Although importation by item is unclear, some of these materials may have the potential for domestic production.

It is necessary for the government to encourage domestic production of construction materials that will be commonly used for infrastructure development projects after conducting the demand survey.

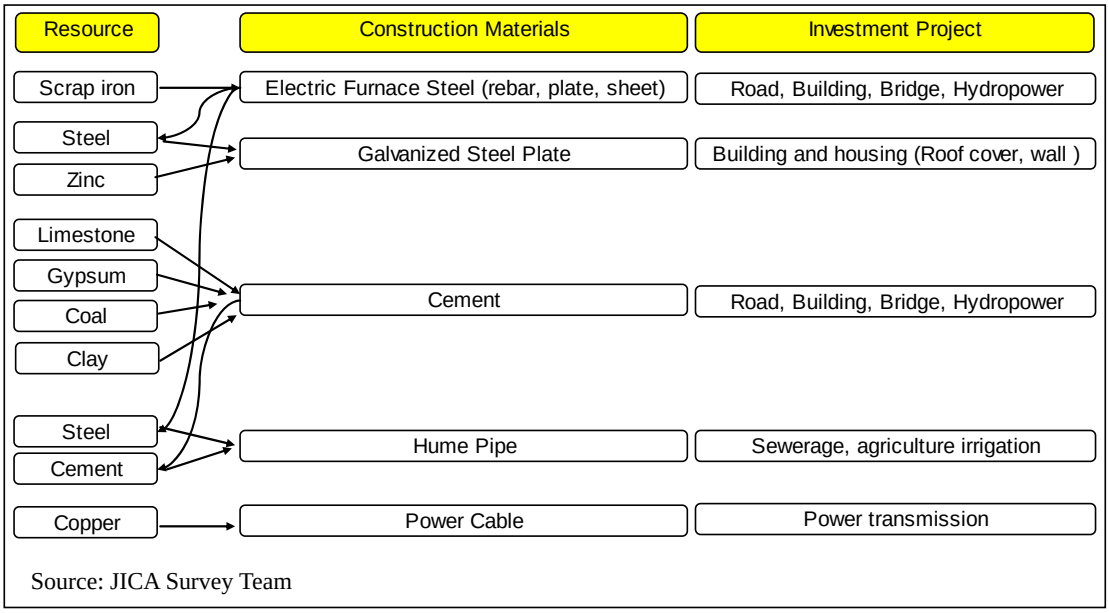



**Figure 4.4.7: Construction Materials for Investment Projects**

*2) Electric Furnace Steel*

Steelwork with electric furnaces produces common steel such as rebars, shape steel, flat steel and sheet steel from scrap iron. This kind of steelwork has the following advantages: less land requirement, less construction cost, flexible design of furnace depending on the production capacity, and easy shut down during change in demand.

*3) Galvanized Steel Plate*

Galvanized steel plate is produced by plating steel plate with zinc. It is usually used for roof cover and outer wall materials due to its corrosion resistance. Production of galvanized steel plate should be encouraged in the country.

*4) Cement*

Cement has already been produced by several factories in Vangvieng, Vientiane, Khammuan, Savannakhet and Oudomxay. The cement industry needs to satisfy the demand for investment projects both quantitatively and qualitatively.

*5) Hume Pipe*

Hume pipe is a reinforced concrete pipe that is compacted using centrifugal force. It is commonly used for sewerage and agricultural irrigation. It is required to encourage investment for the domestic production of hume pipe with adequate strength.

(4) Chemical Fertilizer

*1) Potash Deposit*

There are some deposits of potash in Savannakhet and Vientiane. Potash contains potassium, which is one of the three nutrients that are essential for plant growth. Therefore, potash is mainly used as a component of chemical fertilizer.

*2) Good for Export*

Potash is one of the raw materials of NPK fertilizer that contains nitrogen, phosphorus and potassium. Resources of nitrogen and potassium are not available in the Lao PDR. Moreover, domestic market of chemical fertilizer is not expected because organic farming is dominant in the Lao PDR. Therefore, it is recommended to export potash after refining it to exportable grade rather than processing it into NPK fertilizer in the country.

### 4.4.5 Environment-related Industry

(1) Environment-related Industry

Biomass is a biological material derived from living organisms and it contains carbon derived from carbon dioxide in the atmosphere. Carbon dioxide exhausted by burning biomass does not increase the total amount of carbon in the atmosphere; therefore, biomass energy contributes to the prevention of global warming. Biomass also draws attention as a renewable energy source.

**Table 4.4.4: Potential Environment-related Industries**

| |
|---|
| 1. Bio-ethanol from molasses (by-product of sugar factory) |
| 2. Bio-diesel from vegetable oil |
| 3. Biomass power generation |

Source: JICA Survey Team

(2) Bio-ethanol

*1) Bio-ethanol as Gasoline Substitute*

Bio-ethanol is made from crops such as sugar group, corn and potato and directly used as a gasoline substitute or mixed into gasoline. Bio-ethanol is believed to compete with food supply because increase of production of bio-ethanol caused the price increase of crops such as corn and sugar cane.

*2) Bio-ethanol Potential in the Lao PDR*

In Thailand, bio-ethanol-mixed gasoline, e.g., B5 grade gasoline, has already been sold in the market.

There are two sugar factories invested by two Thai-based sugar companies in Savannakhet. Bio-ethanol can also be produced in the Lao PDR from molasses generated as a by-product from the sugar refining process. Besides, parent companies of these sugar companies have manufacturing technology of bio-ethanol.

Realization of bio-ethanol production depends on the decision of the parent companies in Thailand. Subsidies to bio-ethanol production would encourage such decision, if they are provided by the government.

(3) Bio-diesel

*1) Bio-diesel for Diesel Engine Fuel*

Bio-diesel is made from vegetable oils and used as diesel engine fuel. In addition, experimental flights have been recently conducted for testing bio-diesel as aircraft fuel by several airline companies as well as aircraft makers such as Boeing and Airbus.

*2) Bio-diesel in the Lao PDR*

Several projects were also proposed in the Lao PDR to produce bio-diesel from the fruit of Jatropha, which is inedible due to its poisonous property. Any bio-diesel project has not been realized yet in the Lao PDR because it is difficult to obtain concession of large land for plantation.

Bio-diesel production can be realized depending on oil and gas prices and the growing interest on global environmental issues. Subsidies, if they are provided by the government, would encourage bio-diesel production.

**Figure 4.4.8: Jatropha**

(4) Biomass Power Generation

*1) Biomass Power Generation*

Power is generated by the use of biomass derived from living organisms including plant residuum such as straw and bagasse (strained lees of sugar cane).

*2) Biomass Power Generation Potential in the Lao PDR*

There is a potential for biomass power generation in Savannakhet utilizing bagasse from sugar factories and straw from rice fields.

### 4.4.6 Food and Beverage

(1) Food and Beverage

It is important for the manufacturing sector to have more functions of processing agriculture and forestry products to distribute to the market. Auxiliary functions such as cold chain,

manufacture of containers for food beverage, and organic fertilizer have potential in the Lao PDR.

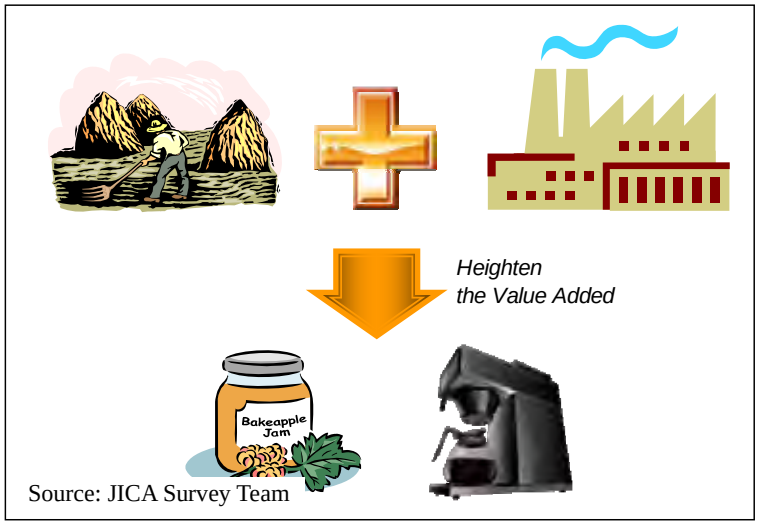
**Table 4.4.5: Potential Food and Beverage Industries**

| |
|---|
| 1. Agriculture products processing |
| 2. Cold chain |
| 3. Container for food and beverage |
| 4. Organic fertilizer (domestic use and border trade) |

Source: JICA Survey Team

(2) Agriculture Products Processing

*1) High Value-added Agriculture*




Source: JICA Survey Team

**Figure 4.4.9: Agriculture Product Processing**

High value-added agriculture can be narrowly defined as the processing of agriculture products through fusion of agriculture and manufacture. It is necessary that the agriculture industry supplies the raw materials and the food processing industry processes the raw materials to heighten the value-added in cooperation with each other.

*2) Examples of Agriculture Products Processing*

The following are examples of industries: processing of vegetable and fruits (tomato ketchup, potato chips, dry vegetable, jam, juice, canned vegetable and fruits); manufacture of instant coffee from coffee; processed foods of rice (rice vinegar, rice confectionery, etc.); processed non-wood forestry resource (mushroom, tinned bamboo shoots, etc.), and beverages (beer, liquor, soft drink, drinking water, ice, etc.)

In addition, examples of commercial crops for processing are: tobacco, essential oil, and flower.

*3) Natural Medicine*

A Japanese pharmaceutical company has been cultivating natural medicinal plants at the Bolaven Plateau. After harvesting, raw natural medicines are exported to a factory in Japan where they are blended with different kinds of natural medicine coming from various places in the world. Then, the mixture is processed into the finished products. Cold chain is necessary to transport raw natural medicine to Japan in order to preserve freshness.

*4) Issues to be Addressed*

It is necessary for foreign investors to have concession of land for plantation to cultivate raw materials. A Thai sugar company was granted concession of 10,000 ha in Savannakhet for plantation of sugar cane in 2006. Then, another Thai sugar company has been granted concession of 10,000 ha also in Savannakhet.

In case of agriculture products processing with large-scale plantation over 100 ha, it presently takes time to obtain concession. It is necessary for the government to accelerate procedures for land concession under the land and forestry laws in order to promote agriculture-related projects.

In case of small-scale processing, domestic enterprises may have opportunities of investment. It is suggested that public research institutes such as research units of universities and agricultural examination facilities provide technical assistance in terms of farming, product development, processing technology, and technical training. It is also recommended that such public research institutes request for technical assistance from research institutes in Thailand, considering similarities of language and climate.

(3) Cold Chain

Cold chain is the logistics system to keep fresh food and medicine at low temperatures in the process of production, transportation and consumption. This system allows extensive distribution and longer storage of fresh food.

In case of frozen vegetables and fruits, it is necessary to freeze raw materials soon after harvesting. In addition, it is necessary to have a cold chain where products can be sorted, stored and transported under frozen condition.

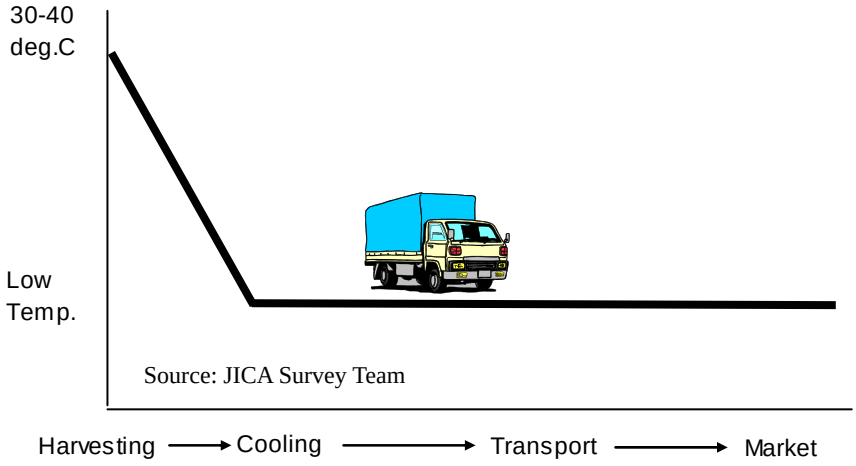



**Figure 4.4.10: Illustration of a Cold Chain**

(4) Container for Food and Beverage

Empty beer and soft drink cans have been imported from Thailand because there is no can manufacturer in the Lao PDR. Empty cans sometimes become deformed during transportation. Can manufacturers are needed near the beer brewery, soft drink factory and canning factory because transportation of empty cans takes up much space. PET bottle factory is also needed near the beverage factories.

(5) Organic Fertilizer

It is necessary to continue producing organic fertilizer from livestock dung and agriculture waste for organic agriculture in the country. There is a possibility of exporting organic fertilizer to the markets near the borders with Thailand and Vietnam.

### 4.4.7 Wood and Furniture Industry

(1) Current Situation

The wood and furniture industry is one of the key industries in the Lao PDR. However, it is difficult for enterprises, particularly foreign entities, to have wood because the forest has been decreasing.

(2) Actions Taken by the Government

The government has worked out the logging program by province, and allocates timber rights by tender. The government prohibits exportation of raw wood and encourages wood processing in the country.

(3) Actions Taken by Manufacturers

The manufacturers need to design and manufacture the furniture to satisfy the customers' desires and minimize the production cost, including transportation cost. The design method for knock down furniture and fabrication technologies have to be acquired, and employees in charge of design or fabrication be trained.

### 4.4.8 Airport Site-Oriented Industry

(1) Potential Location of Airport Site-Oriented Industry

There is a possibility that airport site-oriented industries locate in limited places such as Vientiane Capital. The airport site-oriented industries are mostly those producing small and expensive goods like precision machines, electronic parts, gems and software.

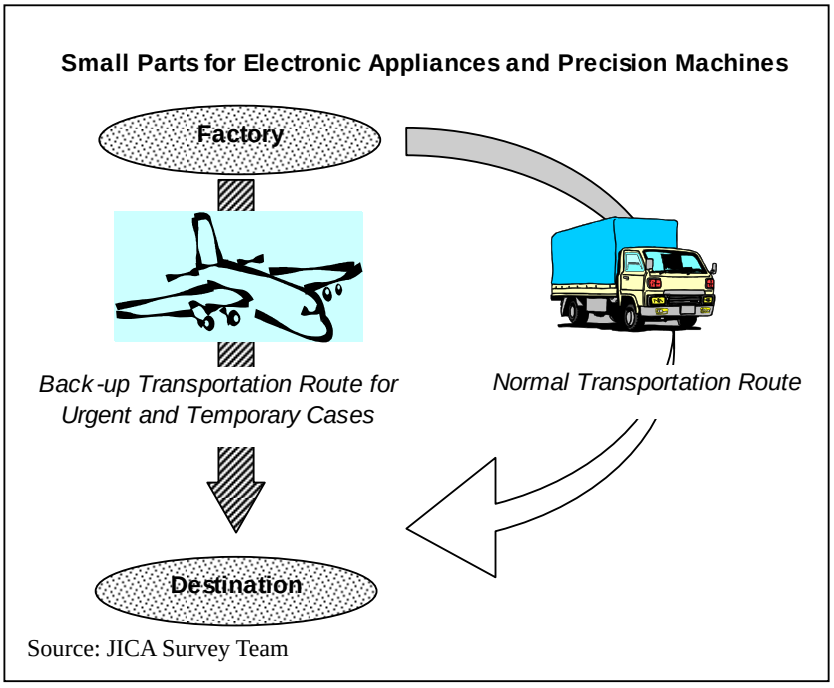
(2) Airlift of Electronic Parts

Electronic parts are normally small and have high value-added. The electric parts manufacture has relatively low ratio of transportation cost to price and it can absorb costs of either airlift or road transportations even those located inland. Therefore, this kind of industry can be located inland.

(3) Learn from a Good Example in Thailand

There are many factories of electric parts and software in northern Thailand, which is an inland region. It is particularly worth noting that 99% of the electronic parts factories concentrate in Chiang Mai Province, which has the Chiang Mai International Airport and is adjacent to Lamphun Province.

As electric parts factories in Lamphun normally transport their products by car, a well-developed road infrastructure is needed. Airlift is not frequently used but lots of enterprises recognize the presence of the airport. It is envisaged that airport bears the function of a backup because the electronic parts industry needs urgent and temporary transport of repair parts and seasonal goods. Therefore, it is necessary to have an airport which can provide rapid logistics service for urgent and temporary transport.




Source: JICA Survey Team

**Figure 4.4.11: Airport-site Oriented Industry**

### 4.4.9 Handicraft Industry

(1) Characteristics of the Handicraft Industry

The handicraft sub-sector plays a significant role at the early stage of industrialization. Local people can produce handicraft to obtain income. Therefore, the handicraft industry directly provides impacts on poverty reduction in the rural area and minority groups.

(2) Examples of the Handicraft Industry

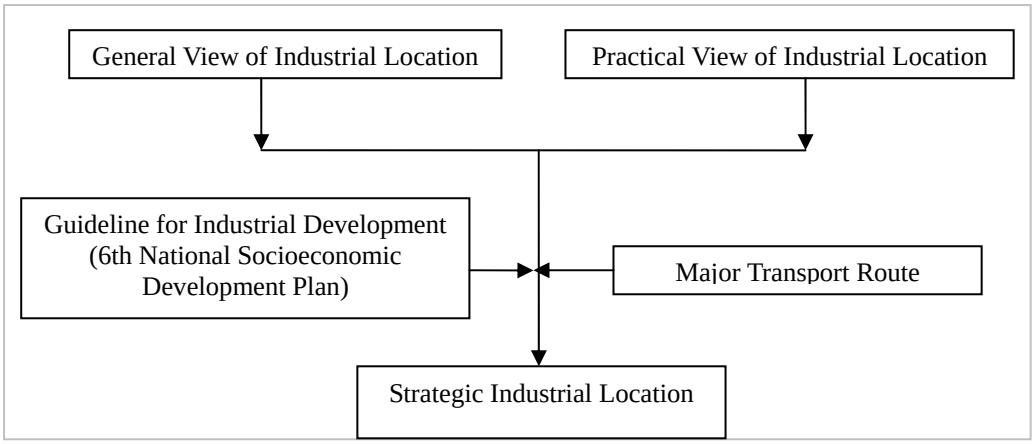
The following are examples of handicrafts: handmade silk, textile, handmade clothes, cooked food, drawing and sculpture, souvenirs for tourism, toys, wood stuff, cotton, paper, metalwork, jewelry, and gold work.

(3) Issue to be Addressed

In order to encourage the handicraft industry, it is necessary to provide product development to suit customers' tastes, exhibition and spot sale, and training for making and selling handicrafts.

## 4.5 Strategic Industrial Location

Strategic industrial location is formulated according to the flow shown in the following Figure 4.5.1:




Source: JICA Survey Team

**Figure 4.5.1: The Flow of Formulating Strategic Location**

### 4.5.1 General and Practical Views of Industrial Location

(1) General View of Industrial Location

Least Cost Location

According to the theory of industrial location formulated by Alfred Weber[2], an industry should be located where it can minimize its costs such as transportation and labor costs. Based on the theory, the location pattern of industry at the macro-scale will be explained below.

Depending on the difference between the weights of raw materials and the finished product, the optimum pattern for an industrial location varies.

*1) The Weight Losing Industry*

In cases where the weight of the final product is less than the weight of the raw material, as in the case of the copper smelting industry for example, it would be very expensive to bring the heavy raw materials to the market for processing. The processing therefore, is carried out near the raw materials. This kind of industry is called the raw material-oriented industry.

The processing industry of most agriculture products is also considered a weight losing industry. It often requires the freshness of raw materials; therefore, processing is carried out

[2] Weber, A., Über den Standort des Industrie: Reine Theorie des Standorts, 1909. English translation by C.F. Fredrich, *Alfred Weber Theory of the Location of Industries*, University of Chicago Press, Ch.I-IV, 1929. Japanese translation by Taizo Shinohara, *Theory of Industrial Location /Alfred Weber*, Taimeido, 1986.

near the cultivation area. Moreover, timer mills and furniture manufacturing are considered materials-oriented, being manufactured in the area not far from the logging area.

*2) The Weight Gaining Industry*

In cases where the final product is heavier than the raw material that require transport, as in the beer brewing industry for example, it would be very expensive to bring the heavy product to the market, hence, processing is carried out near the market. This is usually the case where some ubiquitous raw material, such as water, is added into the product. This kind of industry is the market-oriented industry.

Low labor cost sometimes justifies the greater transport distance, and becomes the primary determinant for industrial location.

*3) Labor-intensive Industry*

Industries such as the garment industry require many cheap unskilled labors to complete activities that are not mechanized. This kind of industry is called the labor-intensive industry and located where the industry can employ workers with low wages, little unionization and of young generation.

Agglomeration

Agglomeration is the phenomenon of spatial clustering, or concentration of firms in a relatively small area. Clustering and linkages allow individual firms to enjoy both internal and external economies, as an effect of agglomeration. Auxiliary industries, specialized machines or services used only occasionally by larger firms tend to be located in agglomerated areas, not only to serve through lower costs but also to serve the larger number of users.

Firms that can achieve economies by increasing their scale of industrial activities benefit from agglomeration. However, after reaching an optimum size, local facilities may make excessive demands, which can lead to an offset of the initial advantages and increase in production costs.

(2) Practical View of Industrial Location

Although the theory of industrial location is useful as a general view, there are lots of cases which cannot be explained by the theory. In particular, there are many issues to be considered under globalization in the form of an ever-increasing movement of people, goods, money, services and information across international borders. The following, among others, are important matters to be taken into account from the practical view of industrial location:

- Corporate strategy for global business
- Future growth of market
- Economy of scale for manufacturing
- Availability of technology transfer
- International trade agreements, including WTO, AFTA and GSP
- Industrial policy of the government
- Investment climate, including infrastructure, industrial zone and estate, and institutional systems

### 4.5.2 Guideline for Industrial Development

The Sixth Five-Year National Socio-Economic Development Plan guides the industrial development in the Lao PDR, as follows:

(1) Northern Region

- Priority is to be given to the Luang Namtha Development Center focusing on leading and important sectors such as the mining industry (coal, antimony, salt and copper), and tree exploitation and processing.
- Local and foreign enterprises will be promoted and provided facilities to increase investments in exploitation of gold and iron in Xiengkhuang[3] and Bokeo, coal in Xiengkhuang and Phongsaly, iron sheets and bauxite in Phongsaly, and sapphires in Bokeo.
- The capacity of the cement plant in Oudomxay will be expanded to 80,000 tons per year. With the completion of the Namtha Hydropower Project in Luang Namtha and the hydropower plants in Nam Xieng, Luang Prabang, the electricity supply in Oudomxay will be improved.
- The Luang Namtha Industrial Zone will be available on a 200-ha area for the extraction and production of gem stones, micro-bio fertilizers, canned products, textiles and animal feed.
- In the northern region, industries such as wood processing, construction materials, mineral exploration and processing, and large-scale hydropower will be developed. At the same time, small-scale hydropower construction will be undertaken in order to provide electricity to the remote rural areas.

(2) Central Region

- Focus will be on the development of electricity, exploitation and processing of minerals to increase export products and enhance the budgetary revenues to be used for the development of infrastructure and implement the comprehensive poverty reduction strategy.
- Continue to enhance the industrial sector with high technology for export, such as the electronics industry, consumer products industry, industrial processing of non-timber forest products, construction materials industry and chemical industry. Key industrial areas will be established gradually along the main communication routes.
- Priority will be given to the development of hydropower plants, exploitation of gold, copper and iron, production of cement and paper, agriculture processing, tourism and high quality services.
- The investment will be mobilized for improving the infrastructure of the two big cities in the region, Vientiane Capital and the Khanthaboury District of Savannakhet Province.
- A favorable investment environment will be created to motivate investment for the exploitation of gold, copper, iron and coal.

[3] Xiengkhuang province is referred to as a part of the Northern Region in the Sixth NSEDP, although the province is generally classified in the Central Region.

- Construction of the Vientiane II cement factory (with a production capacity of 200,000 tons per year) and Savannakhet cement factory (100,000 tons per year) will be completed to meet the local needs for construction.
- The goods distribution in the provincial joint border areas will be widely opened, with focus on investments in Savan-Seno Special Economic Zone (Savannakhet) and other areas which link the Lao PDR with Vietnam and Thailand.

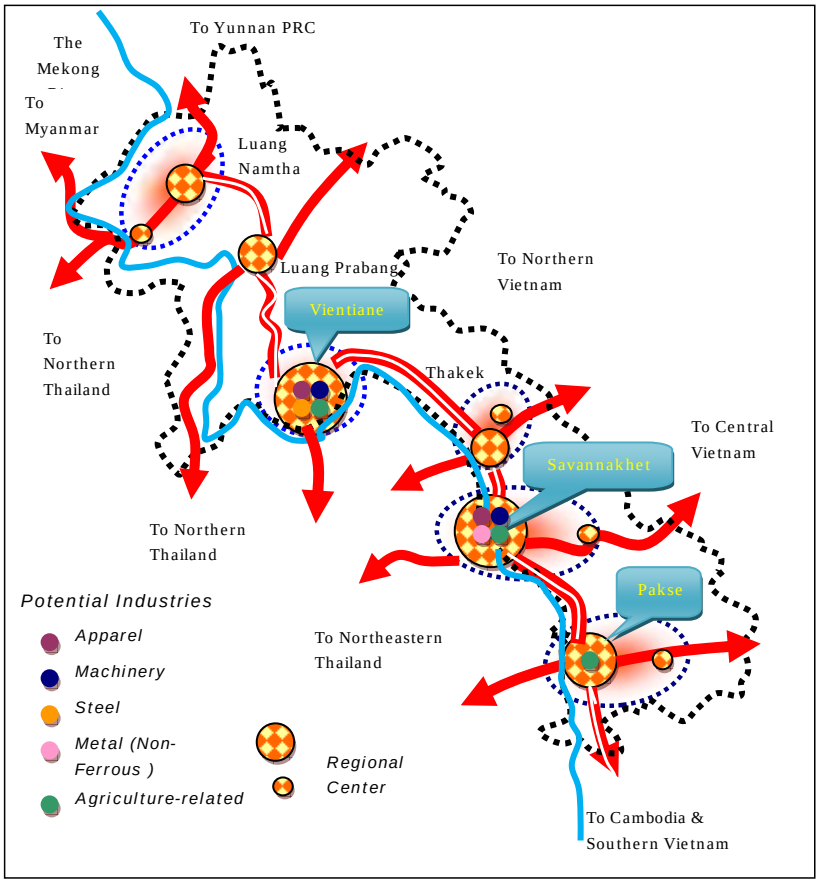
(3) Southern Region

- The main priorities are the development of the electricity industry, agro-processing and mineral exploitation.
- The government will urgently prepare to construct the Xexet 2 (in Saravane) and Sekong 3, Sekong 4 and Sekong 5 hydropower projects; and implement the projects for copper, bauxite, charcoal, and gold exploitation and processing (in Sekong, Saravane and Champasak).
- The focus will be on the development of some industrial and processing sectors such as paper mills, coffee and tea processing for export, and rubber processing, with priority measures to provide improved production of good quality wood in Attapeu and construction of the processing plant in Sekong to provide high quality wood products.
- Attention is to be given to investment promotion and incentives to build a plant to produce high quality canned foods (tea, coffee, canned meat and fruit juice) for export from Champasak; and construct chemical fertilizer plants in Attapeu and Saravane for the southern region market.
- The government will ensure that raw materials are available for the Savarane and Champasak cement factories to operate at full capacity.
- Investment funds will be attracted and mobilized for the exploitation of big projects such as hydropower projects, bauxite mining and the production of aluminum and other mineral products; and to establish a focal site for industry.
- Attention will be given to the development of traditional handicrafts such as weaving, silk, cardamom, rice products, processed corn for domestic and export markets, and tourism.
- Necessary investment will be attracted for infrastructure development in the industrial zone at Pakse with an area of 250 ha, to produce construction materials, beverages, canned goods, garment, animal feed, machinery components and spare parts for agricultural tools.
- The government will invest in the construction of the Southern Trading Center at Pakse and central markets in the provinces to be the links for goods delivery within the region and supply goods on a larger-scale to the border.

### 4.5.3 Major Transport Routes

For the field of road network, in addition to the existing Mekong bridges at Vientiane, Pakse and Savanakhet, there are two bridges now committed and soon to be under construction, namely, the bridge at Thakhek to Nakhon Panom and the Huayxay Bridge.

With regard to the Thakhek Bridge, there will be improvement of roads connecting to Vietnam, which would become a part of the link between Northern Vietnam, Central Laos and Northeastern Thailand, allowing for yet another regional linkage. The Huayxay Bridge, meanwhile, shall strengthen the linkage between Yunnan in China, Northern Laos, Northern Thailand and Myanmar. Figure 4.5.2 below depicts the network and centers for industrial development.




Source: JICA Survey Team

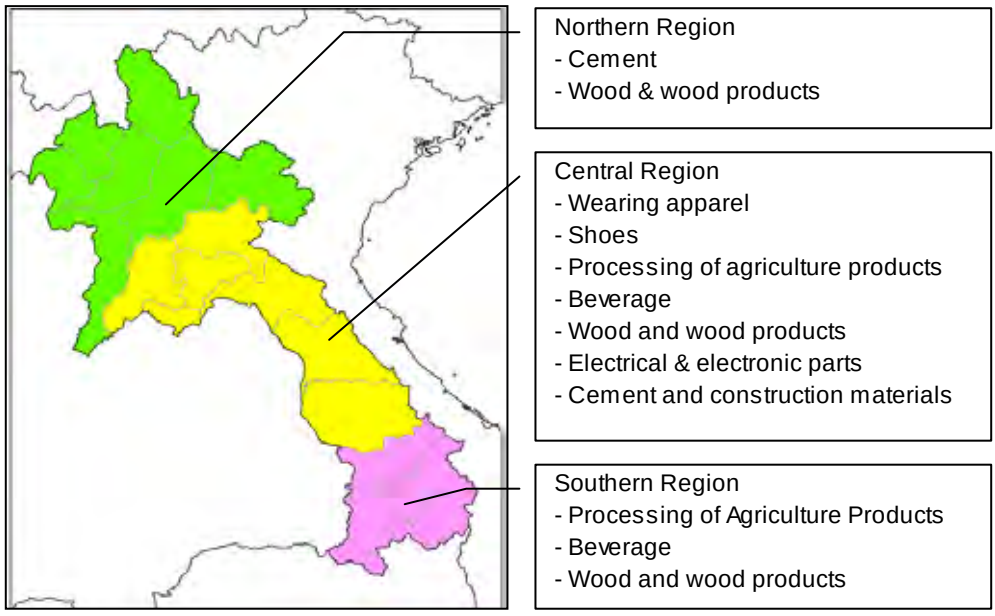
**Figure 4.5.2: Major Transport Routes**

### 4.5.4 Strategic Industrial Location

According to the process mentioned in the first section of this chapter, the strategic industrial location in the Lao PDR is worked out as shown by Figure 4.5.3 on a region-by-region basis.

The largest industrial location is expected in the central region of the country. In particular, Vientiane Capital and Savannakhet Province have large potentials for industrial development. It is expected that the processing industries of agriculture products and wood will locate in the southern region, particularly in Champasak Province. The northern region has potentials for the cement industry and wood product industry, although it is in the most difficult position for industrial development.

With the strategic industrial location in mind, industrial estate development is considered at the three major centers of industrialization, namely: Vientiane Capital, Savannakhet and Champasak. This will be discussed in Part II of the report.




Source: JICA Survey Team

**Figure 4.5.3: Strategic Industrial Location**

# *Appendices*

# APPENDIX I.1 INDUSTRIALIZATION IN THAILAND

## 1 Current Situation of Industry in Thailand

### 1.1 Fundamentals

Thailand showed steady economic growth recently. Real GDP growth rate was between 4% and 7% after recovering from the Asian currency crisis in 2002 up to 2007. Its GDP per capita exceeded USD 3,000 in 2006.

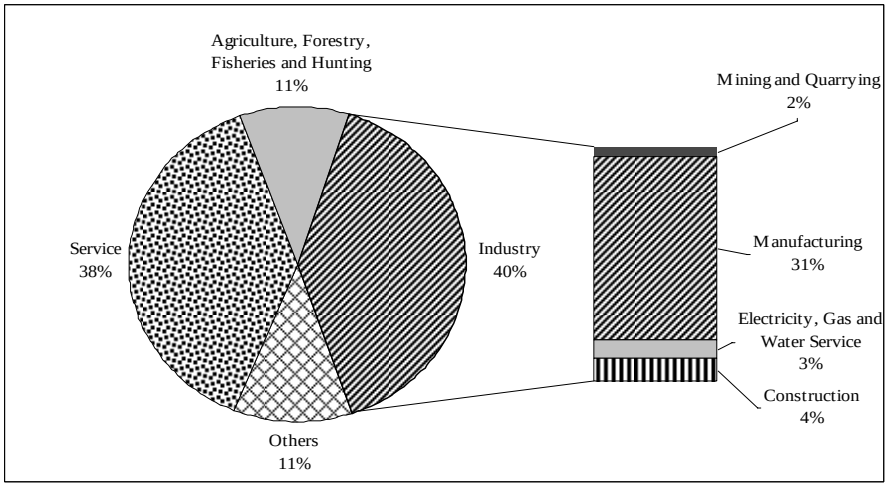
**Table I.1.1: Fundamentals of Thailand (2007)**

| | |
|---|---|
| Growth rate of GDP at Contact Price | 4.9% |
| GDP at Current Price (million USD) | 246,053 |
| Per capita GNP at Current Price (USD) | 3,732.1 |

Source: JETRO-FILE(http://www3.jetro.go.jp/jetro-file/country.do)

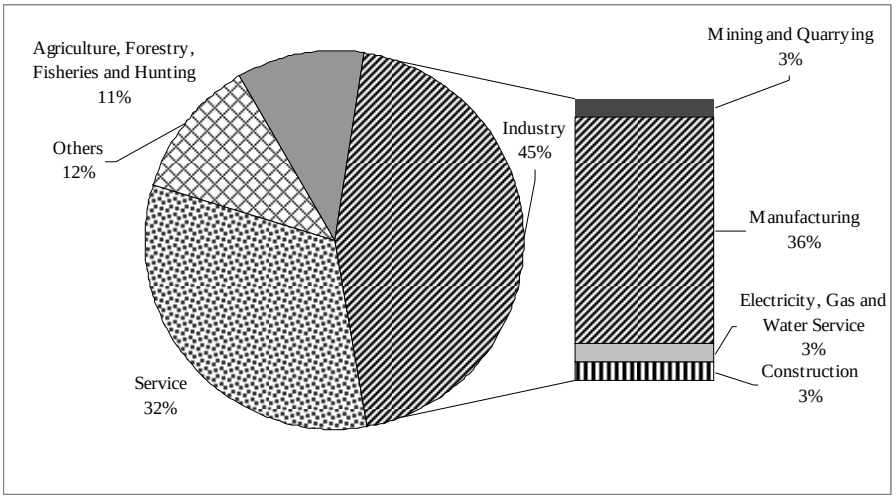
### 1.2 GDP per Sector

This economic growth depended on the growth in the manufacturing sector. Industrial sectors in 1998 and 2007 are compared through the following two charts. GDP composition of the industrial sector has increased from 40% in 1998 to 45% in 2007. The manufacturing industry was the largest among the industrial sectors. GDP composition of the manufacturing industry has increased from 31% to 36% during the same period.




Source: NESDB, Thailand http://www.nesdb.go.th/

**Figure I.1.1: GDP by Industrial Sector (1998)**




Source: NESDB, Thailand http://www.nesdb.go.th/

**Figure I.1.2: GDP by Industrial Sector (2007, estimated)**

Among the manufacturing industry, the assembly industry has remarkably expanded during the period. In particular, many automobile assemblers expanded their businesses to Thailand, for example, Japanese assemblers such as Toyota, Honda and Isuzu; and other global assemblers such as GM and BMW. Furthermore, a large number of manufacturers opened their plants for electrical and electronic machines and related parts.

## 1.3 Trade

Regarding export business in 2007, computers and cars ranked high among the export items, followed by industrial materials such as natural rubber, plastic resin, and iron and steel, as shown in the following Table I.1.2.

Meanwhile, for the import business in 2007, crude oil was the largest import item as fuel and raw material for the petrochemical industry. In addition, a large amount of industrial machines, chemicals and ICs were imported, as also shown in table below.

**Table I.1.2: Export and Import by Item in Thailand (2007)**

| Export Value in 2007 (Million USD) | | Import Value in 2007 (Million USD) | |
|---|---|---|---|
| Computers and Accessories | 14,869 | Crude Oil | 20,406 |
| Car and its Part | 9,524 | Industrial Machine | 12,172 |
| IC | 7,030 | Chemicals | 10,021 |
| Natural Rubber | 5,397 | IC | 9,823 |
| Jewel and Jewelry Goods | 3,668 | Electric Machine and its part | 9,503 |
| Plastic Resin | 4,498 | Iron and Steel | 8,575 |
| Iron and Steel | 3,529 | Computer and its Part | 7,520 |
| Machine and its Part | 2,655 | Waste Metal and Scrap Metal | 7,130 |
| Refined Fuel | 3,649 | Jewel and Bullion | 4,117 |
| Chemicals | 3,434 | Auto Parts | 3,337 |
| Others | 71,467 | Others | 47,355 |
| Total | 129,720 | Total | 139,959 |

Source: JETRO, based on data of the Ministry of Commerce, Thailand

# 2 Industrial Policy Changes

After World War II, Thai industry has reached three turning points: the first oil crisis in 1973, the Plaza Accord in 1985, and the Asian currency crisis in 1997. These turning points changed the industrial structure in Thailand. In order to follow these changes, the Thai government has implemented various policies as described below and summarized in chronological order on the next page.

In addition, the Thai economy has been facing difficulties under the world financial crisis that started in the second-half of 2008. Under such crisis, combined with political turbulence in the country, Thai industry is reaching a new turning point at present.

## 2.1 Changes after First Oil Crisis

(1) Price Escalation of Primary Goods

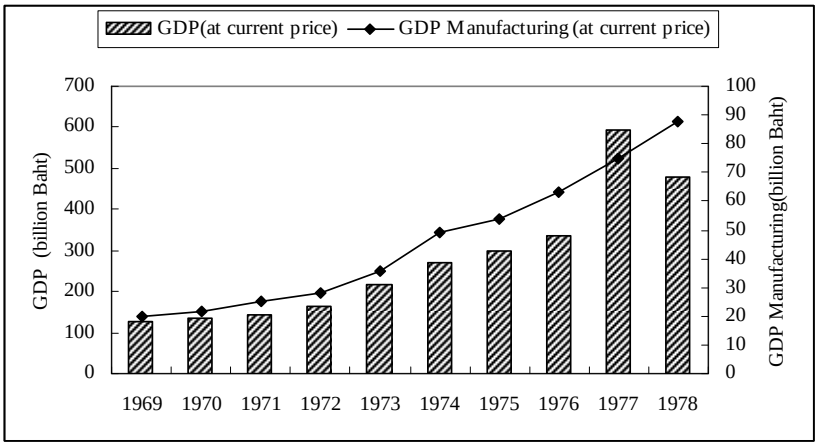
Rising oil prices after the first oil crisis caused price escalation of primary goods in the world. As agriculture was a key industry in Thailand at that time, exports of prime commodities sharply increased as shown in Table 1.1.3.

**Table I.1.3: Index Number of Primary Goods Exports for 1969-1979**

100: exports in 1969

| Year | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rice | 100 | 85 | 99 | 151 | 122 | 332 | 199 | 292 | 454 | 354 | 529 |
| Maize | 100 | 111 | 129 | 118 | 168 | 344 | 323 | 321 | 189 | 242 | 319 |
| Sugar | 100 | 200 | 813 | 2,689 | 2,470 | 7,994 | 12,119 | 14,560 | 15,840 | 8,445 | 10,206 |
| Rubber | 100 | 84 | 72 | 70 | 172 | 189 | 130 | 199 | 231 | 301 | 464 |
| Tin metal | 100 | 99 | 96 | 102 | 125 | 190 | 138 | 182 | 278 | 443 | 567 |

Source: Asia-Pacific Statistical Yearbook (United Nations, 1980)




Source: Asia-Pacific Statistical Yearbook (United Nations)

**Figure I.1.3: Change in Economic Growth (1969-1978)**

(2) First Step of Industrialization

Under the sharp increase in exports of primary goods, Thailand enjoyed an economic boom. It moderately facilitated imports substituting industrialization as the first step of actual industrialization in the sub-sectors of textiles, automobiles, electric appliances and steel secondary products[1].

[1] Akira SUEHIRO, JICA Study Report on country-by-country aid programs for Thailand (2003)

Source: JICA Survey Team

**Figure I.1.4: Changes in Industrial Policy in Thailand**

(3) Restrictive Policy of Foreign Investment

As far as industrial policy is concerned, the Thai government tried to hold down the foreign investment in the first-half of the 1970s under the circumstances of rising nationalism and reduction of trade surplus. In particular, the government attempted to guide the foreign investment into specific industries and geographical areas by formulating related laws in 1972 such as the investment promotion law, the foreign enterprise law, and the foreigner employment law.

(4) Promotion Policy of Foreign Investment

However, such industrial policy did not lead to good results. Once prices of the primary goods became stable, the Thai economy fell into a long depression in the period from the second-half of the 1970s to the first-half of the 1980s. Under such circumstances, the Thai government altered the directions of the investment climate into a policy of actively promoting foreign investment such as revising the investment promotion law in 1977, and strengthening the authority of the Board of Investment (BOI).

At this time, the export promotion policy was also implemented while taking particular measures such as adopting a refund system for import duty imposed on the raw materials for manufacturing export products; accelerated procedures for the refund system of import duty; and exemption of tax to be imposed on raw materials, construction materials and equipment for factories in Lat Krabang Industrial Estate in Bangkok[2].

(5) Structure Adjustment Program

Thailand obtained structure adjustment loans from IMF in 1981 and from the World Bank twice in 1982 and 1983, since foreign debt was increased during the second oil crisis in 1979. Under the fifth five-year National Economic and Social Development Plan (NESDP) and the structure adjustment program of the World Bank, the Thai government implemented the structure adjustment policy, i.e. easing regulations and market liberalization.

## 2.2 Changes after Plaza Accord

(1) Foreign Investment Increment

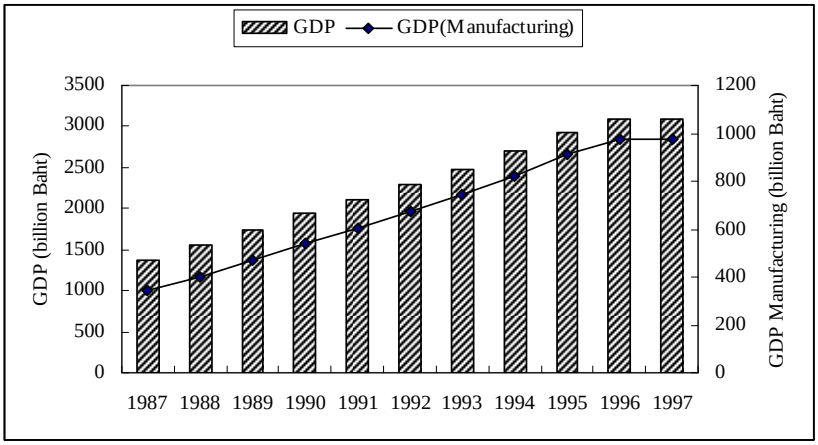
In combination with the rapid fluctuation of the exchange rate due to the Plaza Accord in 1985, previous policies accelerated the growth of industry and economy. The weakening dollar shifted the center of labor-intensive industry to ASEAN countries from the Asian Newly Industrializing Economies (NIEs), such as Japan, South Korea and Taiwan with higher labor costs. With an improved investment climate especially in Thailand, a large amount of foreign investment was gathered. As a result, the industrial structure in Thailand has advanced to an export-oriented industry centering on the machine and electricity industries.

(2) Eastern Seaboard Development

The infrastructure development projects were implemented in the Eastern Seaboard to promote the export-oriented industry and the heavy and chemical industry during the period from the beginning of the 1980s to the first-half of the 1990s. The financial liberalization policy has started from 1990. These projects and policies led to synergetic effects to the Thai economy. High growth lasted until the Asian

[2] Shigeki HIGASHI, Economic Policy in Thailand, IDE-JETRO (2000)

currency crisis in 1997. During the ten years from 1987 to 1997, the national GDP and the GDP of the manufacturing sector increased significantly to 2.23 and 2.85 times as high as in 1987, respectively.




Source: Asia-Pacific Statistical Yearbook (United Nations)

**Figure I.1.5: Change in Economic Growth (1987-1997)**

## 2.3 Changes after the Asian Currency Crisis

(1) Asian Currency Crisis

The financial liberalization policy allowed a large supply of funds; however, it had two harmful effects: the emergence of the bubble economy and fragile economic structure against outflow of foreign investment. In 1997, the Asian currency crisis occurred from the outflow of foreign investment due to bursting of the bubble economy; and a slump of exportation and expanding current-account deficit due to devaluation of Chinese Yuan and the weakening of the dollar against the yen. As Thailand suffered serious damage, the country obtained loans from the World Bank and IMF again, and made adjustments to its economic structure under the agreement and guidance of IMF.

(2) Economic Recovery

After 1999, the Thai economy recovered well but still had two risks:

- Lower international competitiveness compared with China, Indonesia, Vietnam and Malaysia
- Wide regional differences in economy

The Thaksin Cabinet was appointed in 2001, and announced the line of policy consisting of the following:

- Strengthening of competitiveness over the country
- Promotion of small and medium enterprises as well as expansion of domestic demand in the provinces and rural areas (so-called Grass Roots Policy)

In September 2006, the Thaksin Cabinet was overthrown by a coup. After the coup, the current Abhisit Cabinet was established through the governance of the Surayud Provisional Cabinet. However, a large number of people consisting mainly of poverty groups from the rural areas still strongly support Mr. Thaksin and therefore, political confusion has not ended yet.

# 3 Public Institutions for Industrial Development

## 3.1 Board of Investment (BOI)

(1) Function of BOI

BOI was established under the Investment Promotion Law (1977), with aims of formulating the policy measures for industrial investment promotion and examining the eligibility of promoted investments.

BOI consists of a Chairperson (assumed by the Prime Minister), Vice-Chairperson (Minister of Industry), and members (other economic ministers, representatives of the private sector, including the Thai Federation of Industry). In addition, the Office of the Board of Investment (OBOI) has been set up under the Ministry of Industry to perform operations for BOI.

In order to correct regional disparities, BOI formulated policy measures for promoting investment to give special incentives for three different zones, and specific sub-sectors to develop agglomeration of specific industries.

(2) Preferential Treatment

**Table I.1.4: Preferential Treatment of BOI**

| | Zone1 | | Zone2 | | Zone3 | |
|---|---|---|---|---|---|---|
| | Inside industrial estate | Outside industrial estate | Inside industrial estate | Outside industrial estate | Inside industrial estate | Outside industrial estate |
| Exemption from corporation tax | 3 years *1 | × | 7 years *1 | 3 years *1 | 8 years *1 | 8 years *1 |
| 50% reduction of corporation tax of five years from end of tax holiday | × | × | × | × | ○ | × |
| Reduction of import tax on capital investment | Reduction of 50% | | Exemption *2 | Reduction of 50% *3 | Exemption | Exemption |
| Reduction of import tax on raw material for export production | 1 year *4 | | 1 year *4 | 1 year *4 | 5 year *4 | |
| 75% reduction of import tax on raw material for domestic production | × | × | × | × | 5 year *5 | × |
| Expenditure of transportation, the electric power and water is deducted for ten years from the day of the income generated. | × | × | × | × | ○ | × |
| 25%(the infrastructure maintenance and the cost of construction) is added to usual depreciation costs and it deducts it from the gross profit. | × | × | × | × | ○ | ○ |
| Easiness of acquisition of work permit and residency of foreigner | ○ | ○ | ○ | ○ | ○ | ○ |
| Ownership of land | Possible | Possible | Possible | Possible | Possible | Possible |

Source : JETRO Bangkok Business Support Center
*1 The following two are required.
1. Move in industrial estate managed by IEATor specific industrial area or Leamchabang Industrial Estate
2. The investment application must be accepted by December 31, 2009.
*2 For the investment more than 10 million bahts, it is necessary to receive the ISO9000 or the global standard corresponding to it.
*3 50% is reducted for the items of import tariff is 10% or more.
*4 It is possible to extend.
*5 Rayong Province is excluded.

**Table I.1.5: Investment Promotion Zones of BOI**

| | |
|---|---|
| Zone 1 | Bangkok, Samut Prakan, Samut Sakhon, Nakhon Pathom, Nonhtaburi and Pathum Thani (Bangkok and 5 provinces) |
| Zone 2 | Ang Thong, Ayutthaya, Chachoengsao, Chon Buri, Kanchanaburi, Nakhon Nayok, Phuket, Ratchaburi, Rayong, Samut Songkhram, Saraburi, and Suphanburi (12 provinces) |
| Zone 3 | the remaining 58 provinces |

Source : BOI

## 3.2 The Industrial Estate Authority (IEAT)

(1) Function of IEAT

IEAT is a state-owned enterprise belonging to the Ministry of Industry aimed at industrial estate development such as land reclamation, operation and maintenance, and infrastructure development. Industrial areas in Thailand are categorized into the following three types:

- The first type, which IEAT undertakes land reclamation and operation and maintenance,
- The second type, which the private sector undertakes land reclamation while IEAT undertakes operation and maintenance, and
- The third type, which the private sector with approval of BOI undertakes land reclamation and operation and maintenance.

The Industrial Estate Law has agreed to classify the first and second types as industrial estates, but not the third type.

IEAT does not impose restrictions to any factories in industrial estates where IEAT undertakes operation and maintenance. Any factories are allowed to move within the industrial estates, if they contribute to the industrial development in Thailand without adversely affecting the industrial estates.

(2) Preferential Treatment

**Table I.1.6: Comparison of Incentives Granted by BOI and IEAT**

| Incentives | BOI | IEAT |
|---|---|---|
| Exemption of corporate income tax | Yes | No |
| Reduction of import tax on equipment | Yes | No |
| Land ownership of foreign capital | Possible | Possible |
| Acquisition of work permit | Easy | Easy |
| 100% foreign capital | Possible | Possible |

Source : JETRO Bangkok Business Support Center

IEAT as well as BOI provides preferential treatment to investors, although there are differences from those provided by BOI.

# 4 Industrial Estates

## 4.1 List of Industrial Estates

**Table I.1.7: List of Industrial Estates**

| Area | Province | | | Total Area(rai) | Total Area(ha) |
|---|---|---|---|---|---|
| Bangkok | | 1 | Bangchan Industrial Estate | | |
| | | 2 | Gemopolis Industrial Estate | 800 | 128 |
| | | 3 | Ladkrabang Industrial Estate | 2,599 | 416 |
| | | 4 | Nongbon Garden Industrial Zone | | |
| Central・West | Samut Prakan | 5 | Bangplee Industrial Estate | | |
| | Samut Prakan | 6 | Bangpoo Industrial Estate | | |
| | Pathum Thani | 7 | Bangkadi Industrial Park | | |
| | Pathum Thani | 8 | Nava Nakorn Industrial Promotion Zone | 6,485 | 1,038 |
| | Samut Sakhon | 9 | Maharaj Nakorn Industrial Estate | | |
| | Samut Sakhon | 10 | Samut Sakhon Industrial Estate | | |
| | Samut Sakhon | 11 | Sinsakhon Printing City Industrial Estate | | |
| | Ayutthaya | 12 | Bangpa-In Industrial Estate | | |
| | Ayutthaya | 13 | Factory Land Wangnoi | | |
| | Ayutthaya | 14 | Hi-Tech Industrial Estate | | |
| | Ayutthaya | 15 | Rojana Industrial Park(Ayutthaya) | 10,375 | 1,660 |
| | Ayutthaya | 16 | Saha Rattana NakornIndustrial Estate | | |
| | Saraburi | 17 | Nong Khae Industrial Estate | | |
| | Saraburi | 18 | Kaeng Khoi Industrial Estate | | |
| | Saraburi | 19 | SIL Industrial Land(Saraburi) | 3,619 | 579 |
| | Sing Buri | 20 | Indra Industrial Park | 992 | 159 |
| | Ratchaburi | 21 | Ratchaburi Industrial Estate | 1,430 | 229 |
| | Ratchaburi | 22 | V.R.M Ratchaburi Industrial Estate | | |
| | Phetchaburi | 23 | Khao Yoi Industrial Park | 1,600 | 256 |
| East | Chachoengsao | 24 | 304 Industrial Park 2 | | |
| | Chachoengsao | 25 | Gateway City Industrial Estate | 5,183 | 829 |
| | Chachoengsao | 26 | Wellgrow Industrial Estate | | |
| | Chanthaburi | 27 | Amata Nakorn Industrial Estate | 15,500 | 2,480 |
| | Chanthaburi | 28 | Hemaraj Chonburi Industrial Estate | 3,857 | 617 |
| | Chanthaburi | 29 | Leamchabang Industrial Estate | | |
| | Chanthaburi | 30 | Pinthong Industrial Estate | 2,000 | 320 |
| | Chanthaburi | 31 | Saha-Group Industrial Park Sriracha | | |
| | Rayong | 32 | Amata City Industrial Estate | 8,500 | 1,360 |
| | Rayong | 33 | Asia Industrial Estate | | |
| | Rayong | 34 | Eastern Seaboard Industrial Estate(Rayong) | 8,048 | 1,288 |
| | Rayong | 35 | G.K Land Industrial Park | | |
| | Rayong | 36 | Hemaraj Eastern Industrial Estate(Map Ta Phut) | 3,254 | 521 |
| | Rayong | 37 | Hemaraj Eastern Seaboard Industrial Estate | 6,137 | 982 |
| | Rayong | 38 | Map Ta Phut Industrial Estate | 10,215 | 1,634 |
| | Rayong | 39 | Rayong Industrial Land | 3,435 | 550 |
| | Rayong | 40 | Rayong Industrial Park | | |
| | Rayong | 41 | Rojana Industrial Park(Rayong) | 2,692 | 431 |
| | Rayong | 42 | Siam Eastern Industrial Park | | |
| | Rayong | 43 | T.C.C. Industrial Park | | |
| | Prachinburi | 44 | 304 Industrial Park | 12,500 | 2,000 |
| | Prachinburi | 45 | Bor Thong Industrial Zone | | |
| | Prachinburi | 46 | Kabinburi Industrial Zone | 4,000 | 640 |
| | Prachinburi | 47 | Saha Group Industrial Park | | |
| Northeast | Nakhon Ratchasima | 48 | Nava Nakorn Industrial Estate(Nakornratachasrima) | 1,903 | 304 |
| | Nakhon Ratchasima | 49 | Suranaree Industrial Zone | | 0 |
| | Khon Kaen | 50 | Khon Kaen Industrial Estate | | |
| North | Chiang Mai | 51 | Hariphunchai Industrial Estate | | |
| | Lamphun | 52 | Northern Region Industrial Estate | 1,788 | 286 |
| | Lamphun | 53 | Saha Group Industrial Park Lamphun | | |
| | Phichit | 54 | Northern Region Industrial Estate(Pichit) | 1,235 | 198 |
| South | Songkhla | 55 | Southern Industrial Estate | 2,302 | 368 |
| | Pattani | 56 | Halal Food Industrial Estate | | |

Source : Survey Report on Industrial Estaes in Thailand (JETRO)

## 4.2 Free Zone

(1) Revised IEAT Act under World Trade Organization (WTO) Agreements

For over three decades, as a state enterprise established under the IEAT Act B.E. 2522 [1979], the IEAT has been carrying out its roles and responsibilities to develop ideal industrial estates perfectly equipped with an extensive range of infrastructure and facilities, coupled with a full-scale administrative system and numerous privileges. Based on such favorable attributes, each industrial estate is expected to be a production base that contributes to the competitiveness of all business operators.

To improve effectiveness and efficiency as a potential and performance-enhancing tool for investors and operators in industrial estates, the IEAT Act B.E. 2522 [1979] was amended and re-enacted as the IEAT Act (No.4) B.E. 2550 [2007] to meet the needs of today's dynamic marketplace and obligations under WTO agreements.

(2) Fundamentals of IEAT Act (No.4) [2007]

- Industrial estates are divided into two zones: General Industrial Zone and IEAT Free Zone – in lieu of an Export Processing Zone, whereby no export conditions are imposed in accordance with WTO obligations.
- The operation of service businesses are allowed in a General Industrial Zone, where service operators are granted with rights to land ownership.
- Operators in an IEAT Free Zone are entitled to additional tax privileges.
- The administrative process was streamlined to facilitate business operations in an IEAT Free Zone.
- The process of industrial estate establishment and land allocation was improved to ensure faster and more convenient implementation.

(3) Enhanced Potential and Opportunity

*1) Investment in General Industrial Zone*

Investors in the General Industrial Zone are eligible for the following opportunities, options and privileges:

a) Permission to operate service businesses in the General Industrial Zone.

IEAT provides industrial operators in the General Industrial Zone with comprehensive services essential for industrial operation – such as transportation, warehouses, training centers and clinics – as well as permission to own land required for their operations.

b) Non-Tax privileges for operators in the General Industrial Zone

- The right to own land in an industrial estate
- The right to bring in foreign skilled workers as well as their spouses or dependents
- The right to remit money abroad

*2) Investment in IEAT Free Zone*

Under the most recent IEAT Act, investors in an IEAT Free Zone are entitled to additional tax privileges and other preferences:

a) Privileges

- Operators in an IEAT Free Zone are afforded the privilege of exporting products without any restrictions and with the added convenience of being able to bring merchandise or raw materials into an IEAT Free Zone.
- Supplies taken into an IEAT Free Zone are entitled to improved tax and duty privileges.
- Tax burden relief for products taken out of an IEAT Free Zone for domestic use or consumption. Contrary to the previous act, content or raw material components, if produced domestically, are entitled to tax and duty exemptions.
- Operators in an IEAT Free Zone remain entitled to privileges indicated in the previous act:
  - ✓ Tax privileges including import/export tax and duty exemptions; value-added tax (VAT) as well as excise tax on machinery, equipment, components, raw materials and supplies used for the production of goods and other merchandise
  - ✓ General privileges consisting of the right to own land, bring in technicians, experts, their family members and dependents, as well as the ability to remit foreign currency to their home countries

b) Operational preferences

- Permission to import into Thailand or bring into an IEAT Free Zone, merchandise and raw materials for production, trade or service offering, without any restriction that importation of such material is limited to business operators.
- Permission, for export goods producers, to bring supplies or raw materials into the IEAT Free Zone for manufacturing, mixing, assembling, packing or any other operations, without requiring any import permits or particular seals or symbols and with exemptions from standard and quality control requirements contained in any other laws - except those found in the customs law.

*3) Increased Competitiveness of Industrial Estate Developers*

The amended act was rewritten to enhance competitiveness of the industrial estate developer through the following actions:

- The establishment of an IEAT Free Zone is now expedited through the issuance of IEAT Announcements – instead of Royal Decrees.
- The land allocation process is now facilitated by allowing the IEAT Governor to grant approval according to IEAT specified criteria, methods and conditions.

*4) Thailand's Competitive Potential on the Global Arena*

The amended act offers advantages to Thai operators on the global trade stage, through the following:

- Thailand is to earn acceptance and recognition from member nations who also comply with WTO obligations resulting in a positive impact on trade and investment.
- Operators will not encounter any retaliation on issues concerning government-subsidized export products by the WTO member nations, to which operators export their products.
- Trade expansion can take place in accordance with free trade guidelines, propelling Thailand's economy to greater heights.
- Operator and entrepreneur confidence is improved.
- Special privileges such as tax breaks are granted by the 150 WTO member nations.
- Operators are able to conduct business more effectively as they can select appropriate trade markets – whether to sell products domestically or internationally – based on competitive conditions and thereby enhancing their capabilities for global market expansion.

Source:http://www.ieat.go.th/IEAT/index

## 4.3 Selling Prices of Industrial Estate Lands

The following table shows the selling prices of industrial estate lands based on the survey report prepared by JETRO.

**Table I.1.8: Price of Industrial Estate Lands**

| Area | Province | | Selling Price (US$/㎡) * | | BOI Zone |
|---|---|---|---|---|---|
| | | | GIZ | FZ | |
| Central /West | Pathum Thani | Nava Nakorn Industrial Promotion Zone | 104.2 | 83.3 | 1 |
| | Ayutthaya | Rojana Industrial Park(Ayutthaya) | 63.2 | NA | 2 |
| | Saraburi | SIL Industrial Land(Saraburi) | 46.5 | NA | 2 |
| | Sing Buri | Indra Industrial Park | 33.5 | NA | 3 |
| | Ratchaburi | Ratchaburi Industrial Estate | 34.4 | NA | 2 |
| East | Chonburi | Amata Nakorn Industrial Estate | 83.7 | 93.0 | 2 |
| | Chonburi | Hemaraj Chonburi Industrial Estate | 40.9 | 42.8 | 2 |
| | Chonburi | Pinthong Industrial Estate | 46.1 | NA | 2 |
| | Rayong | Amata City Industrial Estate | 42.8 | 48.4 | 3 |
| | Rayong | Eastern Seaboard Industrial Estate(Rayong) | 48.4 | NA | 3 |
| | Rayong | Hemaraj Eastern Industrial Estate(Map Ta Phut) | 93.0 | NA | 3 |
| | Rayong | Hemaraj Eastern Seaboard Industrial Estate | 48.4 | NA | NA |
| | Rayong | Rayong Industrial Land | 39.0 | NA | 3 |
| | Rayong | Rojana Industrial Park(Rayong) | 29.8 | NA | 3 |
| | Prachinburi | 304 Industrial Park | 59.5 | NA | 3 |
| Northeast | Nakhon Ratchasima | Nava Nakorn Industrial Estate(Nakornratachasrima) | 27.0 | NA | 3 |
| | Nakhon Ratchasima | Suranaree Industrial Zone | 25.1 | NA | 3 |
| South | Songkhla | Southern Industrial Estate | 26.0 | NA | 3 |

Source : Survey Report on Industrial Estaes in Thailand (JETRO)

* The price is a mean value.

# APPENDIX I.2 INDUSTRIALIZATION IN VIETNAM

## 1 Current Situation of Industry in Vietnam

### 1.1 Fundamentals

Vietnam's economy has grown rapidly at over 8% real GDP growth rate for three years in a row from 2005 to 2007.

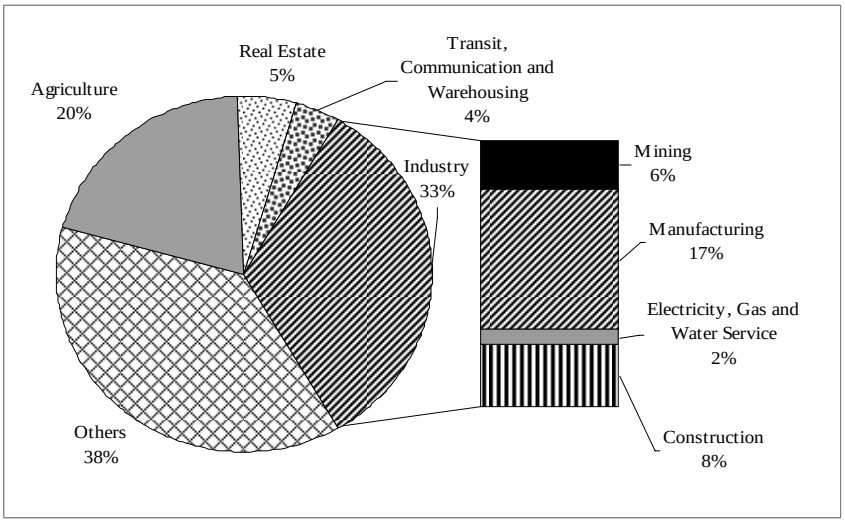
**Table I.2.1: Fundamentals of Vietnam (2007)**

| | |
|---|---|
| Growth rate of GDP at Contract Price | 8.48% |
| GDP at Current Price (million USD) | 71,077 |
| Per capita GDP at Current Price (USD) | 828.8 |

Source: JETRO-FILE(http://www3.jetro.go.jp/jetro-file/country.do)

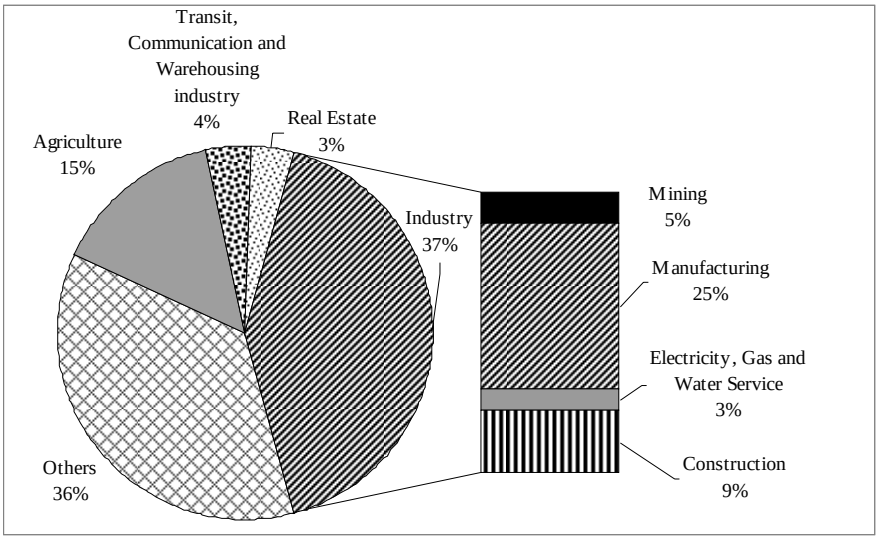
### 1.2 GDP by Sector

The aforementioned economic growth depended on the growth in the manufacturing sector, which is. the largest sector in Vietnam in 2007, accounting for 25% of the real GDP. Since 2001, the real GDP of the manufacturing sector has been larger than that of the agriculture sector. Among the manufacturing sector, light industry, with mostly labor-intensive characteristics, was the main industry in Vietnam.




Note: Base year of real GDP is 1994
Source: JETRO, based on data from the General Statistics Office of Vietnam

**Figure I.2.1: GDP by Industrial Sector (Vietnam, 1998)**



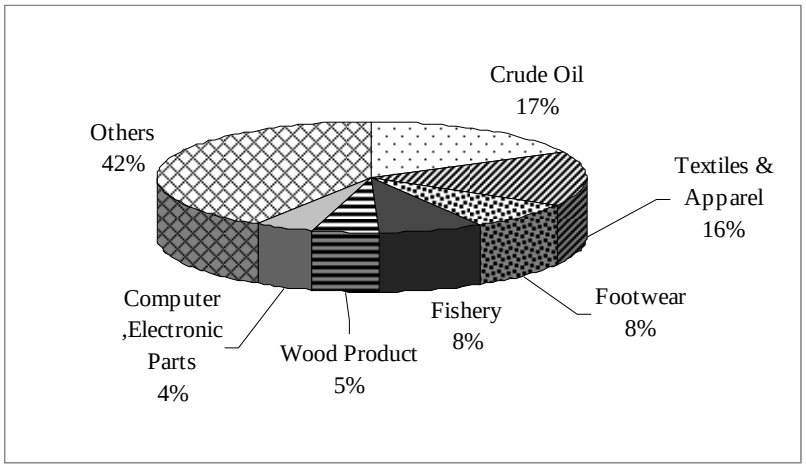

Note: Base year of real GDP is 1994
Source: JETRO, based on data from the General Statistics Office of Vietnam

**Figure I.2.2: GDP by Industrial Sector (Vietnam, 2007)**

While the industrial structure centers on light industry, the Vietnamese government also promotes the heavy and chemical industries. To support the demand on heavy and chemical industry products, Vietnam depends heavily on imported supply from foreign countries such as Singapore, Thailand and Taiwan. Therefore, establishment of a self-support system is an issue in the future.

## 1.3 Trade

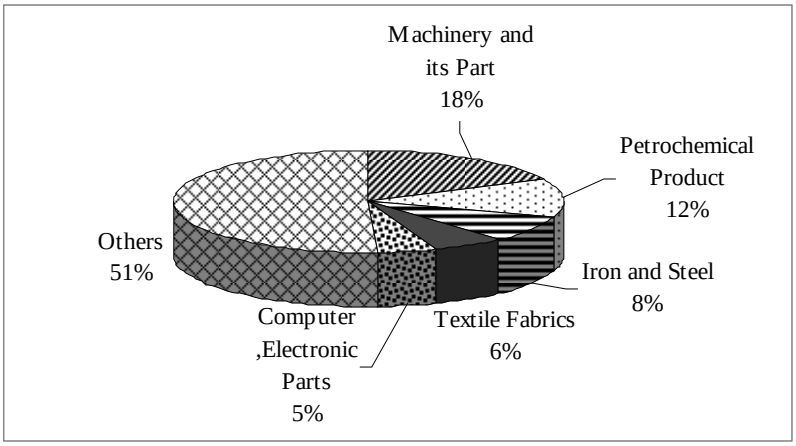
In terms of export amount, the light industry products such as textile, apparel and footwear ranked higher as the next chart shows. As export counterparts, only advanced countries with high labor costs such as the USA, Japan and Australia, ranked higher.




Source: JETRO

**Figure I.2.3: Export Value by Item (Vietnam, 2007)**

A large amount of textile fabrics was imported to be used by the apparel industry. Other major import items were mainly products of heavy and chemical industries such as machinery, petrochemical products, and iron and steel products, as shown in Figure I.2.4.




Source: JETRO

**Figure I.2.4: Import Value by Item (Vietnam, 2007)**

# 2 Industrial Policy Changes in Vietnam

Vietnam started the revolution for introducing a market-oriented economy under the socialist administration, through the policy called Doi Moi employed in 1986. The next figure shows the economic and industrial movements in Vietnam after the revolution. These movements are divided into three phases and are discussed in the following sections:

- Introduction period of the market-oriented economy (1986-1997);
- Low growth period due to Asian currency crisis (1997-2000); and
- High growth period led by FDI and the private sector (2000-2007).

## 2.1 Introduction Period of the Market-Oriented Economy (1986-1997)

Shortly after the Doi Moi policy was adopted, the Vietnamese economy was in a critical state due to some factors such as reduction of assistance from Eastern countries and high inflation rate. In contrast, the first members of ASEAN were enjoying a high growth period after the Plaza Accord in 1985. Under the circumstances, the Constitution and Civil Laws were revised in 1992 and 1995, respectively. Based on these, various industrial policies were implemented to set up the framework of a market-oriented economy. In parallel, the open policy was implemented as well. Foreign direct investment (FDI) was actively introduced by the foreign investment promotion law formulated in 1987. However, Vietnam government was not active enough on the privatization of state-owned enterprises. Only 14 state-owned enterprises had been privatized up to 1997[1].

These industrial policies yielded results after 1992. During the period from 1992 to 1997, Vietnam had an average of 8.9%[2] per annum GDP growth rate and a high growth rate of FDI as shown in Table I.2.2.

[1] Tran Van Tho, Vietnam Economy: Fruits and Problems of Doi Moi (2002)
[2] Website of the Ministry of Foreign Affairs, Japan: http://www.mofa.go.jp/mofaj/gaiko/oda/seisaku/enjyo/viet._h.html

Source: JICA Survey Team

**Figure I.2.5: Changes in Industrial Policy in Vietnam**

**Table I.2.2: Change in FDI in Vietnam**

Unit: Million USD

| Period | 1988-1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| Value of FDI | 319 | 1,939 | 2,349 | 1,455 | 2,745 |

Source: JICA Research Institutes for Development Finance Report No.7 (2001)

In this period, Vietnam actively participated in the regional economy integration to enter ASEAN (1995), AFTA (1996), and APEC (1998).

## 2.2 Low Growth Period due to the Asian Currency Crisis (1997-2000)

The Asian currency crisis that started from Thailand in 1997 affected Vietnam as well. Economic growth in Vietnam slowed down particularly by the downturn in FDI from ASEAN countries and the sharp reduction in exports. The foreign investment promotion law was revised again in 1996, but was restricted. It is believed that this revision was one of the causes of the FDI reduction.

Real GDP growth rate fell to a negative figure in 1997, and was 5.76% in 1998 and 4.77% in 1999.

## 2.3 High Growth Period Led by FDI and Private Sector (2000-2007)

In 2000, Vietnam economy recovered with nearly 7% of real GDP growth rate, as shown in Figure I.2.6 below.

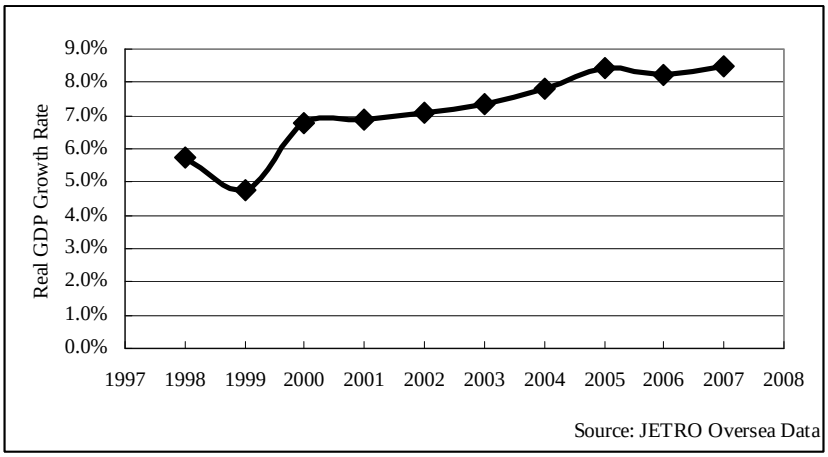



**Figure I.2.6: Real GDP Growth Rate in Vietnam (1998-2007)**

In the period from 1998-2007, a lot of industrial estates have been developed in Vietnam which promoted investment. For example, the Thang Long Industrial Park was established in 1997 and started sales in 2000. A lot of investments were made on manufacturing transportation equipment, and electrical and electronic equipment.

This high growth period was led by FDI. In terms of domestic enterprises, a large number of private enterprises were newly established by the enterprise law formulated in 1999, to greatly simplify the formality of incorporation. Domestic enterprises were established with a focus on the light industry such as apparels, footwear, food and beverage manufacturing, relying on consignment manufacturing. In addition, large-scale private and state-owned enterprises were established[3].

[3] Mai FUJITA, Change in Vietnam Industry during the transition period (2006)

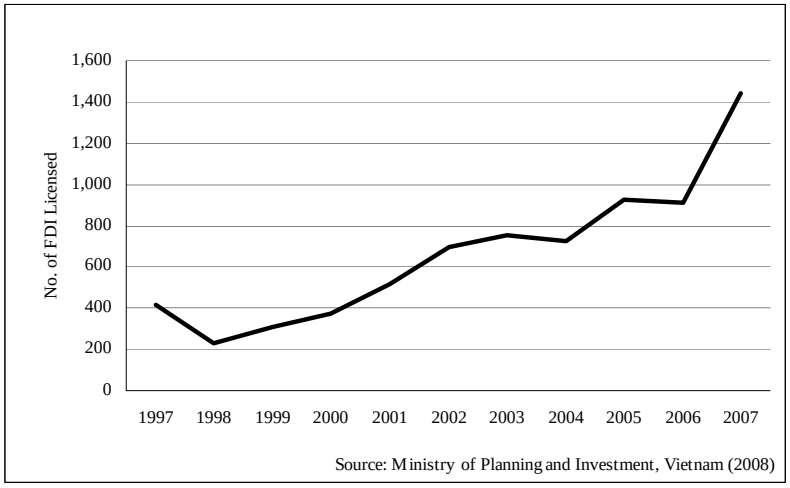



**Figure I.2.7: No. of FDI Licensed (1997-2007)**

In order to establish a foundation for the formal entry into World Trade Organization (WTO), Vietnam government initiated a large scale development of its investment climate. In particular, the government developed the legal system on foreign investments such as the foreign investment law, enterprise law, and civil law in order to eliminate discrimination between domestic and foreign enterprises[4].

Due to the foreign investment policy change in China that aimed to break away from labor-intensive industries, the investors of this industry type increasingly shifted to Vietnam.

The world currency crisis is ongoing in Vietnam, triggered by the sub-prime loan problem in the United States that became apparent in August 2007.

# 3 Public Institutions for Industrial Development in Vietnam

## 3.1 Foreign Investment License

All the businesses of FDI need to be licensed. Investment projects are divided into Group-A and B. Group-A projects need to be approved by the Prime Minister, unlike Group-B projects.

Application of Group-A projects is submitted to the Foreign Investment Agency (FIA) of the Ministry of Planning and Investment (MPI). As for Group-B projects, application is required to be submitted to different organizations depending on the project location. When the project location is outside the industrial estates, export processing zones, or high-tech parks, application should be submitted to the provincial people's committees. Meanwhile, when the project location is inside the industrial estates, export processing zones, or high-tech parks, application should be submitted to the managing agencies of the specific locations, for example, the Management Board of Industrial Park and Management Board of High-tech Park.

> Group-A includes specific projects, for example: development of infrastructure, industrial estates, export processing zones, high-tech parks, etc.; projects with an investment of over USD 40 million in the fields of electricity, mining, metallurgy, cement, machine, chemical, etc. Group-B includes all investment projects other than Group-A.

[4] Mitsubishi UFJ Research & Consulting, http://www.murc.jp/report/research/2006/0654.pdf

### 3.2 Preferential Treatment on Corporate Income Tax

The following table shows the preferential treatment on corporate income tax.

**Table I.2.3: Corporate Income Tax**

Tax Rate: 25%

| Preferential Tax Rates | Condition | Preferential Period | Exemption | 50% Reduction |
|---|---|---|---|---|
| 20% | Promotion zone: areas with difficult socio economic conditions<br>Industrial estate is not a sufficient condition anymore. | 10 years | 2 years | 4 years (10%) |
| 10% | Special promotion zone: economic zones and in high-tech zones; areas with specially difficult socio-economic conditions | 15 years | 4 years | 9 years (5%) |
| 10% | Special promotion sectors: sectors of high technology, scientific research and technological development, investment in development of especially important infrastructure facilities of the State, and production of software products. | 15 years<br>To be extended up to 30 years by Prime Minister's approval | 4 years | 9 years (5%) |
| 10% | Special promotion sectors: sectors of education and training, occupational training, health care, culture, sport and the environment. | Whole period | 4 years | 9 years (5%) |

Source: JICA Survey Team

## 4 Industrial Estates

As for the development and management of industrial estates and export processing zones, Vietnam has no national organization like IEAT in Thailand. There are currently 133 industrial estates, three export processing zones, and three high-tech parks in Vietnam. Among them, those developed by foreign enterprises have relatively better infrastructure, while some of those developed by domestic enterprises have insufficient infrastructure.[5]

The following tables show the industrial zones, export processing zones, and high-tech parks.

[5] Kyoushirou ICHIKAWA, Vietnam Investment Seminar (ASEAN-Japan Center, 2009)

**Table I.2.4: Industrial Zone (Municipality & Northern Region)**

List of Industrial Zone in Vietnam (Municipality)

| Province | | Name | Developed Area(ha) |
|---|---|---|---|
| Ha Noi | 1 | Noi Bai IZ | 100 |
| Ha Noi | 2 | Sai Dong B IZ | 73 |
| Ha Noi | 3 | Thang Long Industrial Park | 274 |
| Ha Noi | 4 | Dai Tu - Hanoi IZ | 40 |
| Ha Noi | 5 | Daewoo-Hanel (SDA) IZ | 197 |
| Hochiminh city | 6 | Tan Thuan EPZ | 300 |
| Hochiminh city | 7 | Linh Trung I EPZ | 60 |
| Hochiminh city | 8 | Binh Chieu IZ | 27 |
| Hochiminh city | 9 | Hiep Phuoc IZ | 332 |
| Hochiminh city | 10 | Tan Tao IZ | 444 |
| Hochiminh city | 11 | Le Minh Xuan IZ | 100 |
| Hochiminh city | 12 | Tan Binh IZ | 186 |
| Hochiminh city | 13 | Tan Thoi Hiep IZ | 215 |
| Hochiminh city | 14 | North Western Cu Chi IZ | 220 |
| Hochiminh city | 15 | Vinh Loc IZ | 202 |
| Hochiminh city | 16 | Linh Trung II EPZ | 62 |
| Hochiminh city | 17 | Cat Lai II IZ | 117 |
| Hochiminh city | 18 | Cat Lai IV IZ | 112 |
| Hochiminh city | 19 | Phong Phu IZ | 148 |
| Hochiminh city | 20 | Tan Phu Trung IZ | 543 |
| Hochiminh city | 21 | Sigon Hi-tech Park | - |
| Hochiminh city | 22 | Phu Huu Industrial Zone | 162 |
| Hai Phong | 23 | Nomura-Haiphong IZ | 153 |
| Hai Phong | 24 | Dinh Vu IZ (1st phase) | 164 |
| Hai Phong | 25 | Hai Phong 96 EPZ | 150 |
| Hai Phong | 26 | Trang Due Industrial Zone | 600 |
| Da Nang | 27 | Da Nang IZ | 50 |
| Da Nang | 28 | Lien Chieu IZ | 307 |
| Da Nang | 29 | Hoa Khanh IZ | 328 |
| Da Nang | 30 | Hoa Cam IZ | 137 |
| Can Tho | 31 | Tra Noc I IZ | 135 |
| Can Tho | 32 | Tra Noc II IZ | 165 |
| Can Tho | 33 | Hung Phu I | 350 |

Souce : ASEAN-Japan Center
HP(http://www.asean.or.jp/ja)

List of Industrial Zone in Vietnam (North)

| Province | | Name | Developed Area(ha) |
|---|---|---|---|
| Thai Nguyen | 34 | Song Cong I IZ | 69 |
| Phu Tho | 35 | Thuy Van IZ | 305 |
| Phu Tho | 36 | Trung Ha IZ | 127 |
| Vinh Phuc | 37 | Kim Hoa IZ | 50 |
| Vinh Phuc | 38 | Quang Minh IZ | 344 |
| Bac Giang | 39 | Dinh Tram IZ | 98 |
| Bac Ninh | 40 | Que Vo IZ | 312 |
| Bac Ninh | 41 | Tien Son IZ | 349 |
| Bac Ninh | 42 | Dai Dong - Hoan Son IZ | 230 |
| Quang Ninh | 43 | Cai Lan IZ | 78 |
| Ha Tay | 44 | North Phu Cat IZ | 327 |
| Ha Tay | 45 | Hoa Lac Hi-tech Zone | 1650 |
| Hai Duong | 46 | Nam Sach IZ | 64 |
| Hai Duong | 47 | Dai An IZ | 171 |
| Hai Duong | 48 | Phuc Dien IZ | 87 |
| Hai Duong | 49 | Tan Truong IZ | 200 |
| Hung Yen | 50 | Pho Noi B IZ | 95 |
| Hung Yen | 51 | Pho Noi A IZ | 390 |
| Thai Binh | 52 | Phuc Khanh IZ | 120 |
| Thai Binh | 53 | Nguyen Duc Canh IZ | 68 |
| Ha Nam | 54 | Dong Van IZ | 110 |
| Nam Dinh | 55 | Hoa Xa IZ | 327 |
| Ninh Binh | 56 | Ninh Phuc IZ | 166 |

Souce : ASEAN-Japan Center
HP(http://www.asean.or.jp/ja)

**Table I.2.5: Industrial Zone (Central Region)**

List of Industrial Zone in Vietnam(Central)

| Province | | Name | Developed Area(ha) |
|---|---|---|---|
| Thanh Hoa | 57 | Le Mon IZ | 88 |
| Nghe An | 58 | Bac Vinh IZ | 60 |
| Nghe An | 59 | Nam Cam IZ | 79 |
| Ha Tinh | 60 | Vung Ang I IZ | 116 |
| Quang Binh | 61 | Hon La IZ 1st phase | 98 |
| Quang Binh | 62 | Notth Western Dong Hoi IZ | 66 |
| Quang Tri | 63 | Nam Dong Ha IZ | 99 |
| Thua Thien Hue | 64 | Phu Bai IZ | 185 |
| Quang Nam | 65 | Dien Nam - Dien Ngoc IZ | 390 |
| Quang Ngai | 66 | Tinh Phong IZ | 142 |
| Quang Ngai | 67 | Quang Phu IZ | 100 |
| Binh Dinh | 68 | Phu Tai IZ | 328 |
| Binh Dinh | 69 | Long My IZ 1st phase | 100 |
| Binh Dinh | 70 | Nhon Hoi Industrial Zone | 630 |
| Phu Yen | 71 | Hoa Hiep IZ | 102 |
| Khanh Hoa | 72 | Suoi Dau IZ | 78 |
| Khanh Hoa | 73 | Ninh Thuy IZ | 206 |
| Gia Lai | 74 | Tra Da IZ | 109 |
| Kon Tum | 75 | Sao Mai IZ | 79 |
| Dac Nong | 76 | Tam Thang IZ | 181 |

Souce : ASEAN-Japan Center HP(http://www.asean.or.jp/ja)

**Table I.2.6: Industrial Zone (Southern Region)**

List of Industrial Zone in Vietnam(South-1)

| Province | | Name | Developed Area(ha) |
|---|---|---|---|
| Lam Dong | 77 | Loc Son IZ | 93 |
| Binh Duong | 78 | Song Than I IZ | 180 |
| Binh Duong | 79 | Dong An IZ | 132 |
| Binh Duong | 80 | Song Than II IZ | 319 |
| Binh Duong | 81 | Viet Huong IZ | 46 |
| Binh Duong | 82 | Binh Duong IZ | 17 |
| Binh Duong | 83 | Tan Dong Hiep A IZ | 47 |
| Binh Duong | 84 | My Phuoc IZ | 377 |
| Binh Duong | 85 | Tan Dong Hiep B IZ | 164 |
| Binh Duong | 86 | Vietnam - Singapore IZ | 500 |
| Binh Duong | 87 | Binh An Textile IZ | 26 |
| Binh Duong | 88 | Mai Trung IZ | 51 |
| Binh Duong | 89 | Viet Huong II IZ | 110 |
| Binh Duong | 90 | My Phuoc II IZ | 472 |
| Binh Duong | 91 | Nam Tan Uyen IZ | 331 |
| Binh Duong | 92 | Rach Bap IZ | 279 |
| Binh Duong | 93 | Vietnam - Singapore IZ II | 345 |
| Binh Phuoc | 94 | Chon Thanh IZ | 115 |
| Binh Phuoc | 95 | Saigon BinhPhuoc Industrial Zone | 436 |
| Binh Thuan | 96 | Phan Thiet IZ | 124 |
| Tay Ninh | 97 | Trang Bang IZ | 197 |
| Tay Ninh | 98 | Linh Trung II IZ & EPZ | 204 |

Souce : ASEAN-Japan Center HP(http://www.asean.or.jp/ja)

List of Industrial Zone in Vietnam(South-2)

| Province | | Name | Developed Area(ha) |
|---|---|---|---|
| Dong Nai | 99 | AMATA IZ | 361 |
| Dong Nai | 100 | Bien Hoa II IZ | 365 |
| Dong Nai | 101 | Go Dau IZ | 184 |
| Dong Nai | 102 | Nhon Trach I IZ | 430 |
| Dong Nai | 103 | LOTECO IZ | 100 |
| Dong Nai | 104 | Nhon Trach II IZ | 350 |
| Dong Nai | 105 | Nhon Trach III IZ | 368 |
| Dong Nai | 106 | Ho Nai IZ | 230 |
| Dong Nai | 107 | Song May IZ | 227 |
| Dong Nai | 108 | Bien Hoa I IZ | 335 |
| Dong Nai | 109 | Tam Phuoc IZ | 323 |
| Dong Nai | 110 | An Phuoc IZ | 130 |
| Dong Nai | 111 | Nhon Trach Textile IZ | 184 |
| Dong Nai | 112 | Long Thanh IZ | 510 |
| Dong Nai | 113 | Nhon Trach V IZ | 302 |
| Dong Nai | 114 | Dinh Quan IZ | 54 |
| Dong Nai | 115 | Nhon Trach 6 IZ | 320 |
| Long An | 116 | Duc Hoa I IZ | 70 |
| Long An | 117 | Thuan Dao - Ben Luc IZ | 114 |
| Long An | 118 | Xuyen A IZ | 306 |
| Long An | 119 | Tan Kim IZ | 117 |
| Long An | 120 | Tan Duc IZ | 273 |
| Long An | 121 | Vinh Loc 2 IZ | 226 |
| Dong Thap | 122 | Sa Dec IZ | 70 |
| Tien Giang | 123 | My Tho IZ | 79 |
| Tien Giang | 124 | Tan Huong IZ | 138 |
| Ben Tre | 125 | Giao Long IZ | 96 |
| Soc Trang | 126 | An Nghiep IZ | 257 |
| Vinh Long | 127 | Hoa Phu IZ | 121 |
| Tra Vinh | 128 | Long Duc IZ | 100 |
| Ca Mau | 129 | Khanh An IZ | 180 |
| Ba Ria - Vung Tau | 130 | Dong Xuyen IZ | 161 |
| Ba Ria - Vung Tau | 131 | My Xuan B1 IZ | 226 |
| Ba Ria - Vung Tau | 132 | Phu My I IZ | 954 |
| Ba Ria - Vung Tau | 133 | My Xuan A2 IZ | 313 |
| Ba Ria - Vung Tau | 134 | Cai Mep IZ | 670 |
| Ba Ria - Vung Tau | 135 | My Xuan A IZ | 270 |
| Ba Ria - Vung Tau | 136 | Phu My II IZ | 572 |

Souce : ASEAN-Japan Center HP(http://www.asean.or.jp/j

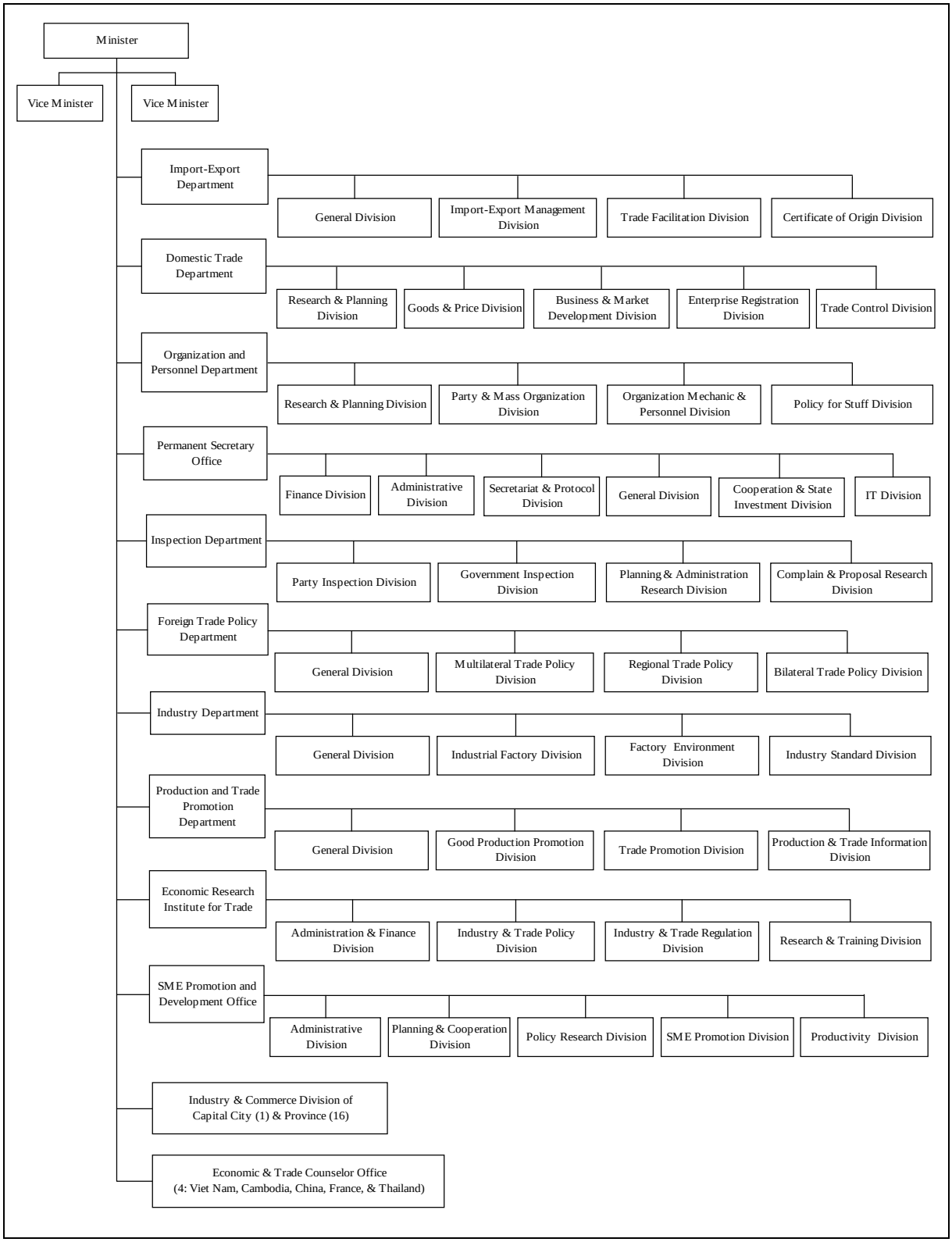
# APPENDIX I.3 RELEVANT INSTITUTIONS

## 1 Ministry of Industry and Commerce (MoIC)

### 1.1 Duties and Responsibilities, and Organizational Structure

The decree on organization and functions of the MoIC (No. 188/PMO, 17 August 2006) stipulates major duties of said ministry as follows:

- To study and draft policies, strategic plan, master plan, law, decree, standard, and other regulations concerned with industry and commerce to submit to the government,
- To study and translate policy, strategic plan, master plan, and resolution of government into detailed plan, programs and projects of the industry and commerce sector as well as to implement them,
- To manage, improve and promote industrial production and commerce by using measures in accordance with the laws and regulations,
- To manage the environment of industrial factories,
- To communicate with foreign countries to cooperate in industry and commerce sector, to facilitate integration of the state economy in regional and global economy, and to work as a member of the Asian economic ministers and World Trade Organization,
- To study and promote domestic and foreign investment for industry and commerce sector development, in cooperation with experts,
- To manage and facilitate import and export, and to promote trade and goods export,
- To develop the market and manage goods and prices,
- To manage, develop and promote business units, to train the labor force and improve labor skills, and to develop small and medium enterprises,
- To support, promote and protect productions and domestic consumers,
- To direct and supervise the organizations, local authorities and community-based units in implementing the policies, laws, measures and tasks in the industry and commerce sector,
- To direct and manage activities of the Economic & Trade Counselor Office in foreign countries, Provincial Industry and Commerce Division, and District Industry and Commerce Office, in cooperation with local authorities,
- To supervise and summarize the situation of work performance in the industry and commerce sector, and to report to the government, and
- To supervise the National Chamber of Commerce and state enterprises under MoIC.




Source: MoIC

**Figure I.3.1: Organizational Structure of MoIC**

## 1.2 Human Resources

According to the Organization and Personnel Department of MoIC, there are 1,312 personnel as of April 2009 under MoIC. This consist of 275 in its central office, 535 in the Division of Industry and Commerce (DoIC) in the provinces and capital, and 502 in its district offices. The ministry plans to recruit 68 new personnel in the year 2009/10, which will then increase the total number to 1,380.

Table I.3.1, Table I.3.2, and Figure I.3.2 classify MoIC personnel according to educational background, age group and educational level.

The top four courses, which MoIC personnel have majored in, are relevant to the ministry's scope of work. These include business administration (13.8%), trade (13.5%), accounting (9.5%), and finance and banking (6.8%). Middle rank diploma is the dominant educational level for most of the subject majors and age groups. It is interesting to note that about one third of MoIC personnel are aged 30 or under. Their insufficient working experience and skills might be a cause for concern in terms of work efficiency. On the other hand, their relatively high educational attainment, as indicated by the fact that about 40% are bachelor's degree holders, means that they will be beneficial to MoIC in the future, if they are trained appropriately.

**Table I.3.1: Educational Background of MoIC Personnel (1/2)**

| Name of major | Number of Personnel | | | Ph.D | | Master degree | | Bachelor degree | | Diploma | | | | | | High school | | Junior high school | | Primary school | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | High rank | | | Middle rank | | | First rank | | | | | |
| | Total | (%) | Female | Total | F | Total | F | Total | F | Total | F | | Total | F | | Total | F | Total | F | Total | F |
| Business administration | 192 | (13.82%) | 77 | 1 | 1 | 12 | 0 | 42 | 18 | 45 | 13 | | 90 | 45 | | 2 | 0 | | | | |
| Trade | 188 | (13.53%) | 44 | | | 15 | 2 | 25 | 4 | 14 | 4 | | 98 | 21 | | 35 | 13 | 1 | 0 | | |
| Accounting | 132 | (9.50%) | 37 | | | 2 | 0 | 1 | 0 | 5 | 1 | | 91 | 20 | | 33 | 16 | | | | |
| Finance and banking | 95 | (6.84%) | 33 | | | | | 9 | 2 | 15 | 3 | | 55 | 27 | | 16 | 1 | | | | |
| Pedagogy | 71 | (5.11%) | 8 | | | | | 4 | 0 | 25 | 5 | | 32 | 2 | | 10 | 1 | | | | |
| English Language | 66 | (4.75%) | 18 | | | | | 45 | 9 | 20 | 9 | | 1 | | | | | | | | |
| Economics | 57 | (4.10%) | 15 | | | 12 | 4 | 41 | 10 | 1 | | | 3 | 1 | | | | | | | |
| Law | 54 | (3.89%) | 8 | 1 | 0 | 5 | 1 | 38 | 5 | 8 | 2 | | 2 | | | | | | | | |
| Politics-administration | 47 | (3.38%) | 6 | | | 2 | 0 | 11 | | 9 | 3 | | 15 | 1 | | 10 | 1 | | | | |
| Economy | 42 | (3.02%) | 8 | 1 | 0 | 9 | 2 | 15 | 2 | 2 | 1 | | 15 | 3 | | | | | | | |
| Electricity | 42 | (3.02%) | 1 | | | 1 | 0 | 5 | 0 | 7 | 1 | | 25 | 0 | | 4 | 0 | | | | |
| Foreign Trade | 37 | (2.66%) | 13 | | | 10 | 8 | 20 | 5 | 5 | 0 | | 2 | | | | | | | | |
| Engine | 36 | (2.59%) | 1 | | | 6 | 0 | 10 | 0 | 5 | 0 | | 9 | 1 | | 5 | 0 | 1 | 0 | | |
| Theory | 28 | (2.02%) | 3 | | | | | | | 8 | 1 | | 20 | 2 | | | | | | | |
| Agriculture-forestry | 24 | (1.73%) | 3 | | | | | 6 | 1 | 4 | 1 | | 10 | 1 | | 4 | | | | | |
| Planning-Investment | 19 | (1.37%) | 0 | | | 1 | | 1 | 0 | 3 | 0 | | 11 | 0 | | 3 | 0 | | | | |
| Economic administration | 18 | (1.30%) | 1 | 1 | 0 | 2 | 1 | 6 | 0 | 1 | | | 6 | 0 | | 2 | 0 | | | | |
| Typewriting | 18 | (1.30%) | 8 | | | | | | | | | | 3 | 1 | | 15 | 7 | | | | |
| Economic planning | 16 | (1.15%) | 2 | | | 7 | 2 | 2 | 0 | 2 | | | 5 | | | | | | | | |
| Mining | 15 | (1.08%) | 1 | | | | | | | | | | 15 | 1 | | | | | | | |
| Garment | 13 | (0.94%) | 2 | | | 2 | 1 | | | | | | 10 | 0 | | 1 | 1 | | | | |
| Technical | 13 | (0.94%) | 2 | | | | | | | 2 | 0 | | 8 | 1 | | 3 | 1 | | | | |
| Chemical | 12 | (0.86%) | 1 | | | 4 | 0 | 8 | 1 | | | | | | | | | | | | |
| Industry | 11 | (0.79%) | 1 | 1 | 0 | 5 | 1 | 4 | 0 | | | | 1 | 0 | | | | | | | |
| Literature | 9 | (0.65%) | 2 | | | | | 8 | 1 | 1 | 1 | | | | | | | | | | |
| Construction | 8 | (0.58%) | 1 | | | 2 | 0 | 1 | 0 | 2 | 1 | | 2 | 0 | | 1 | 0 | | | | |
| Domestic Trade | 7 | (0.50%) | 3 | | | 2 | 0 | 2 | 2 | 2 | 1 | | 1 | | | | | | | | |
| Trade law | 7 | (0.50%) | 1 | | | 1 | 1 | 2 | 0 | 2 | 0 | | 2 | | | | | | | | |
| Secretary | 7 | (0.50%) | 2 | | | | | | | | | | 7 | 2 | | | | | | | |
| Mathematics-Physics | 7 | (0.50%) | 1 | | | | | 2 | 0 | 5 | 1 | | | | | | | | | | |
| Cooking | 6 | (0.43%) | 2 | | | 2 | 1 | 2 | 0 | | | | 2 | 1 | | | | | | | |
| French Language | 5 | (0.36%) | 1 | | | | | 3 | 1 | | | | 2 | | | | | | | | |
| Communication-transport | 5 | (0.36%) | 0 | | | | | 1 | 0 | | | | 4 | 0 | | | | | | | |
| Architecture | 5 | (0.36%) | 1 | | | | | 3 | 0 | 2 | 1 | | | | | | | | | | |
| Medical science | 5 | (0.36%) | 0 | | | | | | | | | | 2 | 0 | | 3 | 0 | | | | |
| Art | 5 | (0.36%) | 0 | | | | | | | | | | 5 | 0 | | | | | | | |
| Metal science | 4 | (0.29%) | 0 | | | | | | | | | | 4 | 0 | | | | | | | |
| Industrial Statistics | 3 | (0.22%) | 0 | | | 3 | 0 | | | | | | | | | | | | | | |
| Technical | 3 | (0.22%) | 0 | | | | | | | | | | 3 | 0 | | | | | | | |
| Sugar Technology | 3 | (0.22%) | 0 | | | 3 | 0 | | | | | | | | | | | | | | |
| Geography | 3 | (0.22%) | 1 | | | | | 3 | 1 | | | | | | | | | | | | |
| Car driving | 3 | (0.22%) | 0 | | | | | | | | | | | | | 3 | 0 | | | | |
| Irrigation design | 3 | (0.22%) | 0 | | | | | | | 1 | 0 | | 2 | 0 | | | | | | | |

Source: JICA Survey Team based on the internal document of Organization and Personnel Dept., MoIC

**Table I.3.1: Educational Background of MoIC Personnel (2/2)**

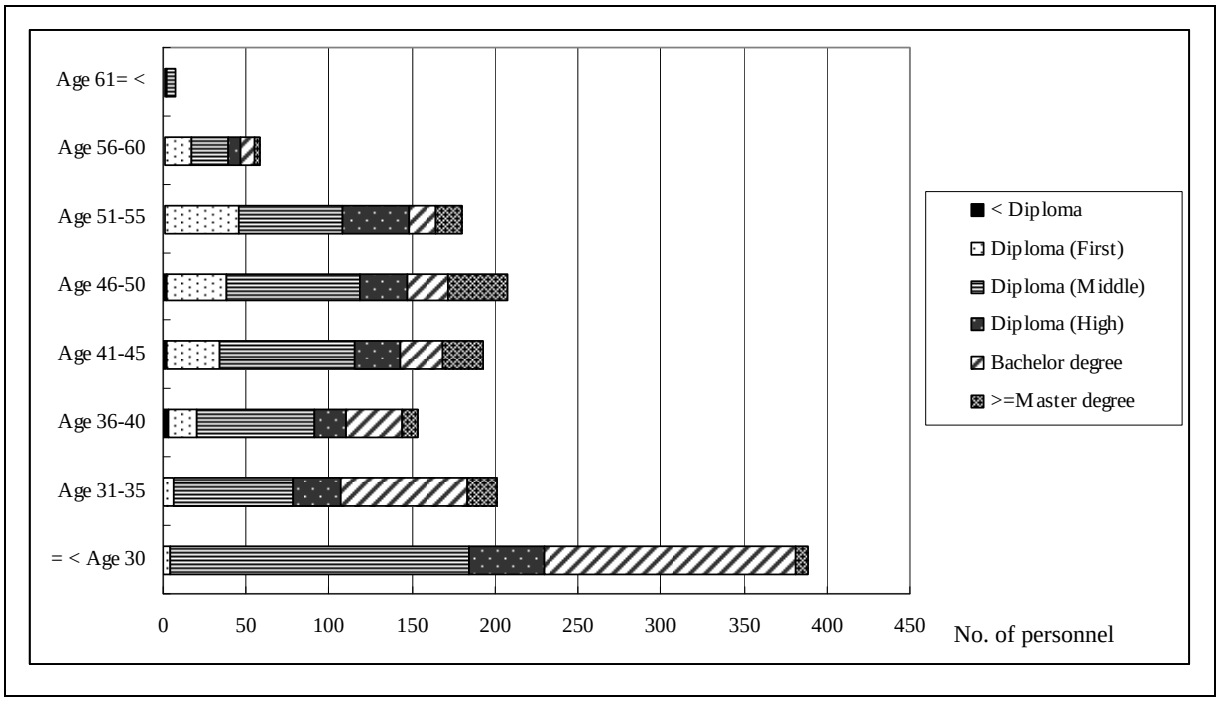
| Name of major | Number of Personnel | | | Ph.D | | Master degree | | Bachelor degree | | Diploma | | | | | | High school | | Junior high school | | Primary school | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | High rank | | Middle rank | | First rank | | | | | | | |
| | Total | (%) | Female | Total | F | Total | F | Total | F | Total | F | Total | F | Total | F | Total | F | Total | F | Total | F |
| International Economics | 2 | (0.14%) | 1 | | | | | 2 | 1 | | | | | | | | | | | | |
| Environmental administration | 2 | (0.14%) | 0 | | | | | 2 | 0 | | | | | | | | | | | | |
| IT | 2 | (0.14%) | 0 | | | | | 2 | 0 | | | 2 | 1 | | | | | | | | |
| Mapping | 2 | (0.14%) | 1 | | | | | | | | | | | | | | | | | | |
| Strategy | 2 | (0.14%) | 0 | | | | | 2 | 0 | | | | | | | | | | | | |
| Geology | 2 | (0.14%) | 0 | | | | | | | 1 | 0 | 1 | 0 | | | | | | | | |
| Cinema adviser | 2 | (0.14%) | 0 | | | 2 | 0 | | | | | | | | | | | | | | |
| Biology | 2 | (0.14%) | 0 | | | | | 2 | 0 | | | | | | | | | | | | |
| Land | 2 | (0.14%) | 1 | | | | | | | | | 1 | 1 | 1 | 0 | | | | | | |
| Waterworks | 2 | (0.14%) | 0 | | | | | 1 | 0 | | | | | 1 | 0 | | | | | | |
| Fishing | 2 | (0.14%) | 0 | | | | | | | | | | | 2 | 0 | | | | | | |
| Music | 2 | (0.14%) | 1 | | | | | | | | | | | 2 | 1 | | | | | | |
| Handicraft | 1 | (0.07%) | 0 | | | | | | | | | | | 1 | 0 | | | | | | |
| Communication | 1 | (0.07%) | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| Telegram | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| Post office | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| Science | 1 | (0.07%) | 0 | | | | | | | 1 | 0 | | | | | | | | | | |
| Russian language | 1 | (0.07%) | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| Water engineering | 1 | (0.07%) | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| Agriculture | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| Computer | 1 | (0.07%) | 0 | | | | | 1 | 0 | | | | | | | | | | | | |
| Bridge-road | 1 | (0.07%) | 1 | | | | | | | | | 1 | 1 | | | | | | | | |
| Soldier | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| Art factory | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| Livestock | 1 | (0.07%) | 0 | | | | | | | | | 1 | 0 | | | | | | | | |
| No major | 8 | (0.58%) | 2 | | | | | | | | | | | | | 4 | 1 | 3 | 0 | 1 | 1 |
| Grand total | 1389 | (100%) | 315 | 5 (0.4%) | 1 | 110 (7.9%) | 24 | 335 (24.1%) | 64 | 198 (14.3%) | 49 | 574 (41.3%) | 133 | 157 (11.3%) | 42 | 6 (0.4%) | 1 | 3 (0.2%) | 0 | 1 (0.1%) | 1 |

Source: JICA Survey Team based on the internal document of Organization and Personnel Dept., MoIC

**Table I.3.2: Educational Level of MoIC Personnel by Age Group**

| Age group | Number of Personnel | | Ph.D | | Master degree | | Bachelor degree | | Diploma | | | | | | | | High school | | Junior high school | | Primary school | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | High rank | | Middle rank | | First rank | | | | | | | | | |
| | Total (%) | Female | Total (%) | F | Total (%) | F | Total (%) | F | Total (%) | F | Total (%) | F | Total (%) | F | | | Total (%) | F | Total (%) | F | Total (%) | F |
| = < Age 30 | 389 (28%) | 127 | (0%) | | 8 (2%) | 1 | 151 (39%) | 43 | 46 (12%) | 19 | 180 (46%) | 62 | 4 (1%) | 2 | | | (0%) | | (0%) | | (0%) | |
| Age 31-35 | 201 (14%) | 35 | 1 (0%) | 0 | 17 (8%) | 2 | 76 (38%) | 7 | 29 (14%) | 8 | 72 (36%) | 13 | 6 (3%) | 5 | | | (0%) | | (0%) | | (0%) | |
| Age 36-40 | 154 (11%) | 46 | 1 (1%) | 0 | 9 (6%) | 3 | 34 (22%) | 3 | 19 (12%) | 8 | 71 (46%) | 23 | 17 (11%) | 8 | | | 1 (1%) | 0 | 1 (1%) | 0 | 1 (1%) | 1 |
| Age 41-45 | 193 (14%) | 47 | (0%) | | 25 (13%) | 5 | 25 (13%) | 4 | 28 (15%) | 6 | 81 (42%) | 19 | 32 (17%) | 13 | | | 1 (1%) | 0 | 1 (1%) | 0 | 0 (0%) | 0 |
| Age 46-50 | 207 (15%) | 41 | 2 (1%) | 1 | 33 (16%) | 10 | 25 (12%) | 5 | 28 (14%) | 5 | 81 (39%) | 11 | 36 (17%) | 9 | | | 2 (1%) | | 0 (0%) | | (0%) | |
| Age 51-55 | 180 (13%) | 17 | 1 (1%) | 0 | 15 (8%) | 3 | 16 (9%) | 2 | 40 (22%) | 3 | 62 (34%) | 5 | 45 (25%) | 3 | | | 1 (1%) | 1 | (0%) | | 0 (0%) | |
| Age 56-60 | 58 (4%) | 1 | (0%) | | 3 (5%) | 0 | 8 (14%) | 0 | 8 (14%) | 0 | 22 (38%) | 0 | 16 (28%) | 1 | | | 1 (2%) | | (0%) | | (0%) | |
| Age 61= < | 7 (1%) | 1 | (0%) | | (0%) | | (0%) | | (0%) | | 5 (71%) | | 1 (14%) | 1 | | | (0%) | | 1 (14%) | 0 | (0%) | |
| Total | 1389 (100%) | 315 | 5 | 1 | 110 | 24 | 335 | 64 | 198 | 49 | 574 | 133 | 157 | 42 | | | 6 | 1 | 3 | 0 | 1 | 1 |

Source: JICA Survey Team, based on the internal document of Organization and Personnel Dept., MoIC




Source: JICA Survey Team, based on the internal document of Organization and Personnel Dept., MoIC

**Figure I.3.2: Educational Level of MoIC Personnel by Age Group**

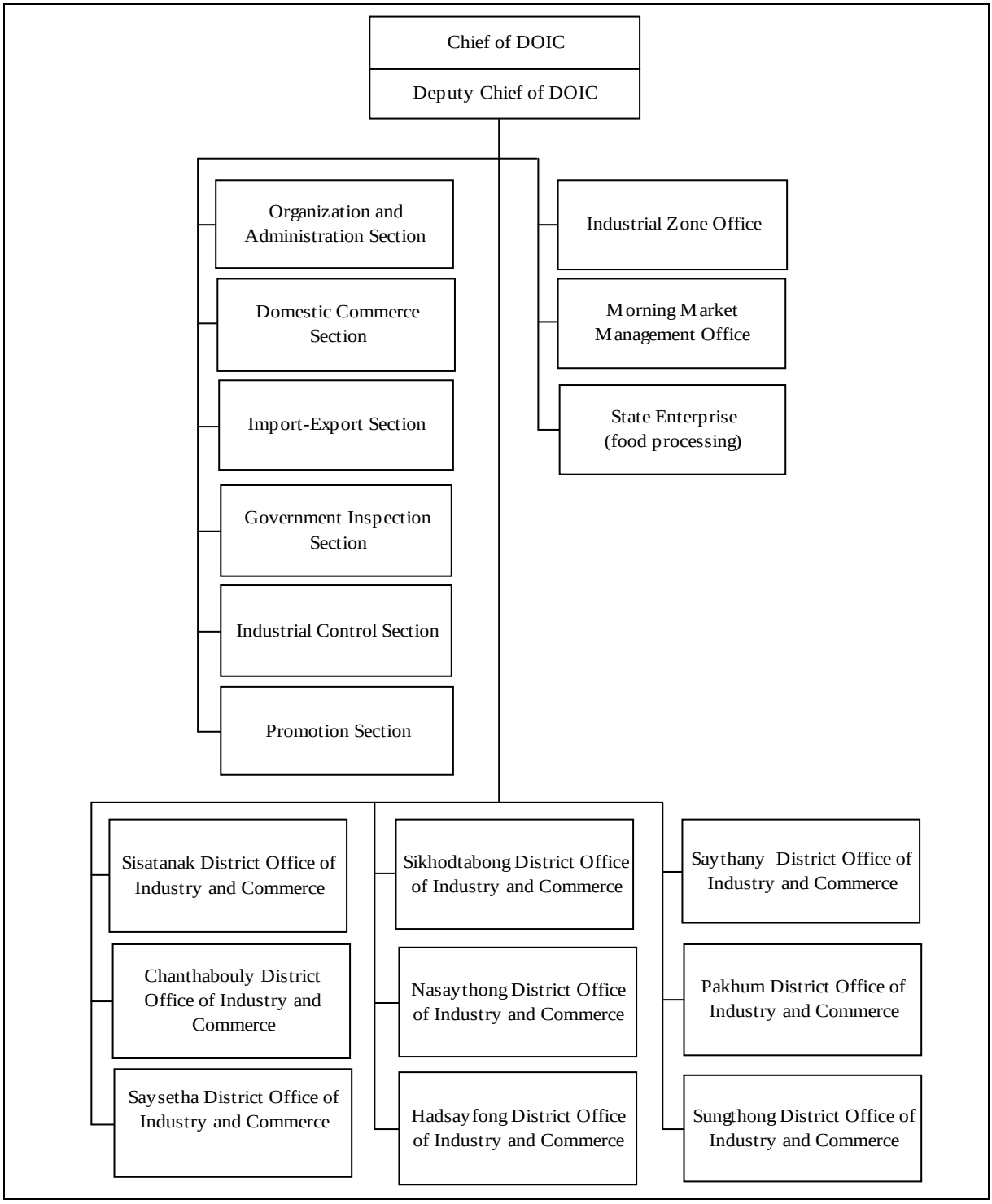
# 2 Division of Industry and Commerce (DoIC) of Vientiane Capital

## 2.1 Duties and Responsibilities, and Organizational Structure

The decree on the organization and functions of the DoIC in provinces and capital (No. 1491/DoIC, 23 October 2006) stipulates major duties of DoIC as follows:

- To study and translate resolutions, decisions, orders, instruction, notification and other principles of MoIC and local authorities into detailed plan, projects and activities as well as to implement them,
- To supervise, support, monitor and evaluate project and activity implementation for production and trade promotion,
- To manage industry and commerce promotion center and vocational promotion center,

- To promote exhibitions and fairs for industry and commerce,
- To control factory environment, safety, quality and standards of the products,
- To issue, extend and terminate licenses and certificates relevant to factory operation, import of raw material, machine and parts, machine registration, and export of products,
- To monitor and project a trend of domestic market, supply and demand, and prices of products,
- To monitor and inspect quality, quantity, prices and other standards of products to protect producers and consumers,
- To coordinate with relevant associations, groups, and parties aiming at improvement of industry and trade business,
- To develop and improve trading business, market, trade network and goods supply system for rural and remote areas,
- To approve import and export products in accordance with laws,
- To control and support import-export business and to improve its quality and efficiency,
- To record and analyze statistical data of industry, handicraft and trade and report to higher levels of the government authorities, and
- To supervise, monitor and support activities of organizations and business units under the jurisdiction of DoIC




Source: Vientiane Capital DoIC

**Figure I.3.3: Organizational Structure of DoIC of Vientiane Capital**

## 2.2 Human Resources

There are a total of 152 personnel in Vientiane Capital DoIC, consisting of 78 at the capital level and 74 at the district level, as shown in Table I.3.3.

Similar to MoIC, the main courses that the DoIC personnel of Vientiane Capital have majored in, are relevant to its scope of work such as accounting (17%), finance (17%), business administration (15%), and commerce (9%), as shown in Table I.3.4.

**Table I.3.3: Staffing of DoIC of Vientiane Capital**

| Section/Office | No. of personnel | District Office | No. of personnel |
|---|---|---|---|
| Chief of DoIC | 1 | Sisatanak District Office of Industry and Commerce | 12 |
| Deputy Chief of DoIC | 2 | Chanthabouly District Office of Industry and Commerce | 10 |
| Organization & Administration Section | 16 | Saysetha District Office of Industry and Commerce | 10 |
| Domestic Commerce Section | 21 | Sikhodtabong District Office of Industry and Commerce | 10 |
| Import-Export Section | 5 | Nasaythong District Office of Industry and Commerce | 6 |
| Government Inspection Section | 3 | Hadsayfong District Office of Industry and Commerce | 8 |
| Industrial Control Section | 11 | Saythany District Office of Industry and Commerce | 6 |
| Promotion Section | 11 | Pakhum District Office of Industry and Commerce | 7 |
| Industrial Zone Office | 6 | Sungthong District Office of Industry and Commerce | 5 |
| Morning Market Management Office | 1 | **Sub-total at District level** | **74** |
| State Enterprise (Food Processing) | 1 | | |
| **Sub-total at Capital level** | **78** | | |
| **Grand Total** | | | **152** |

Source: JICA Survey Team, based on the internal document of Vientiane Capital DoIC

**Table I.3.4: Educational Background of DoIC Personnel of Vientiane Capital**

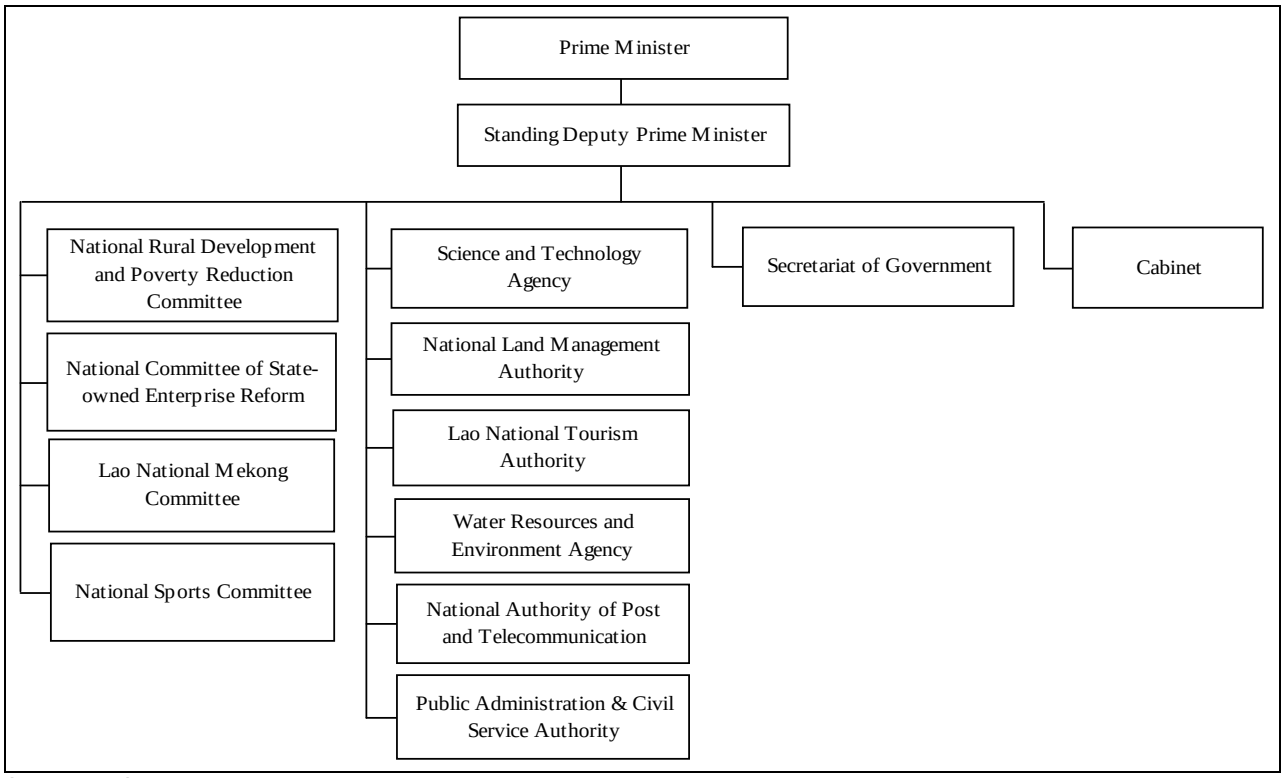
| Name of Course | Number | % | Accumulated % |
|---|---|---|---|
| Accounting | 30 | 17% | 17% |
| Finance | 30 | 17% | 34% |
| Business Administration | 26 | 15% | 49% |
| Commerce | 16 | 9% | 58% |
| Economics | 14 | 8% | 66% |
| Trade | 9 | 5% | 71% |
| Education (teacher) | 6 | 3% | 74% |
| English, Law, Literature, Electricity, Sewing Industry | 15 (3 for each subject) | 9% (2%) | 83% |
| Marketing, Planning, Typing, Architecture, Sugar Industry | 10 (2 for each subject) | 6% (1%) | 89% |
| French, Mapping, Mathematics, Medicine, Engineering, Irrigation, Construction, Industrial Equipment, Processing Technology, Equipment, Mining Industry, Metal Industry, Cotton Industry | 13 (1 for each subject) | 7% (0.6%) | 96% |
| Unclassified | 7 | 4% | 100% |
| Total | 176 | 100 | |

Note: Since some persons have learned more than one subject, total number is not equal to the number of personnel.
Source: JICA Survey Team based on the DoIC internal document of Vientiane Capital

# 3 Prime Minister's Office (PMO)

The PMO is the government organization at the central level which supports the Prime Minister in coordinating with various government agencies and local administration, monitoring the operation of the government, ministries, and local administration, studying various issues related to collective work of the government in the administration and state management, and providing information necessary

for finalization of government policies and programs. The organizational structure of the PMO is shown in Figure I.3.4.



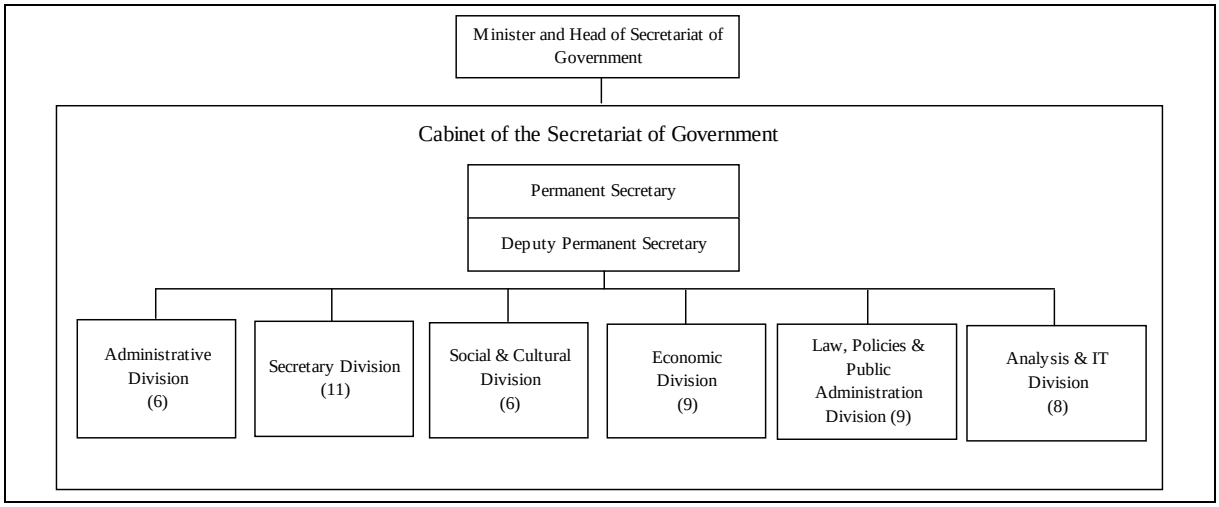

Source: PMO

**Figure I.3.4: Organizational Structure of the PMO**

The Secretariat of Government (SoG) is a central body in the PMO which assists the government, Prime Minister and Deputy Prime Minister in carrying out the following responsibilities:

- Supervising all directions and decisions made by the government, Prime Minister and Deputy Prime Minister to ensure that they are well-prepared and have been implemented,
- Analyzing social, political and economic issues,
- Reviewing all policies and legislative drafts from line ministries and authorities, prior to government meetings or passing to the National Assembly for approval, and
- Coordinating with line ministries in preparing and implementing specific issues.

Figure I.3.5 shows the organizational structure of the SoG.




Note: The number in parenthesis represents the number of personnel in each division.
Source: JICA Survey Team, based on the internal document of SoG, PMO

**Figure I.3.5: Organizational Structure of the SoG**

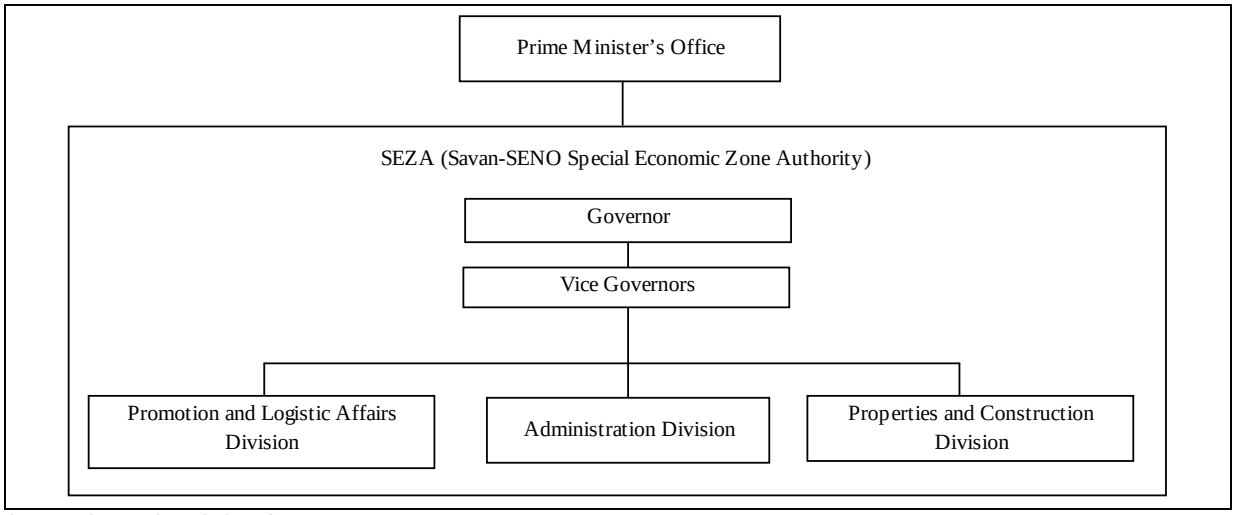
In the SoG, the Economic Division, which is responsible for coordinating with the Ministry of Industry and Commerce, Ministry of Planning and Investment, Savan-SENO Special Economic Zone Authority (SEZA), National Land Management Authority, Ministry of Energy and Mines, and Ministry of Finance, plays a key role in addressing industrial development issues. The division currently supervises Savan-SENO SEZA.

# 4 Savan-SENO SEZA

Savan-SENO SEZA was established in 2003 under the PMO to provide one-stop services to foreign and domestic investors who intend to do business in Savan-SENO Special Economic Zone.

## 4.1 Organizational Structure, Duties and Responsibilities

The current organizational structure of Savan-SENO SEZA is illustrated in Figure I.3.6, while Table I.3.5 summarizes the duties and responsibilities of each position/division.




Source: Savan-SENO SEZA

**Figure I.3.6: Organizational Structure of Savan-SENO SEZA**

**Table I.3.5: Duties and Responsibilities of Savan-SENO SEZA by Position/Division**

| Position / Division | Duties and Responsibilities |
|---|---|
| Governor | Supervise overall tasks and directly in charge of the Administration Division |
| Vice-Governor 1 | Assists the governor, directly in charge of the Investment Promotion and Legal Affairs Division and performs other duties assigned by the governor |
| Vice-Governor 2 | Assists the governor, directly in charge of the Properties and Construction Management Division and performs other duties assigned by the governor |
| Investment Promotion and Legal Affairs Division | - Disseminates information to investors related to investment matters<br>- Organizes or participates in seminars or workshops regarding investment<br>- Provides consultation to investors concerning investment rules and regulations<br>- Evaluates investment proposal submitted by investors<br>- Prepares investment license, business registration and facilitate tax registration and company seal approval<br>- Grants investment incentives including tax holiday, customs duties exemption on imports<br>- Functions as One Stop Service Unit by providing assistances and facilitation in coordinating with relevant agencies to obtain permits and approvals such as visa and work permit<br>- Drafts, edits and provides comments on legal documents including MOUs, contracts, agreements, rules and regulations related to investment in the zones<br>- Records approved investment licenses and investors profile<br>- Performs other tasks assigned by governor |
| Administration Division | - Prepares annual budget plans and handles office revenues and expenditures<br>- Manages and controls office assets and properties<br>- Carries out human resource development including training, further studying, allocating, promoting, and punishing staff<br>- Prepares SEZA overall performance reports including monthly, quarterly, six monthly and yearly reports<br>- Performs administrative activities and other duties assigned by governor |
| Properties and Construction Division | - Prepares development plans by studying, surveying and collecting land data<br>- Evaluates and approves proposal for construction of physical infrastructures in the zones including buildings, factories, and essential infrastructures<br>- Monitors, controls and manages land and properties invested in the zones<br>- Carries out activities related to resettlement and compensation for affected peoples<br>- Assists investors in coordinating with relevant agencies related to the development of the zones<br>- Performs other tasks assigned by the governor |

Source: JICA Survey Team based on interviews with Savan-SENO SEZA

## 4.2 Human Resources

There are 32 personnel currently working at Savan-SENO SEZA. Table 2.2.6 classifies the personnel according to division/position and educational level. Forty-two percent of the personnel have equivalent to or higher degree than bachelor's degree which is about 32% out of the whole MoIC personnel (see Table I.3.1). Relatively high educational level of personnel in Savan-SENO SEZA might be attributed to the fact that said authority has not yet been established very long.

**Table I.3.6: Educational Level of Personnel of Savan-SENO SEZA**

| Division/Position | Total No. | Educational Level | | | | | |
|---|---|---|---|---|---|---|---|
| | | Ph.D. | Master Degree | Bachelor Degree | Diploma | High School | Junior High School |
| Governor | 1 | | | 1 | | | |
| Vice-Governors(1) | 1 | | 1 | | | | |
| Vice-Governors(2) | 1 | | 1 | | | | |
| Investment Promotion and Legal Affairs Division | 11 | | 2 | 3 | 6 | | |
| Administration Office | 9 | | | 2 | 5 | 1 | 1 |
| Properties and Construction Management Division | 9 | | | 3 | 4 | 2 | |
| Total | 32 (100%) | 0 (0%) | 4 (13%) | 9 (28%) | 15 (47%) | 3 (9%) | 1 (3%) |

Source: JICA Survey Team, based on interviews with Savan-SENO SEZA personnel

## 4.3 Current Functions of Savan-SENO SEZA

Based on the information collected in August 2009, the current situations in Savan-SENO SEZA are summarized as follows:

In order to start business in Savan-SENO Special Economic Zone (SASEZ), investors firstly need to obtain 1) investment license, 2) business license, 3) tax registration certificate, and 4) authorized seal. Issuance of 3) and 4) is now delegated to Savan-SENO SEZA although it has not handled such activities before.

Foreign investors and workers themselves should deal with the Ministry of Foreign Affairs and Ministry of Public Security in order to obtain the authorization necessary prior to working in the Lao PDR. This involves securing visa, ID card and work/resident permit. However at present, Savan-SENO SEZA acts as an agent for foreign investors and workers, to take care of application procedure.

Investors often have trouble with the Customs and Tax Departments because they do not understand the tax and customs incentives and exemptions granted to investors according to the Savan-SENO SEZA decree. However, such problems will be solved if Customs and Tax Department staff will be stationed in a One-Stop-Service Office.

Recently, the PMO has notified all relevant organizations to designate necessary staff at the One-Stop-Service Office established at the sites of Savan-SENO SEZA. In the same office, staff from Departments of Customs and Tax, Public Works and Transport, Savan-SENO SEZA, and the developer are also stationed to provide investors with necessary services.

The first One-Stop-Service Office is constructed at Site B and planned to start operation in December 2009. Said office will also be established at Site A near Mekong Bridge. Immigration officers and staff from the Department of Labor and Social Welfare will also be stationed to cover not only Site A but also Sites B and C.

Installation, connection and maintenance of basic infrastructure such as telecommunication, electricity, water supply, and waste disposal should totally rely on the relevant agencies. Savan-SENO SEZA realizes the necessity for more engineering staff.

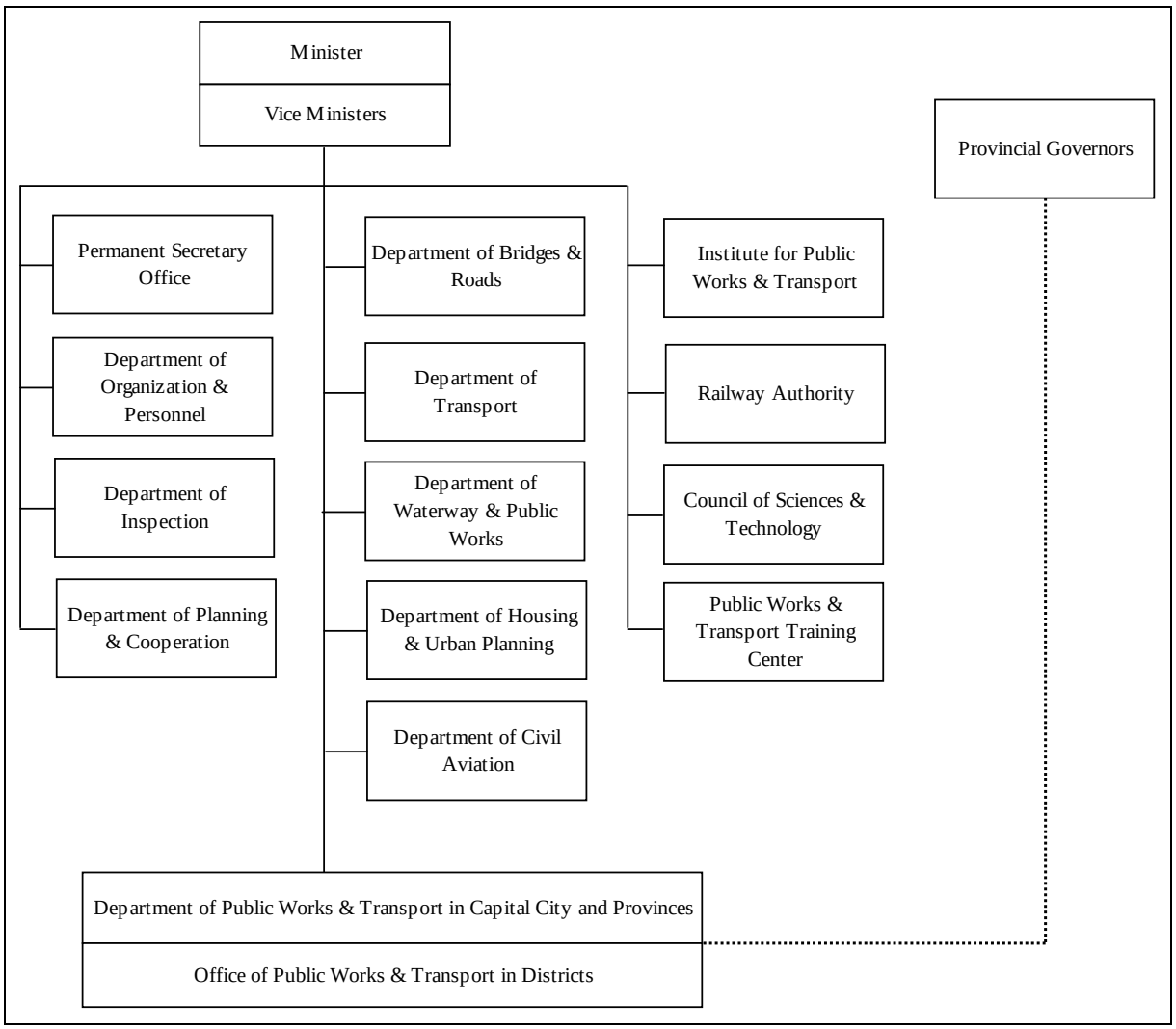
**Table I.3.7: Current Functions of Savan-SENO SEZA**

| Activities | SEZA | Developer | Other Organizations in charge |
|---|---|---|---|
| 1. Development of SASEZ1 | | | |
| 1.1 Procurement of developer | ✓ | | |
| 1.2 Development permission to developer | ✓ | | |
| 1.3 Land acquisition | ✓ | | Provincial Land Management Office |
| 1.4 Resettlement | ✓ | | Provincial Land Management Office |
| 1.5 Compensation for resettlement | ✓ | ✓ | |
| 1.6 Ground leveling | ✓(Site B) | ✓(Site A, C and D) | |
| 1.7 Basic Infrastructure development within SASEZ | ✓(Site B) | ✓(Site A, C and D) | Urban Development Authority, Nam Papa, EDL[2], Lao Telecom & other telecom companies |
| 1.8 Advertisement and promotion to invite business enterprises to SASEZ | ✓ | ✓ | |
| 1.9 Setting of rent and service charge (e.g. land lease, public utility charge) | ✓ | | |
| 2. Customer Services<br>(Customers = Business enterprises within SASEZ) | | | |
| (Preparatory Stage) | | | |
| 2.1 Investment license | ✓ | | |
| 2.2 Business license | ✓ | | |
| 2.3 Factory operation license | ✓ | | |
| 2.4 Taxpayer registration | ✓ | | (Tax Department) |
| 2.5 Import / Export license | ✓ | | |
| 2.6 Seal Authorization | ✓ | | (Ministry of Public Security) |
| 2.7 Necessary registration in order to obtain the privilege (except 2.1 ~ 2.6) | ✓ | | |
| 2.8 Contract of land lease | ✓(Site B) | ✓(Site A, C and D) | |
| 2.9 Contract of building lease | | ✓ | |
| 2.10 Construction authorization certificate (to build the structure on the leased land) | ✓ | | |
| 2.11 Connection to basic infrastructure | | ✓(Site A, C and D) | Urban Development Authority, Nam Papa, EDL[2], Lao Telecom & other telecom companies |
| 2.12 Opening bank account | | | Commercial Banks in LAOS |
| 2.13 Issuance of Visa for foreign investors and workers | | | Ministry of foreign affairs |
| 2.14 Issuance of ID card, work permit or resident permit-to-stay for foreign investors and workers | ✓ | | Ministry of Public Security |
| (Operational Stage) | | | |
| 2.15 Procedure of tax payment (including exemption & reduction procedure) | ✓ | | Tax Department |
| 2.16 Customs clearance (including customs exemption & reduction procedure) | | | Customs Department |
| 2.17 Payment of rent and service charge (e.g. land lease, public utility charge) | ✓ | ✓ | |
| 2.18 Maintenance of basic infrastructure | ✓(Site B) | ✓(Site A, C and D) | Urban Development Authority, Nam Papa, EDL, Lao Telecom & other telecom companies |
| 2.19 Security protection | ✓ | | Police |
| 2.20 Dealing with complaints from customers | ✓ | ✓ | |
| 2.21 Labor Service | ✓ | ✓ | |
| 1) Manpower recruitment | ✓ | ✓ | |
| 2) Labor dispute resolution | ✓ | | |
| 2.22 Information dissemination & consultation of relevant government laws and regulations (e.g. their revision, new enactment) | ✓ | ✓ | |

Note: 1 Savan-SENO Special Economic Zone (SASEZ)
2 Electricite du Laos (EDL) (= Electricity Generating Authority of Laos)
Source: JICA Survey Team, based on interviews with Savan-SENO SEZA (as of August 2009)

# 5 Ministry of Public Works and Transport (MPWT)

MPWT is responsible for the macro-management of communication, land transport, waterway, airway, railway, housing, urban development and water supply throughout the country. Organizational structure of MPWT is shown in Figure I.3.7.




Source: MPWT

**Figure I.3.7: Organizational Structure of MPWT**

Since the existing and future transport and logistics network and urban development affect industrial zone/park development plan, it is necessary to have close coordination with MPWT. During the development and implementation stages of industrial park, collaboration with MPWT and its relevant agencies is essential concerning the installation of public utilities (telecommunication, water supply, etc.), and corresponding operation and maintainance.

# APPENDIX I.4 INVESTMENT DEMAND SURVEY

## 1 Survey Methodology

### 1.1 Objectives

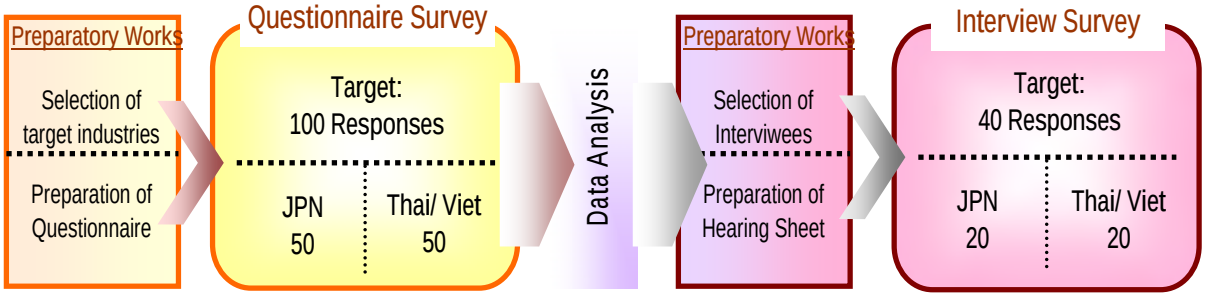
An investment demand survey (hereinafter called as "the Survey") has been carried out in Japan, Vietnam and Thailand during the period from the start of April 2009 until the end of June 2009 to analyze investment demands. The main objectives of the Survey are:

- To investigate what kind of incentives, both hardware and software, are required to attract investments from potential foreign investors;
- To investigate the trend of investment demand in the Lao PDR by types of business and by size of enterprises, as well as interests in the locations in the Lao PDR (Vientiane Capital, Savannakhet, Pakse and etc); and
- To investigate the investment demand and/or relocation of factories to the Lao PDR by enterprises currently operating in neighboring countries like Vietnam and Thailand.

The above mentioned information is requisite for preparing the basic plan for the industrial development in the Lao PDR.

### 1.2 Methodology

The Survey is composed of two main work components: i) a questionnaire survey which was conducted initially, and then, ii) a follow-up interview survey of selected enterprises in accordance with the questionnaire survey results. As mentioned in the foregoing section, both the questionnaire and interview surveys have been conducted in three countries, namely, Japan, Vietnam and Thailand.




Source: JICA Survey Team

**Figure I.4.1: Work Flow of the Investment Demand Survey**

# 2 Questionnaire Survey

## 2.1 Sample Size of Questionnaire Survey

Prior to the conducted Survey, target sample number for the questionnaire survey was set at 100 responses in total, which consist of 50 responses for Japanese enterprises and 25 responses each for enterprises operating in Vietnam and Thailand.

For the surveyed Japanese enterprises, those which have already operated or invested in either Thailand or Vietnam[1] were selected. Investment from Japanese enterprises in the Lao PDR generally considered relocation or additional investment from the operating factories or sales offices in its neighboring countries. After receiving permission through initial telephone communications, questionnaires were addressed to each headquarter office or designated offices of target enterprises in Japan. The total number of enterprises initially contacted was 1,158. Meanwhile, the actual number of the responses was 179, which exceeded the targeted responses of one hundred (100).

For the questionnaire surveys in both Vietnam and Thailand, the subcontracted local surveyors directly visited the contacted enterprises and filled out each questionnaire via interview. The surveys in the two countries have been finished at achieving the targeted 25 responses.

The questionnaire, prepared by JICA Survey Team, is attached at the end of this Appendix. In practice, the questionnaire was translated into the mother tongue of each country and distributed to the respondents.

Finally, the sample size of the questionnaire survey is summarized in Table I.4.1.

**Table I.4.1: Sample Size of Questionnaire Survey**

| Country | Contacted Enterprises | Actual Responses | Interested | |
|---|---|---|---|---|
| | | | No. | % |
| Japan | 1,158* | 179 | 44 | 3.8 |
| Vietnam | 84 | 25 | 25 | 29.8 |
| Thailand | 126 | 26 | 26 | 20.6 |

Note: *The actual number of Japanese enterprises allowed to receive the questionnaire was 965.
Source: JICA Survey Team

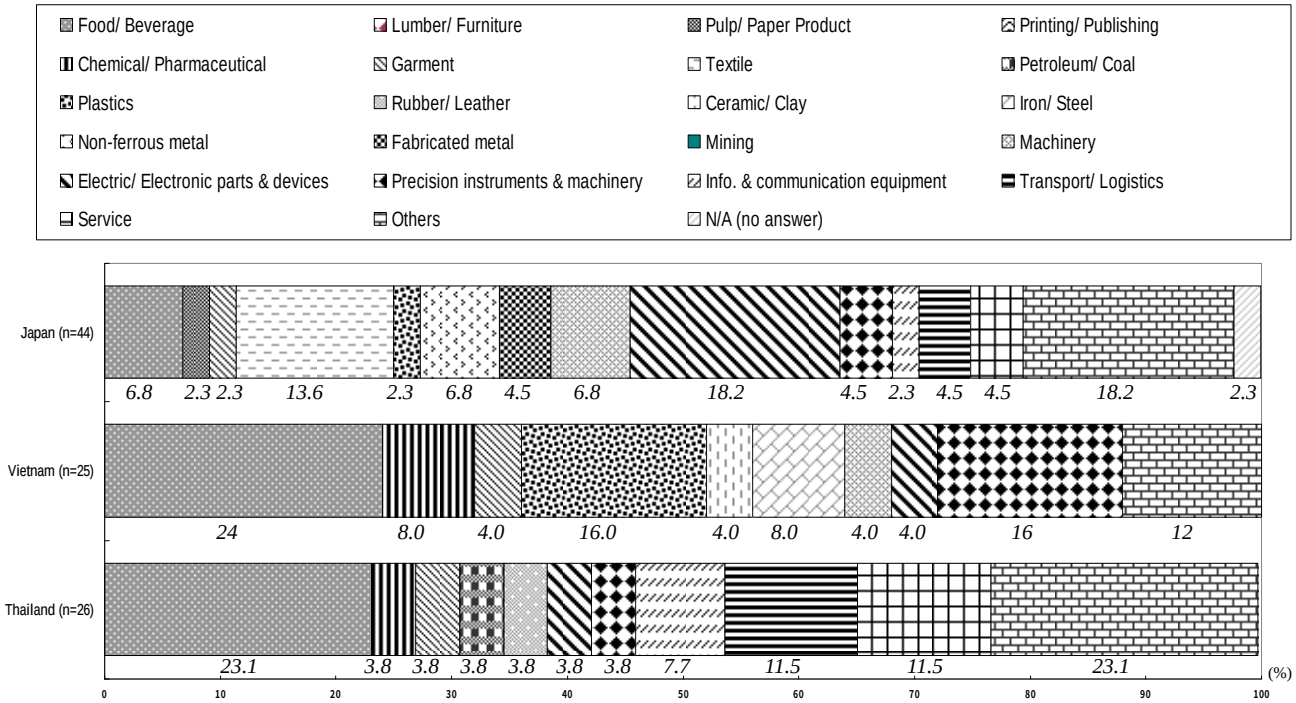
## 2.2 Information of Respondents

As mentioned in the previous section, the total number of enterprises which have shown interest in investing in the Lao PDR is 95, forty-four of which are Japanese, 25 Vietnamese, and 26 from Thailand.

The types of industry for these 95 potential investors are eclectic, as shown in Figure I.4.2. For the Japanese enterprises, i) "electrical/ electronic parts and devices" formed the majority group, which is 18% of the overall industrial types, ii) "others", also sharing 18% of the total, is composed of trading firms, accessories distributors and so on, and iii) "textile" industry ranks next. According to the questionnaire survey, most of them are export oriented enterprises and considers the Lao PDR as its export production base. On the other hand, "food and beverage" industry ranks the highest among industrial categories in Vietnam and Thailand, with 24% and 23% in total, respectively. In Vietnam, "precision instruments and machinery" and "rubber/ leather" industries also expressed interest in investing in the Lao PDR. In case of Thailand, "service" and "logistics" industries are also among

[1] The garment as well as food processing-related Japanese enterprises, which have operated in China, have also been included in the Survey, since a certain demand for relocation or additional investment from the Japanese enterprises of these sectors operated in China has been expected, according to the discussions with various intellectuals.

the large groups. Meanwhile various software industries such as IT and entertainment companies, categorized as "others", also expressed strong interest in investing in the Lao PDR.




Source: JICA Survey Team

**Figure I.4.2: Types of Industry of the Potential Investors in the Lao PDR**

**Table I.4.2: Types of Industry of the Potential Investors in the Lao PDR**

| | Japan | | | | Vietnam | | | | Thailand | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Under consideration | Interested, in the near future | Interested, but not likely near future | Total | Under consideration | Interested, in the near future | Interested, but not likely near future | Total | Under consideration | Interested, in the near future | Interested, but not likely near future |
| Food | 3 | 1 | 1 | 1 | 6 | 0 | 1 | 5 | 6 | 3 | 1 | 2 |
| | | 33.3 | 33.3 | 33.3 | | 0.0 | 16.7 | 83.3 | | 50.0 | 16.7 | 33.3 |
| Lumber (wood)/ Furniture | 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 |
| Pulp/ Paper Product | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Printing/ Publishing | 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 |
| Chemical/ Pharmaceutical | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| | | 0.0 | 0.0 | 0.0 | | 0.0 | 50.0 | 50.0 | | 100.0 | 0.0 | 0.0 |
| Garment | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 100.0 |
| Textile | 6 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 16.7 | 0.0 | 83.3 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Petroleum & Coal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 |
| Plastics | 1 | 0 | 0 | 1 | 4 | 1 | 1 | 2 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 25.0 | 25.0 | 50.0 | | 0.0 | 0.0 | 0.0 |
| Rubber/ Leather | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 100.0 | 0.0 | 0.0 |
| Ceramic & Clay | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 |
| Iron & Steel | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 |
| Non-ferrous metal | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 33.3 | 0.0 | 66.7 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Fabricated metal | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Mining | 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 |
| Machinery | 3 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Electronic parts& devices | 8 | 0 | 0 | 8 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 100.0 |
| Precision instruments & Machinery | 2 | 0 | 0 | 2 | 4 | 0 | 1 | 3 | 1 | 0 | 0 | 1 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 25.0 | 75.0 | | 0.0 | 0.0 | 100.0 |
| Information & Communication Electric Equipment | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | | 50.0 | 50.0 | 0.0 |
| Transport/ Logistics | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 |
| | | 0.0 | 50.0 | 50.0 | | 0.0 | 0.0 | 0.0 | | 66.7 | 33.3 | 0.0 |
| Service | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 |
| | | 0.0 | 0.0 | 100.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 100.0 | 0.0 |
| Others | 8 | 4 | 0 | 4 | 3 | 1 | 1 | 1 | 6 | 4 | 1 | 1 |
| | | 50.0 | 0.0 | 50.0 | | 33.3 | 33.3 | 33.3 | | 66.7 | 16.7 | 16.7 |
| No Answer (N/A) | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total | 44 | 7 | 3 | 34 | 25 | 2 | 7 | 16 | 26 | 13 | 7 | 6 |

Source: JICA Survey Team

Company size of the respondents in the neighboring countries of the Lao PDR mostly belong to category "from 100 to 999" employee number and category "from 2 to 9 ha" lot area. Although the factory size is even larger than that of (officially categorized as) large factories currently operating in the Lao PDR, it can still be accommodated in a typical industrial park. The following Table I.4.3 presents summarized size of factories of the respondents showing interest in investing in the Lao PDR.

**Table I.4.3: Size of Factories of the Respondents Operating in the Neighboring Countries**

| | | Response | Employee | | | | | Factory area (ha) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1-29 | 30-99 | 100-999 | above 1,000 | N/A | less than 1ha | 2-9ha | 10-49ha | above 50ha | N/A |
| Operated countries | Thailand | Japan (n=44) | 9.1 | 9.1 | 34.1 | 18.2 | 29.5 | 22.7 | 22.7 | 9.1 | 11.4 | 34.1 |
| | | Vietnam (n=25) | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| | | Thailand (n=26) | 26.9 | 15.4 | 34.6 | 19.2 | 6.7 | 42.3 | 23.1 | 26.9 | 3.8 | 13.3 |
| | Vietnam | Japan (n=44) | 6.8 | 9.1 | 13.6 | 9.1 | 61.4 | 11.4 | 13.6 | 6.8 | 4.5 | 63.6 |
| | | Vietnam (n=25) | 12.0 | 8.0 | 60.0 | 20.0 | 0.0 | 28.0 | 60.0 | 12.0 | 0.0 | 0.0 |
| | | Thailand (n=26) | 0.0 | 3.8 | 0.0 | 0.0 | 93.3 | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 |
| | China | Japan (n=44) | 9.1 | 9.1 | 38.6 | 13.6 | 29.5 | 18.2 | 25.0 | 6.8 | 9.1 | 40.9 |
| | | Vietnam (n=25) | 0.0 | 0.0 | 4.0 | 0.0 | 96.0 | 0.0 | 4.0 | 0.0 | 0.0 | 96.0 |
| | | Thailand (n=26) | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 | 3.8 | 0.0 | 0.0 | 0.0 | 93.3 |
| | Other Asian Countries | Japan (n=44) | 6.8 | 6.8 | 20.5 | 13.6 | 52.3 | 6.8 | 22.7 | 2.3 | 9.1 | 59.1 |
| | | Vietnam (n=25) | 0.0 | 4.0 | 0.0 | 0.0 | 96.0 | 4.0 | 0.0 | 0.0 | 0.0 | 96.0 |
| | | Thailand (n=26) | 7.7 | 7.7 | 7.7 | 7.7 | 73.3 | 7.7 | 11.5 | 3.8 | 3.8 | 73.3 |

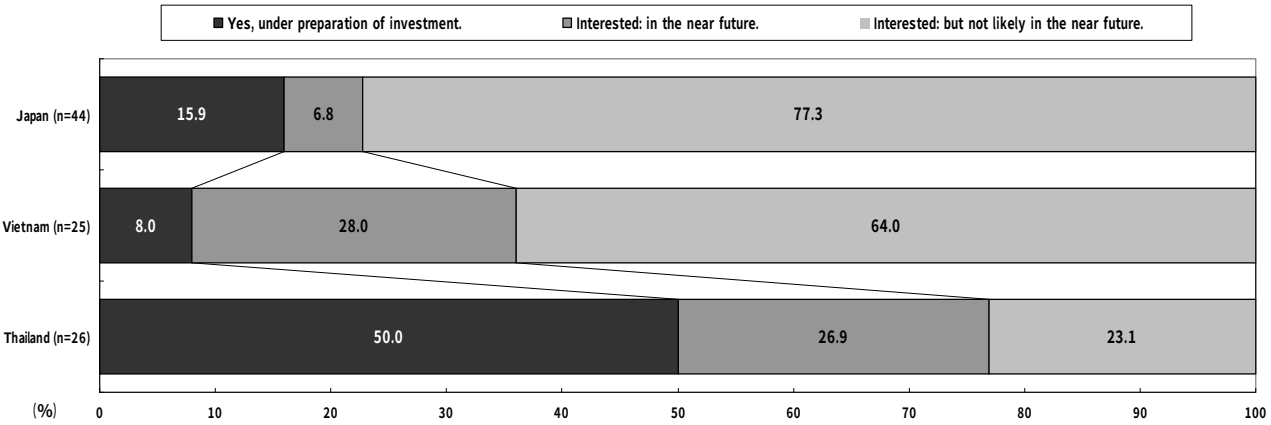
(%)

Source: JICA Survey Team

Of the 95 respondents expressing interest in investing in the Lao PDR, 22 mentioned that they are currently considering setting up investment in the country. Especially for the enterprises in Thailand, half of the respondents, equivalent to 13 out of the 26, showed their high investment demands. On the other hand, most of the Japanese enterprises, about 80% of the total, expressed interest in setting

up modest investment in the Lao PDR. The respondents in Vietnam meanwhile have expressed fair interest in investing.

It seems that varying degrees of knowledge and understanding among the three countries for the business environment in the Lao PDR yielded the above mentioned results[2].




| | Under consideration: Investment in the Lao PDR | | Interested in investment in the near future | | Interested but less likely in the near future | | Total | |
|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % |
| Japan | 7 | 15.9 | 3 | 6.8 | **34** | **77.3** | 44 | 100 |
| Vietnam | 2 | 8.0 | 7 | 28.0 | **16** | **64.0** | 25 | 100 |
| Thailand | **13** | **50.0** | 7 | 26.9 | 6 | 23.1 | 26 | 100 |
| Total | 22 | 23.2 | 17 | 17.9 | 56 | 58.9 | 95 | 100 |

Source: JICA Survey Team

**Figure I.4.3: Degree of Investment Demand in the Lao PDR**

## 2.3 Major Factors for FDI Inducement

In order to understand the important factors to attract foreign investments in the Lao PDR, six major factors expected to induce FDI in the Lao PDR were presented to the respondents. The respondents have been requested to rank said factors considering necessity. Table I.4.4 summarizes the overall survey results of the six major factors ranked by the respondents according to priority.

**Table I.4.4: Priority Ranking of Factors for FDI Inducement**

| | Infrastructure | Human Resources | Logistics | Incentives for Investment | Geographic Condition | Industrial Estate |
|---|---|---|---|---|---|---|
| Japan | **2.0** | **2.9** | 3.8 | **3.3** | 4.5 | 4.2 |
| Vietnam | **1.9** | 2.5 | 3.1 | **2.3** | **2.0** | 2.6 |
| Thailand | **3.0** | **2.9** | 3.1 | **2.5** | 4.2 | 4.5 |
| Avg. | **2.3** | **2.8** | 3.3 | **2.7** | 3.6 | 3.8 |

Note: *Shadowed items are the top three priority items
**The highest priority scored one (1)/ the lowest priority scored six (6): Above figure for each item is an average score. (The lower score the item received, the higher priority it is.)
Source: JICA Survey Team

Meanwhile, as the questionnaire also requested respondents to leave the cell of the factor blank if it is deemed not so important to consider in investing in the Lao PDR, the "no response ratio" is defined as the percentage of the investors' expression of disinterest. Table I.4.5 presents the no response ratio

[2] Many of the interviewees of Japanese enterprises have claimed the lack and difficulties of getting information of business opportunities as well as investment environment of Lao PDR, whereas most of interviewees of Thailand have frequently either attended Thai-Lao trade fairs or business trips to Lao PDR.

for each factor. These revealed that Vietnamese investors are generally less interested in logistics, geographic condition, and industrial park. Thai investors also express similar impression. On the contrary, most of the Japanese potential investors show high interest in industrial estate and therefore resulted in less percentage of no response ratio. To summarize, "infrastructure", "human resources", and "incentives for investment" have shown less no response ratios.

**Table I.4.5: No Response Ratio**

(%)

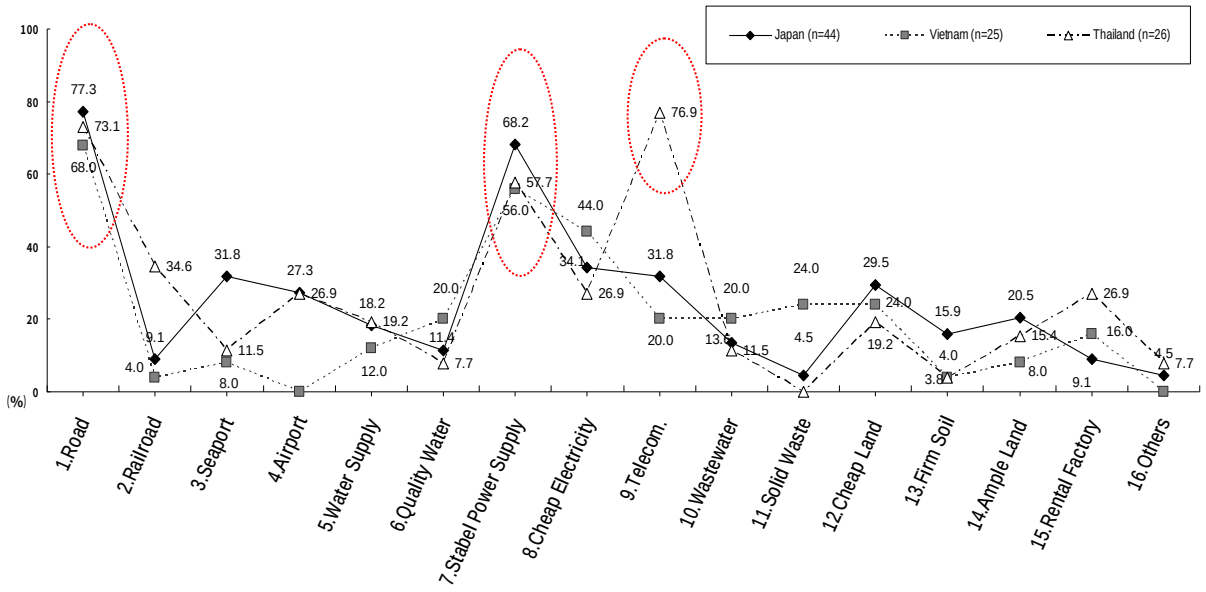
| | Infrastructure | Human Resources | Logistics | Incentives for Investment | Geographic Condition | Industrial Estate |
|---|---|---|---|---|---|---|
| Japan | 6.8 | 6.8 | 9.1 | 9.1 | 13.6 | 11.4 |
| Vietnam | 20 | 32 | **56** | 4 | **92** | **80** |
| Thailand | 11.5 | 7.7 | 26.9 | 11.5 | 42.3 | **57.7** |
| Avg. | 12.8 | 15.5 | 30.7 | 8.2 | 49.3 | 49.7 |

Source: JICA Survey Team

The survey results revealed that the future investors regard infrastructure as the most important factor to determine investment interest in the Lao PDR. Subsequently, incentives for investment are required. Lastly, human resources are considered as an important factor for them prior to investing in the Lao PDR.

For each major factor, an additional demand analysis was conducted. Corresponding results are summarized as follows:

*1) Infrastructure*




Source: JICA Survey Team

**Figure I.4.4: Needs Analysis for Infrastructure**

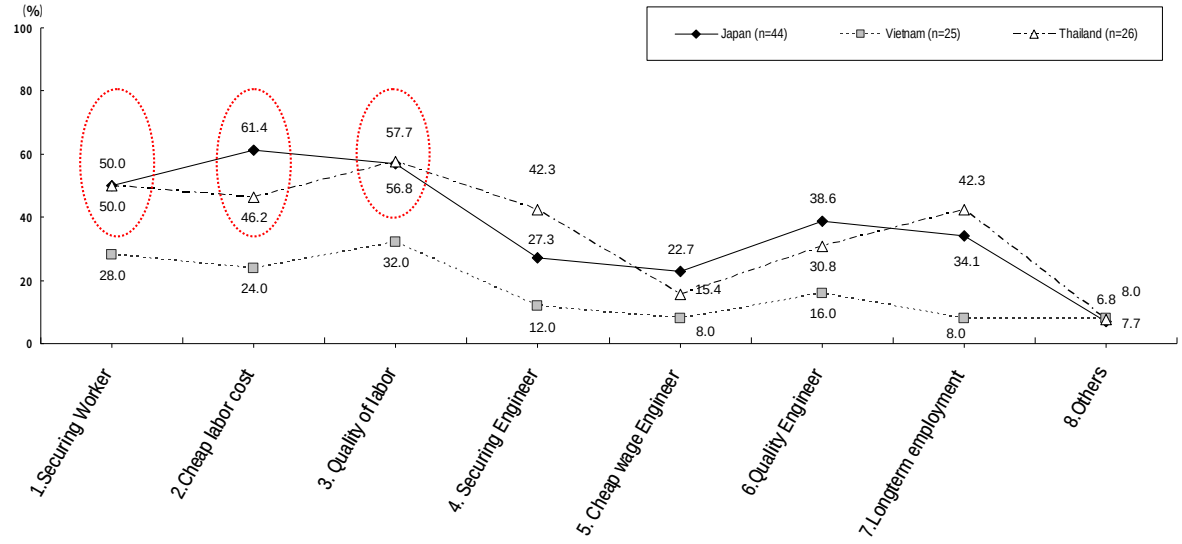
Infrastructure is thought as the highest priority for the potential investors in the Lao PDR. As shown in Figure I.4.4, needs for good road transportation network was the highest priority followed by stable power supply based on replies from respondents of the three countries. For the investors of Thailand, needs for high-speed telecommunication facilities were very high. Therefore, the investors' requirement for the infrastructure development is summarized as follows:

- Road transportation network is a prerequisite condition for investing in the Lao PDR, as most of the investors import/ export raw materials as well as their finished products.

- Stable power supply is indispensable, as most of the potential investors are in the manufacturing sector, but tariff shall be cheap, as electricity is not so expensive in Vietnam and Thailand.

- High-speed telecommunication system is also important, especially for Thai investors, since the telecommunication network in Thailand is already equipped and ready to link with the existing telecommunication system intended for O&M of their products as well as for transportation.

*2) Human Resources*




Source: JICA Survey Team

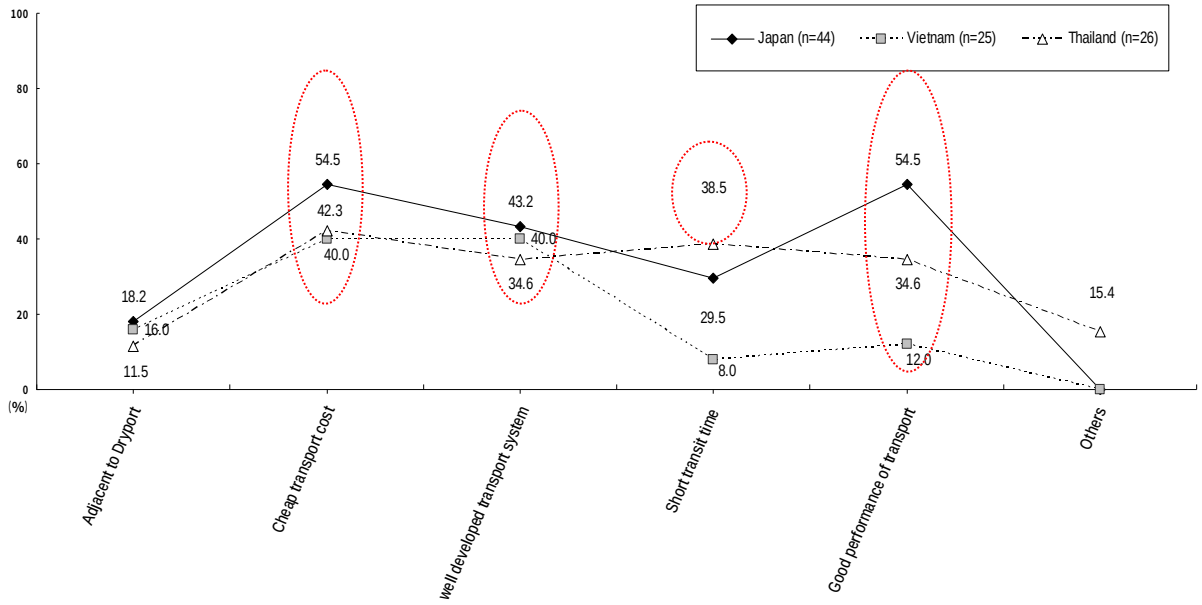
**Figure I.4.5: Needs Analysis for Human Resources**

The third highest factor for inducing investment is human resources. The needs analysis results for the human resources issue revealed that the potential investors obviously value the workers more than engineers or technicians, as shown in Figure I.4.5.

- Japanese investors considered that "*2. cheap labor cost*" is a more important factor than quality or securing of workers, whereas the investors from Thailand considers quality of workers as the highest priority.

- Investors from Vietnam rather show modest interest in human resources, as a whole. Because many of the investors think that labor cost of the Lao PDR is not so cheap as compared with that of Vietnam, significant difference in terms of labor quality is observed between said two countries.

### *3) Logistics*



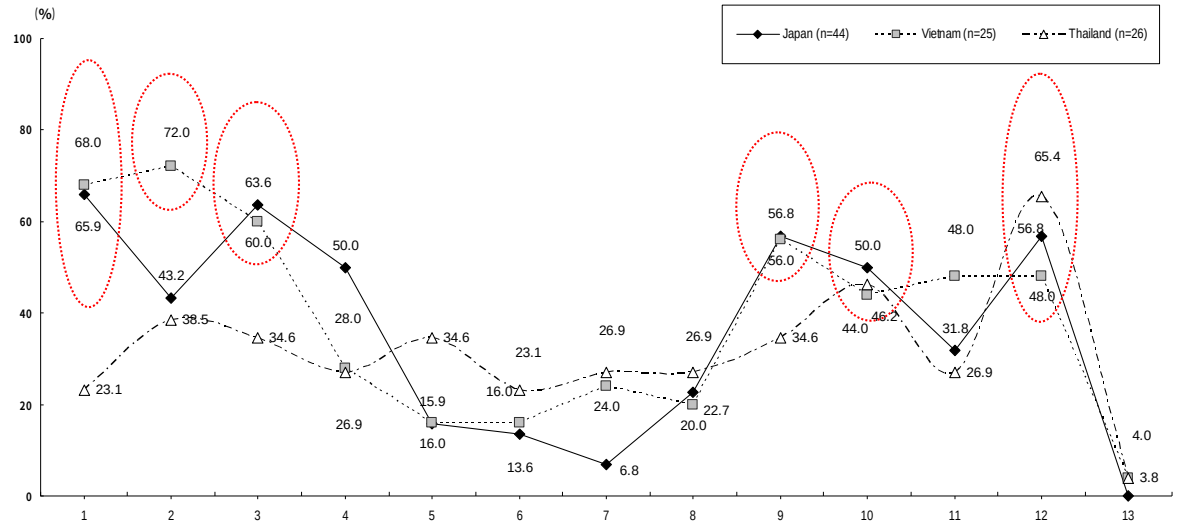

Source: JICA Survey Team

**Figure I.4.6: Needs Analysis for Logistics**

As the Lao PDR is an inland country, logistics is also an important factor for investment. The questionnaire survey revealed the following conclusions:

- Most of the investors put emphasis on "*2. cheap transport cost*", as transportation cost is the main issue for both importing and exporting goods in/ from the Lao PDR.
- "*3. well developed transport system*" is also an important factor for potential investors. Development of logistic industries is required for inducing FDI and future economic development of the Lao PDR.
- "*5. good performance of transportation (preciseness and less damage)*" has been considered a requisite aspect for Japanese investors. Therefore, together with the development of transportation system, the quality of transportation shall be considered.

*4) Incentives for Investment*




1.Rapid screening and approval of investment 2.Transparent procedures for approval 3.Fast custom clearance 4.Accurate custom 5.Incentive for H/R 6.Easiness on concession 7.Longer time of concession 8.Longer land use right 9.Exemption for export tax, 10.Exemption for import tax 11.Income tax reduction 12.Corporate tax reduction 13.Others

Source: JICA Survey Team

**Figure I.4.7: Needs Analysis for Incentives for Investment**

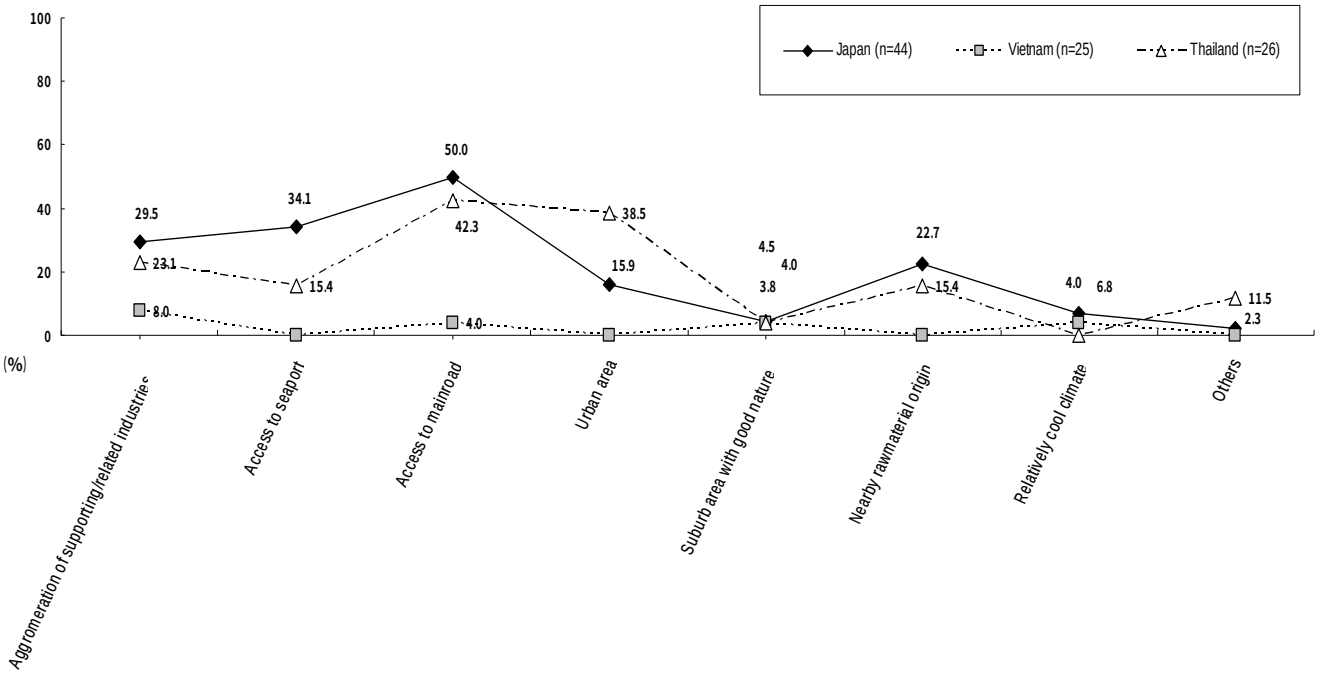
Determining incentives for investment is also a very important factor to attract FDI. As shown in the Figure I.4.7, the potential investors mainly put highest value on issues regarding procedures as well as taxes. Major findings are summarized as follows:

- Potential Japanese investors put emphasis on "*1. rapid screening and approval*", "*3. fast custom clearance*", as well as "*9. exemption for export tax*" since most of them consider the Lao PDR as production base for export, and these conditions directly benefit the operation of export-oriented industries;

- Similar to Japanese investors, Vietnamese investors consider fast procedures and tax exemption for export as major issues. They also indicated that "*2. transparent procedures for approval*" is the most important factor. Some respondents mentioned through the interview survey that agreements officially set by AFTA or CBTA are not being implemented by the customs officers.

- Reduction of corporate tax is another highest priority for all the potential investors. Therefore, if the Lao government offers better incentives on corporate tax reduction to the foreign investors than those of its neighboring countries, this shall attract FDI.

*5) Geographic Condition*




Source: JICA Survey Team

**Figure I.4.8: Needs Analysis for Geographic Condition**

The survey results suggest that geographic condition is not a major issue according to potential investors. However, access to transport infrastructure is regarded as a prerequisite condition.

*6) Industrial Estate*

In order to understand the intention to locate in an industrial estate, the following sub-questions were raised:

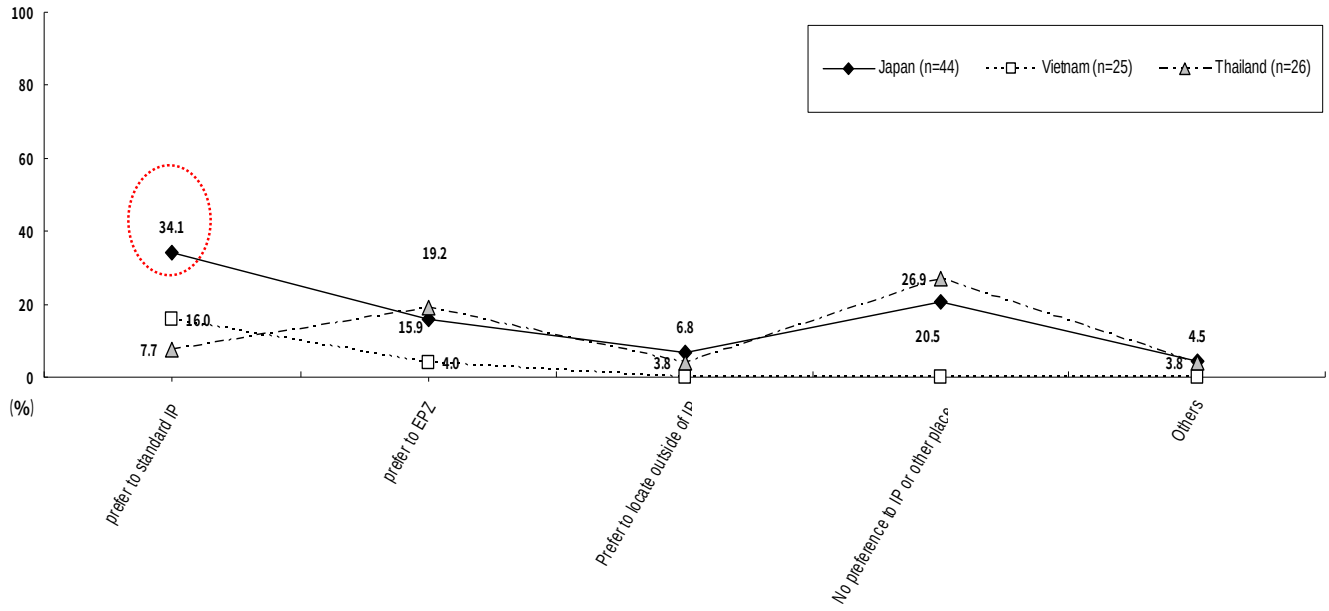
i) Preferring to move in a well-developed industrial estate, if there is;

ii) Preferring to move in a well-developed export processing zone (EPZ), if there is;

iii) Preferring to set up factory outside to an industrial estate or EPZ;

iv) No preference (whether to move in or out of an industrial estate/ EPZ); and

v) Others.




Source: JICA Survey Team

**Figure I.4.9: Needs Analysis for Locating in Industrial Estate**

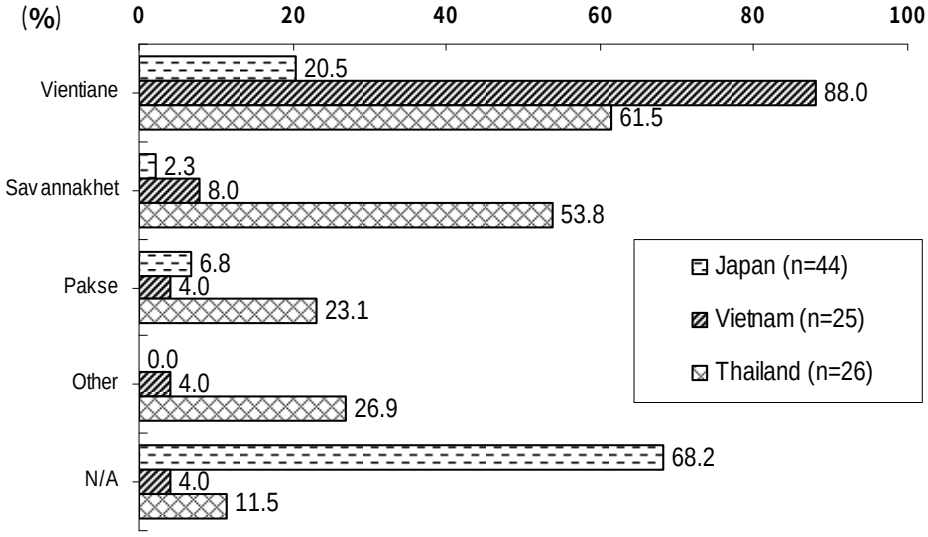
Survey results indicate that although the intention to locate in either an industrial estate or EPZ was not so high, more potential investors are likely to locate their factories inside industrial estates or EPZ rather than outside the premises. Also, as EPZ has basically prohibited selling of the products in the domestic market in the Lao PDR, the potential investors are likely to establish their factories in an industrial estate rather than in an EPZ.

## 2.4 Investment Demand by Location

Regarding preference in location in the Lao PDR, almost half of the respondents (47 out of the 95 in total) favored Vientiane Capital. The investors from both Vietnam and Thailand have shown quite high investment demand in Vientiane Capital with 88% and 61.5%, respectively. Said investors mentioned through the hearing survey that most of the competent business partners, public authorities on business administration, demand for domestic market, and workers are concentrated in Vientiane Capital.

Savannakhet and Pakse are adjacent to the northeastern areas of Thailand. The local economy has been integrated with the Thai economy, and local people have quite similar lifestyle as they speak almost same language. In this regard, Thai investors have well-understood the business environment and opportunities of these cities. On the other hand, Vietnamese investors, especially those located in Hanoi, have little information of these two cities. In case of Japan, most of the investors do not know even the name and location of said cities.

Finally, many of the Japanese investors mentioned through the interview surveys that they are concerned about the living conditions, such as housing, hospital, restaurants, food, entertainment and sport facilities, in addition to the business environment. Hence, since the urban infrastructure of Savannakhet and Pakse is still primitive to meet the demands of the Japanese investors, they consider Vientiane Capital as their preference.




Note: Multiple answers
Source: JICA Survey Team

**Figure I.4.10: Preference of Location for Investment in the Lao PDR**

## 2.5 New Business Opportunity Raised by the Potential and Competitiveness of the Lao PDR

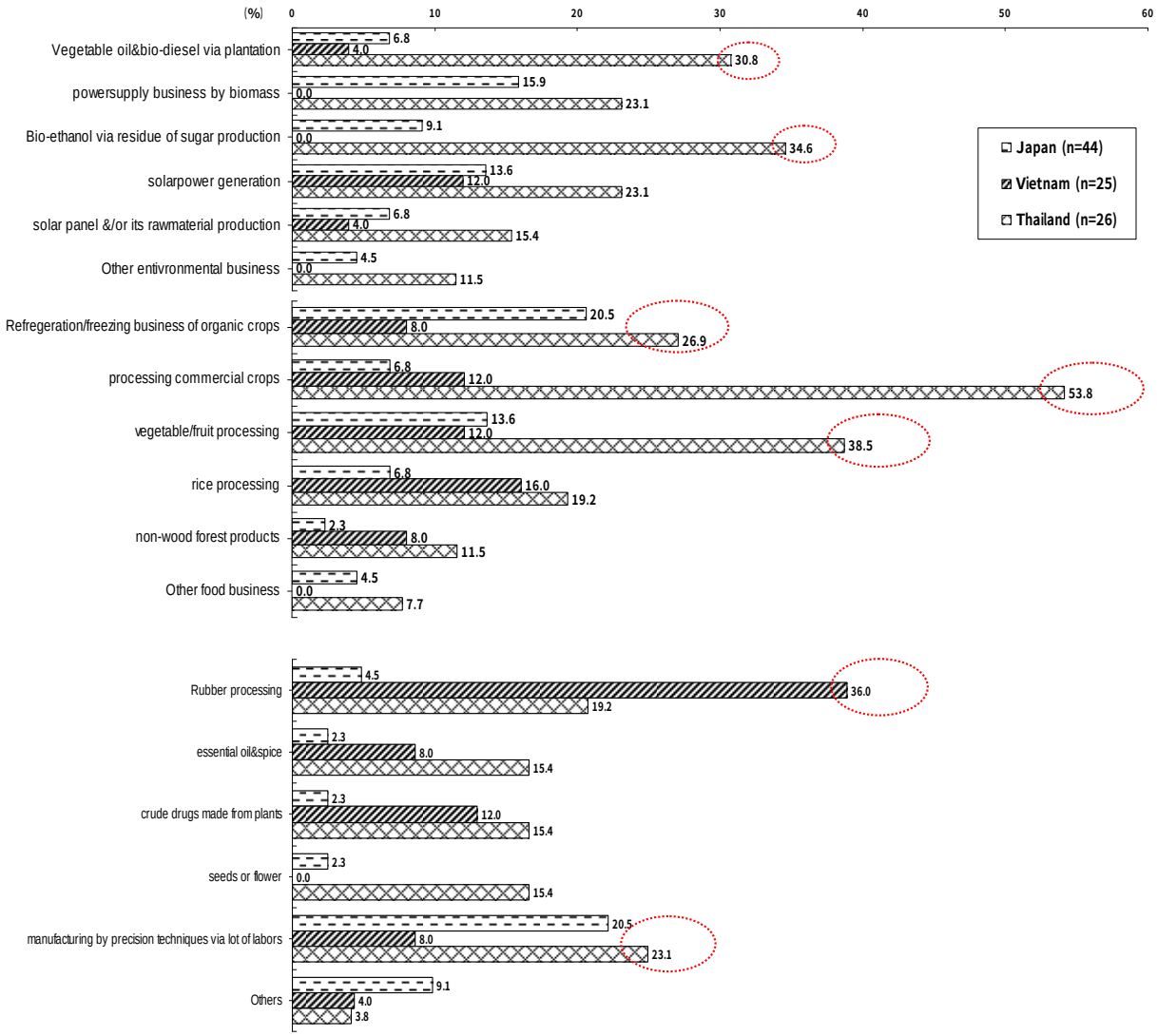
The main features of the Lao PDR related to business environment include abundant land resources, mild climate and rich soil in Boloven Plateau, and high potential for generating electricity (as they are commonly referred to as the "battery of Mekong"), as well as cheaper labor costs compared to its neighboring countries. These features bring opportunities to the Lao PDR in creating environmental businesses for mitigating global warming as well as food safety-related businesses.

In this regard, the JICA Survey Team confirmed the potentials for possible new business opportunities by inquiring about the following in each sector.

**Table I.4.6: Questions regarding Interests in the New Business Opportunities in the Lao PDR**

| No. | Environmental business for global warming countermeasure | Food safety related business | Potential business utilizing the feature of Laos |
|---|---|---|---|
| 1 | plantation for vegetable oil and production of bio-diesel | refrigeration or freezing of organic vegetables for exporting to remote market | processing of natural rubber made in Laos |
| 2 | power supply to the local areas by biomass power generation | processing of commercial crops (coffee, sugar, etc.) | production of essential oil and spice from tropical plants |
| 3 | production of bio-ethanol via sugar processing by-product, or starchy crops cultivated in Laos | processing of vegetables & fruits (ketchup, potato chips, dried vegetable, jam, juice, canned food, etc.) | production of curde drugs made from plants cultivated in Laos |
| 4 | power supply to the local areas by solar power generation | rice processing (rice veneger, alchol products, rice snacks, etc.) | production of seeds or flowers for export |
| 5 | production of solar panel and/or its raw material | non-wood forest products (mushroom, bamboo shoot, etc.) | manufacturing by precision technique such as medical and precision apparatus, fabrication and assembling of fine parts, embroidery & fabric, wigs, wire harness, etc. |
| 6 | other environmental business for global warming countermeasure, if any | Other food safety related business, if any | Other business, if any |

Source: JICA Survey Team




Source: JICA Survey Team

**Figure I.4.11: Intention of the New Business Opportunity Based on the Potential and Competitiveness of the Lao PDR**

*1) Environmental Business for Global Warming Countermeasures*

- Thai potential investors have expressed strong interest in environmental business, most especially on bio-diesel and bio-ethanol production.
- Japanese and Vietnamese potential investors are highly interested in the power supply business utilizing bio-mass as well as solar energy.

*2) Food Safety related Business*

- Thai potential investors are highly interested in food processing business.

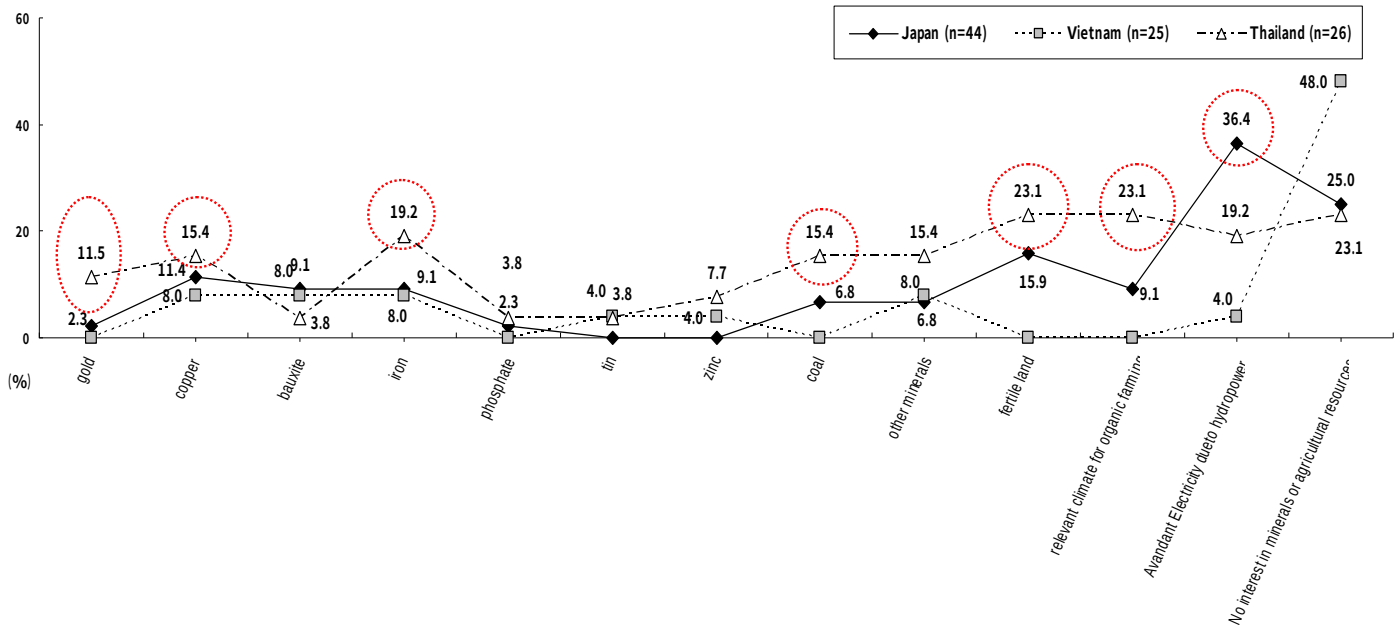
*3) Potential Business Utilizing the Feature of the Lao PDR*

- Vietnamese potential investors have strong interests in the rubber plantation business.

## 2.6 Advantage for Mineral and Agricultural Resources of the Lao PDR

Various studies reveal that the Lao PDR is a mineral-rich country. However, these high potential mineral resources have not been exploited and utilized. As basic infrastructure has been developed through the ODA projects, it is expected to induce the private foreign investors in developing mineral resource-affiliated businesses. Also, the agricultural resources are noted as one of the attractive business opportunities in the Lao PDR, as the country has rich land resources for agricultural business, both in terms of land area and soil quality. This section presents how the future investors are expected to utilize these two major features.

As shown in Figure I.4.12, many of the potential investors who have expressed interest in investing in the Lao PDR did not consider mineral and agricultural resources as advantages for their investment.

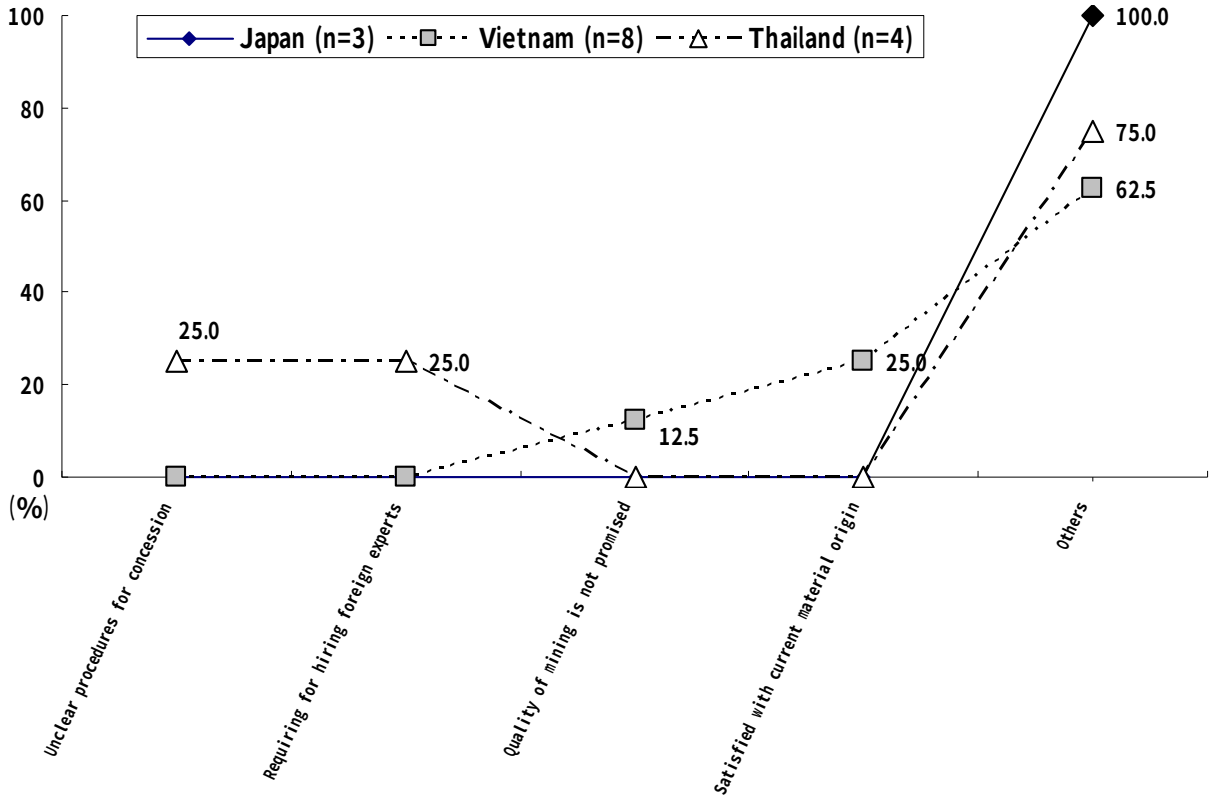



Source: JICA Survey Team

**Figure I.4.12: Advantage for Mineral and Agricultural Resources of the Lao PDR**

Even the Thai investors who know well of the potential of the Lao PDR's natural resources reveal that they are fairly impressed with both the mineral and agricultural resources of the Lao PDR.

In this context, as an additional survey item, the JICA Survey Team inquired on the respondents' reasons for not considering mineral and agricultural resources as decisive factors for investment. The results of the inquiry revealed that investment climate issues, such as uncertainty for procedure of investment/ development or quality of the mineral resources, do not affect their interests. It may simply be conjectured that the business types of the respondents with strong interest in investing in the Lao PDR, are not directly related to procurement of mineral resources or agricultural resources.



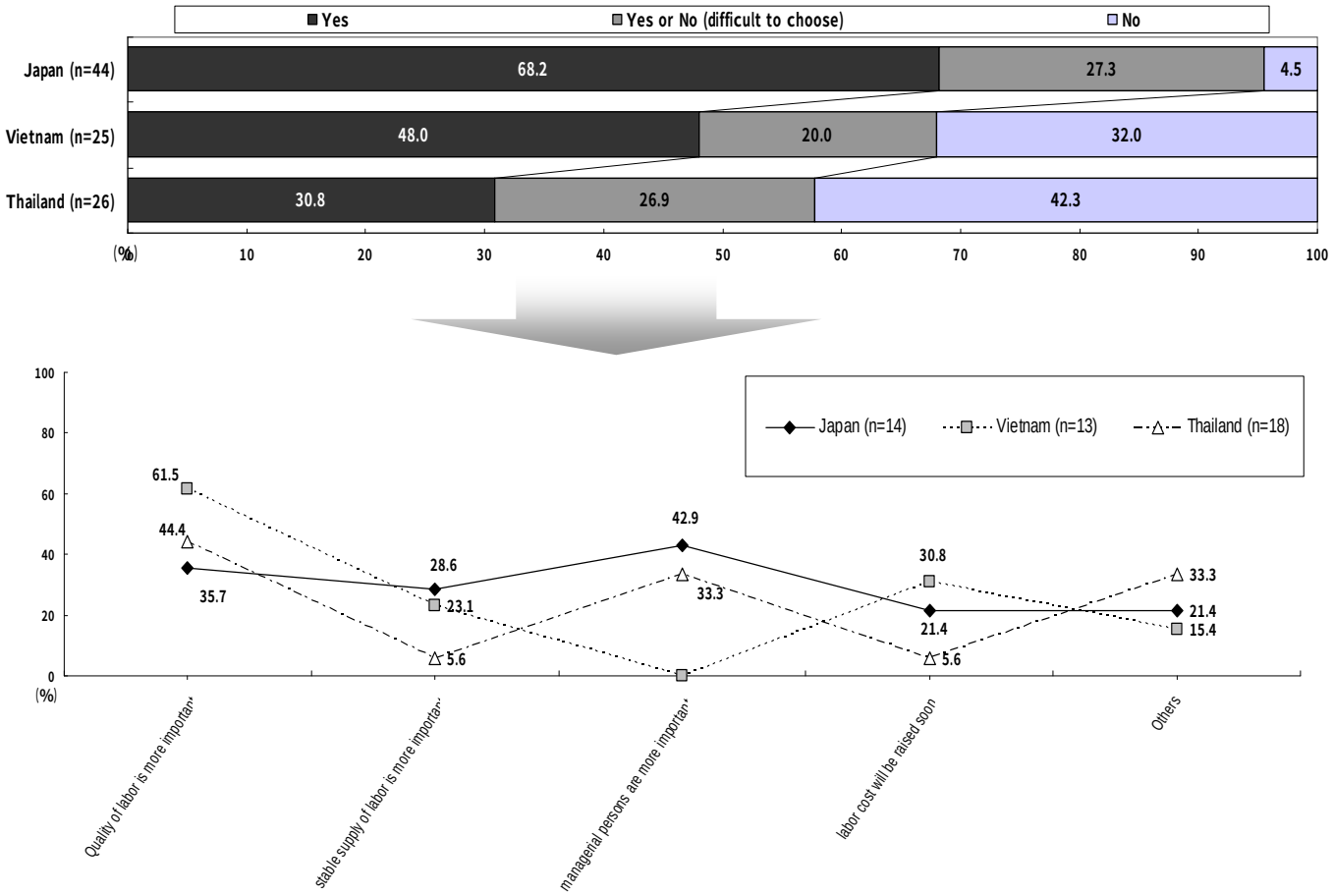

Source: JICA Survey Team

**Figure I.4.13: Reasons for Not Considering Mineral and Agricultural Resources as Decisive Factors for Investment**

## 2.7 Advantage for Cheap Labor Costs in the Lao PDR

As compared to its neighboring countries, the labor cost in the Lao PDR is cheaper. Especially, it is reported that their labor cost is one fifth of that of Thailand. This has been confirmed from the questionnaire survey. The corresponding survey results are shown in Figure I.4.14.

The results indicate that many of the future investors from the three countries replied that the cheap labor cost is certainly advantageous for their investment in the Lao PDR. The Japanese investors notably expressed the highest interests in the cheap labor cost. On the other hand, the Thai investors were completely not interested with the cheap labor cost issue, as most of them belong to service industries and not to labor-intensive industries. For the investors especially in the service sectors, the quality of labor is more important than the cost of labor, as shown in Figure I.4.14.

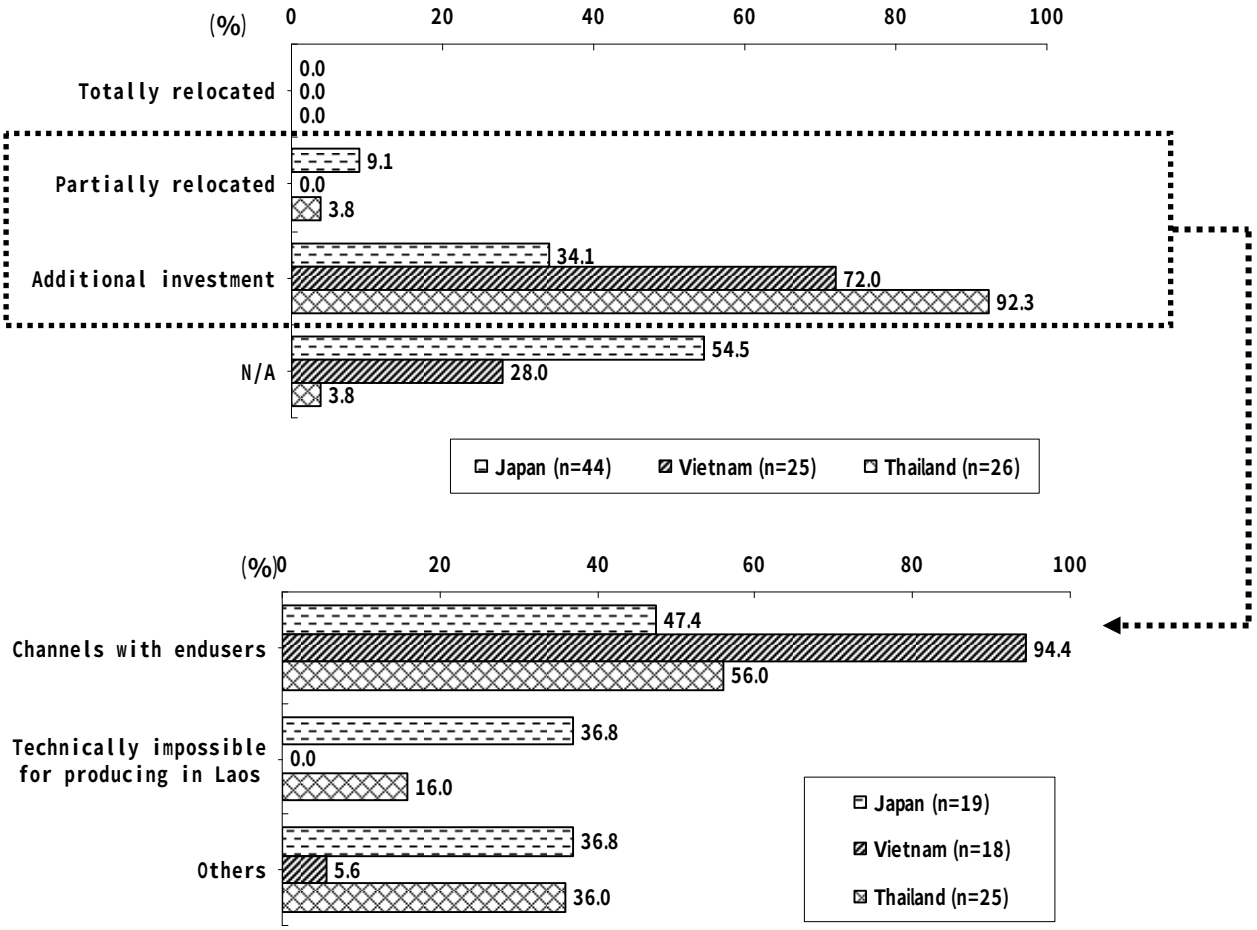



Source: JICA Survey Team

**Figure I.4.14: Advantage for Cheap Labor Cost in the Lao PDR and the Main Reasons for Not Considering Cheap Labor Cost as a Decisive Factor for Investment**

## 2.8 Investment Trend

As shown in Figure I.4.15, most of the potential investors plan to set up additional investment, if they invest in the Lao PDR. The main reason for not fully relocating in the Lao PDR is that its number of end users is limited. It means that the domestic market of the Lao PDR is still very low and therefore, even if they invest in this country, many of them will still locate their manufacturing base close to the end users. The number of respondents who answered "Others" indicated that most of the investors want to keep their mother factories in Thailand or Vietnam, as raw materials are imported through the seaports. If they fully relocate their mother factories in the Lao PDR, the transportation cost of the raw material shall balance out the cost merit.




Source: JICA Survey Team

**Figure I.4.15: Investment Style and Reasons for Not Fully Relocating in the Lao PDR**

# 3 Interview Survey

In order to acquire more detailed information, which could not be possibly obtained through questionnaire survey, a follow-up interview survey was conducted. The target sample number of interview survey was set to 40 enterprises in total consisting of 20 Japanese enterprises, and 10 each in Vietnam and Thailand.

The enterprises, which have shown the interest in investing in the Lao PDR, were basically selected for the interview survey. Prior to carrying out the interview survey, a hearing survey sheet was prepared to note down and to understand not only the detailed information about their answers to the questionnaire but also to determine demands for locating in an industrial park and to request for the kind of incentives that shall be offered to attract investments in the industrial park.

The major findings from the interview survey are as follows:

### 3.1 Timing of Investment

Twenty enterprises have been interviewed during the survey.

- Most of the Japanese enterprises had no detailed investment plan and therefore the schedule of their investment will not be immediate.
- Most of the Thai and Vietnamese investors mentioned that they would like to invest within three years, as they consider that there is a high chance to dominate the domestic market in the Lao PDR since there are not so many competitors.

### 3.2 Size of Investment

Most of the interviewees mentioned that the size of investment in the Lao PDR should be limited as it is quite difficult to acquire skilled labor and also the domestic market is small.

### 3.3 Preference of Location

- Most of the interviewees of the three countries answered that Vientiane Capital is the best location for investment, as the city is the centre of both economy and politics.
- For the agricultural business investors, they prefer investing in either the south or south central area of the Lao PDR.
- Thai investors who seek to export their products to Vietnam mentioned that the location of Savannakhet is also attractive.

### 3.4 Factors for Investment

Although there are various factors considered by each investor, the following are the major findings identified through the interview survey:

- Infrastructure development, incentives for investment, and human resources development are the most required factors for the interviewed investors of the three countries.
- In terms of infrastructure, both transportation and electricity development are prerequisite conditions for investment.
- Regarding incentives for investment, import/ export tax exemption is the usual requirement of most of the interviewees.
- Transparent and simplified procedures are also essential for all investors.
- Some investors mentioned that long-term land lease is among the main factors for investment.

### 3.5 Required Facilities

- All the interviewees indicated that vocational school for human resources development is important to secure and improve the quality of labor.
- Especially, Japanese and Thai investors preferred the provision of a one-stop service facility to simplify securing customs clearance.

- Some Vietnamese investors mentioned that provision of an information center on investment in the Lao PDR is very important for them because related guidance in the Lao PDR is limited and proper information are not easily acquired.

### 3.6 Requests for Industrial Park Facilities and Services

Finally, the required industrial park facilities and services are also confirmed through the survey. All the interviewed Thai investors did not show high interest in investing in an industrial park. Thus, the following findings are mainly from Japanese and Vietnamese investors.

- Export/ Import tax exemption
- Special incentives on corporate tax exemption or reduction
- Guarantee for the implementation/provision of investment incentives
- Fast and stable customs clearance
- Bond warehouse
- Access to the main transportation infrastructure

## 4 Questionnaire

The questionnaire form used for the investment demand survey is shown below.

# Questionnaire Survey

# on

# Industrial Zone Development in Lao PDR

## April 2009

Dear Sirs,

The Government of Lao PDR has currently been preparing the Industrial Zone Development Plan (hereinafter called as "the Plan") through the Preparatory Survey on the Industrial Zone Development in Lao PDR under the technical assistance of Japan International Cooperation Agency (JICA).

In order to prepare the plan, it is essential to acquire the information regarding i) the investment demand of the potential investors in the neighboring Thailand and Vietnam to Laos, as well as ii) what kind of incentives are required to be offered for promoting the investment from those investors, especially if industrial estates (parks) would be constructed in Laos. Consequently, this questionnaire survey has been conducted to acquire the essential information to prepare the Plan. The acquired information will be used exclusively for this JICA study after statistical data treatment, and thereby, any information that you provide us will remain confidential. Please kindly corporate to this survey. Thank you.

Yours sincerely

---

April 2009

Ministry of Industry and Commerce

JICA Study Team

【Contact】

JICA Study Team Project Office
Address: Phon Xai Rd., P.O. Box 4107, Vientiane, Lao PDR
TEL/FAX: +856-21-453493 (Koji Otsuka)

Q1. Would you have any interest for the future investment in Laos (say within 1- 5 years)?

Please select the one from the following items

| | |
|---|---|
| 1. | Yes, currently under the preparation of investment |
| 2. | Interested: possible in the near future |
| 3. | Interested: but not likely in the near future |
| 4. | Not interested so far |

* It is highly appreciated to answer the following questions even if you selected the "Not interested so far" in the above question. Your answer is valuable information for preparing the industrial development plan.

Q2. What is the most important factor to facilitate your investment in Laos?

Please prioritize the following 6 (six) items, by scoring figures. (The highest priority: 1 (one) / the lowest priority: 6 (six))

If (the item is) not so important for your business, please leave the cell (of the item) blank.

| | Infrastructure | Human Resources | Logistics | Insentives for Investment | Geographic Condition | Industrial Estate (Park) |
|---|---|---|---|---|---|---|
| Priority | | | | | | |

Q3. For each prioritized item in the Q.2, what kind of condition do you want? (Multiple Answer)

【Infrastructure】

| | | | |
|---|---|---|---|
| 1. | good road transportation network | 9. | high-speed telecommunication facilities |
| 2. | good railroad transportation network | 10. | sewage treatment facilities |
| 3. | good seaport facilities | 11. | waste treatment and recycling facilities |
| 4. | good airport facilities | 12. | cheap land cost |
| 5. | sufficient amount of water supply | 13. | firm ground |
| 6. | good water quality | 14. | enough land space |
| 7. | stable power supply | 15 | easiness to acquire rental factories |
| 8. | cheap electric tariff | 16. | others ( ) |

【Human resources】

| | | | |
|---|---|---|---|
| 1. | easy access to workers | 5. | cheap wage of engineers and technicians |
| 2. | cheap wage of workers | 6. | high capability of engineers and technicians |
| 3. | high capability of workers | 7 | securing workers for long term periods |
| 4. | easy access to engineers and technicians | 8. | others ( ) |

**"Mineral and agricultural resources" and "Human resources" are the largest benefits for the investors in Laos. In terms of these benefits, please kindly answer the following questions.**

[Mineral and agricultural resources]

**Q4. The following resources exist profusely in Laos. Which resources are attractive to your business? (Multiple answer)**

1. gold
2. copper
3. bauxite
4. iron-ore
5. phosphate rock
6. tin
7. zinc
8. coal
9. other mineral resource( )
10. fertile land
11. relevant climate for cropping (esp. organic farming)
12. plenty of electricity, due mainly to hydro power generation
13. no interest in the mineral or agricultural resources
14. Although interested in the mineral or agricultural resources, they do NOT become the decisive factors to invest.

**Q5. If you select no. 14 in the above question (Q4), what are the main reasons that the resources do not become the decisive factors to invest? Please kindly answer the following questions. (Multiple answers)**

1. Procedure for acquiring the concession is unclear.
2. There is no human resource needed to exploit in Laos.
3. The quality of the mineral resources is unclear.
4. Fully satisfied with the current purchase price of raw material, and thereby, no needed to invest in Laos.
5. Others( )

[Logistics]

1. adjacent to logistic park (warehouse facilities)
2. cheap transportation cost
3. well developed transportation
4. short transit time
5. good performance of transportation(less damage in transit, securing safeness in transit)
6. others( )

[Incentives for investment]

1. rapid screening and approval
2. transparent procedures for approval
3. fast custom clearance
4. accurate and transparent custom clearance
5. supportive system for recruitment
6. easiness in acquiring concession
7. long term concession period
8. long term land ownership
9. exemption of export tax
10. exemption of import tax for raw and intermediate materials)
11. reduction of personal income tax
12. reduction of corporate income tax
13. Others ( )

[Geographic condition]

1. agglomeration of related industries and supporting industries
2. good access to seaport facilities
3. good access to main roads
4. in the city with substantial urban facilities
5. in suburb (or rural) area with good natural environment
6. close to producing centers of raw materials
7. in the areas of relatively cool climate
8. Others( )

[Industrial estate (park)]

1. preferring to move in the well-developed industrial estate, if there is
2. preferring to move in the well-developed export processing zone, if there is
3. preferring to set up factory outside the industrial estate or export processing zone
4. no preference (whether move in or out of the industrial estate/export processing zone)
5. Others( )

3

4

[Human resources]

Q6. The cheap labor cost is one of the biggest benefits for investors in Laos. (General wage for workers in Laos is estimated about one fifth of that in neighboring Thailand)

Do you think the cheap labor cost becomes the decisive factor to invest in Laos for your business?

| 1. Yes | 2. Yes or No (difficult to answer) | 3. No |
|---|---|---|

→Q7. If you select no. 2 or 3 in the above question (Q6), what are the main reasons that the cheap labor cost does not become the decisive factor to invest? Please kindly answer the following questions. (Multiple answers)

1. The quality of labor is more important than the cost of labor.
2. Stable supply of human resources through the year is more important than the cost.
3. Securing management level employees, technicians, and engineers is more important than securing the workers.
4. An investment will be increased in Laos, the labor cost will also be increased rapidly.
5. Others(  )

Q8. As introduced in the attached brochure, there is a high potential of developing agricultural business as well as environmental business in Laos. The both business attract growing interest among the public, as the people's awareness of "food safety" and "global warming". Also, the following industries (shown below) are considered the potential industries in Laos. when considering the natural resources and conditions of this country. What are the attractive industries? Please kindly answer the following questions. (Multiple answer)

[Environmental business for global warming countermeasure]

1. plantation for vegetable oil and production of bio-diesel
2. power supply to the local areas by biomass power generation
3. production of bio-ethanol via sugar processing by-product, or starchy crops cultivated in Laos
4. power supply to the local areas by solar power generation
5. production of solar panel and/ or its raw material
6. Other environmental business for global warming countermeasure
(  )

[Food safety related business]

1. refrigeration or freezing of organic vegetables for exporting to remote market
2. processing of commercial crops (coffee, sugar, etc.)
3. processing of vegetables and fruits (ketchup (tomato sauce), potato chips, dried vegetable, jam, juice, canned foods, etc.)
4. rice processing (rice venegar, alchol products, rice snacks, etc)
5. non-wood forest products (mushroom, bamboo shoot, etc)
6. Other food safety related business(  )

5

[Potential business utilizing the feature of Laos]

1. processing of natural rubber made in Laos
2. production of essential oil and spice from tropical plants
3. production of crude drugs made from plants cultivated in Laos
4. production of seeds or flowers for export
5. manufacturing by precision technique such as medical and precision apparatus, fabrication and assembling of fine parts, embroidery & fabric, wigs, wire harness, etc.
6. Other business(  )

Q9. Except Vientiane Capital, there are possibilities of establishing industrial estates (parks) in Savannakhet, Pakse, Takhek and other major cities in Laos. If you're interested in moving in an industrial estate (park), where is the most preferable city? (Multiple answer)

1. Vientiane
2. Savannakhet
3. Pakse
4. Others (Name of the city:  )
5. No idea (Difficult to decide the city)

6

Q10. Please answer the size of your factory (or office) operated in Thailand, Vietnam, China and the other Southeast Asian countries. If you have multiple factories in single country, please answer the largest factory in that country.

| Operated countries (Multiple answer) | | Number of workers (persons) | Lot area (ha) |
|---|---|---|---|
| 1. | Thailand | 1. 1 – 29<br>2. 30 – 99<br>3. 100 – 999<br>4. more than 1000 | 1. less than 1ha<br>2. 2 – 9ha<br>3. 10 – 49ha<br>4. more than 50ha |
| 2. | Vietnam | 1. 1 – 29<br>2. 30 – 99<br>3. 100 – 999<br>4. more than 1000 | 1. less than 1ha<br>2. 2 – 9ha<br>3. 10 – 49ha<br>4. more than 50ha |
| 3. | China | 1. 1 – 29<br>2. 30 – 99<br>3. 100 – 999<br>4. more than 1000 | 1. less than 1ha<br>2. 2 – 9ha<br>3. 10 – 49ha<br>4. more than 50ha |
| 4. | Others (Southeast Asia) | 1. 1 – 29<br>2. 30 – 99<br>3. 100 – 999<br>4. more than 1000 | 1. less than 1ha<br>2. 2 – 9ha<br>3. 10 – 49ha<br>4. more than 50ha |

Q11. If you invest in Laos, do you have a plan to relocate your factory operated in Thailand, Vietnam, and / or China? Or is it an additional investment?

1. Totally relocated
2. Partially relocated
3. Additional investment (no relocation)
4. Not yet decided

Q12. *This question is answered by respondent who selected no. 1 in the above question (Q11).* Is the size of the relocated factory in Laos will be same as the current factory in Thailand, Vietnam, or China?

1. Yes (same as before) 2. Larger 3. Smaller

Q12. *This question is answered by respondent who selected no.2 or 3 in the above question (Q11).*
What is the main reason for leaving factory in Thailand, Vietnam or China?

1. having channels with end users
2. some working processes are technically impossible in Laos
3. Others (  )



Please write down your company profile.

| | |
|---|---|
| Company name | |
| Name of respondent | |
| Position | |
| Address | |
| Tel/ Fax | TEL.: FAX: |
| Email | |
| Type of Industry | 1. Food 9. Plastics 17. Electronic parts & devices<br>2. Lumber (wood)/ Furniture 10. Rubber/ Leather 18. Precision instruments & machinery<br>3. Pulp/ Paper Product 11. Ceramic & clay 19. Information & communication electronics equipment<br>4. Printing / Publishing 12. Iron & Steel 20. Transport/ Logistics<br>5. Chemical/ Pharmaceutical 13. Non-ferrous metals 21. Service<br>6. Garment 14. Fabricated metal 22. Others ( )<br>7. Textile 15. Mining<br>8. Petroleum & coal 16. Machinery |
| Main products (or service) | |

Is it possible to make a contact with you to carry out the follow-up interview survey in the near future?

1. Possible
2. Depending on the timing → Please fill out the contact person above.
3. Impossible

JICA study team and the Ministry of Industry and Commerce of Lao PDR will hold seminars to present the overall study results to the public. One will be held in Bangkok, Thailand, around the mid of December 2009, and the other two in Tokyo and Osaka, Japan in February 2010. Could we send the invitation letter of the seminar to you in the future?

1. Yes → Please fill out the contact person above 2. No.

**Thank you for your kind cooperation!**

# APPENDIX I.5 LEGAL SYSTEM IN THE LAO PDR

## 1 Current Legal System

According to the Ordinance of the President of the Lao PDR on Legal Act Drafting (2003), the system of legal acts is comprised of the Constitution, laws, resolutions, ordinances, decrees, decisions, orders and instructions. The order of these acts shows the ranking-wise hierarchy in the legal system of the Lao PDR. The roles and functions of each act are summarized in Table I.5.1.

**Table I.5.1: Roles and Functions of Each Legal Act**

| Legal act | Content |
|---|---|
| Constitution | Constitution is the fundamental law of the nation determining the political system, the economic and social system, the fundamental rights and obligations of citizens, the organizations and activities of State authorities. The Constitution is adopted by the National Assembly and voted by at least the two thirds of the whole number of the deputies of the National Assembly. |
| Law | Law is a legal act of the National Assembly determining the principles, policies, regulations, provisions and measures and aiming to regulate the social rapports in any important domain, having the binding force throughout the country and being used for long period of time. The law is adopted by the National Assembly and voted by the majority of the number of the deputies present in the session. |
| Resolution of the National Assembly | Resolution of the National Assembly is an approval of any issue in the National Assembly session relating to the economic and social development plan and budget plan, the adoption of laws and others issues relevant to the competence of the National Assembly. |
| Resolution of the Standing Committee of the National Assembly | Resolution of the Standing Committee of the National Assembly is an approval of any issue discussed in the meeting of the Standing Committee relating to the implementation of the decision of the National Assembly, the monitoring on the implementation of the Constitution and laws, including the interpretation of the Constitution and laws, and other issues relevant to the competence of the Standing Committee of the National Assembly. |
| Ordinance of the President of the Republic | Ordinance of the President of the Republic is a provision determining the principles, policies, regulations, provisions and measures below the laws and aiming to regulate the social rapports. The Ordinance is issued by the President of the Republic on the recommendation of the Standing Committee of the National Assembly. |
| Decree of the President of the Republic | Decree of the President of the Republic is a specific binding provision, such as the Decree on the promulgation of the Constitution and laws, pardon, medal decoration, appointment, upgrade, mutation or demission, and others provided for by the laws. The Decree is issued by the President of the Republic on the proposition of the government or other parties concerned. |
| Decision of the Government | Decision of the Government is a decision in a meeting of the government on any issue discussed in such meeting by the vote of majority more than half of the numbers of the members of the government present in the meeting. |

| Legal act | Content |
|---|---|
| Decree of the Government and Prime Minister | Decree of the government and Prime Minister is a provision determining the principles, regulations, policies and measures in order to regulate the social rapports in any domain. The Decree is issued by the government or the Prime Minister within their competence. Decree of the government and Prime Minister divide in two categories: general binding Decree and specific binding Decree:<br>(a) General binding Decree issued by the Government or the Prime Minister in order to manage the State, economy and society, such as: Decree on civil servants of the Lao PDR, Decree on the establishment and activities of any sector, Decree on the implementation of the laws issued with the view to detail the provisions of law for the facilitating the implementation;<br>(b) Specific binding Decree issued by the Prime Minister for administrative services, such as: Decree on appointment of the Director General, Decree on rewarding the State employees. |
| Decision | Decision is a general binding provision issued for detailing and implementing the legal acts of the higher state organs or a specific binding provision for administrative services. The decision is issued by the Heads of State organizations concerned within their competence. |
| Order | Order is a general binding provision issued for organizing and implementing economic and social development plan and budget plan, laws, ordinances, regulations or a specific binding provision for administrative services. |
| Instruction | Instruction is a general binding provision issued for organizing and implementing economic and social development plan and budget plan, laws, regulations, plans or any work by indicating the comprehensibility, methods, steps, vehicle and equipment use and term of the implementation, coordination and others. |
| Notice | Notice is a document issued by the state organizations of all levels for notifying the parties concerned or for accomplishing any work. |

Source: Ordinance of the President of the Lao PDR on Legal Act Drafting (2003)

# 2 Typical Steps for Legal Act Drafting

The typical steps for law drafting and decree drafting are summarized below.

## 2.1 Law Drafting

In order to implement the law drafting, each organization, which proposes to draft the law, must assign its sector concerned to perform such task. The assigned sector has to widely collect the information, study on the reality of political, economic and social situations, draw the lessons learned from internal and external experiences and coordinate with the parties concerned in order to complete the draft law.

The draft law has to have a title, and generally divided into parts, i. e., sections and articles. The parts or sections may be composed of: (a) general provisions determining the objective, perspectives and principles of law; (b) contents of the law which are the important issues to be governed, resolved or encouraged that are determined in the law; (c) management and control focusing on the management and inspection authorities determining by the law; (d) privileges and measures on the implementation of the adopted law that focusing on the rewarding for excellent achievements of law implementation, and on the education, including the punishment of the violators of the law; and (e) final provisions determining those who are in charge with the law implementation and the effectiveness of the law, and the provisions that shall be cancelled by the law.

After adjusting the draft law, the concerned sector assigned shall submit the draft, together with the law report on drafting, to the government for consideration. The government must then send the draft law to its members and other organizations not later than fifteen days prior to the relevant meeting to

be held. This is intended to give them enough time to study and give comments to the draft law during the meeting.

The draft law approved during the government meeting shall be forwarded to the Standing Committee of the National Assembly not later than sixty days before the opening of the session of the National Assembly. Subsequently, the Standing Committee of the National Assembly shall assign the Law Commission of the National Assembly to integrally inspect the necessity for the enactment of the law and its conformity with the Constitution and other laws.

In case the content of the draft law is fully complete, the Standing Committee of the National Assembly shall submit the draft law for consideration during the meeting of the National Assembly. The adoption of the law in the National Assembly session is decided through either open or secret voting. The draft law shall be considered adopted if majority of the number of the deputies who attended the meeting voted for it. The amendment of the law is also subject to a similar process.

The President of the Republic shall promulgate the law adopted by the National Assembly not later than thirty days from the date it was adopted. During this period, the President has the right to request the National Assembly to reconsider the law. The law shall come into effect a certain period of time after its promulgation, in order to create favorable conditions for its implementation.

## 2.2 Government and the Prime Minister Decree Drafting

The cabinet of the Prime Minister's Office is in charge of drafting government decrees, which is initiated through the following steps: (a) collect and study the situations related to the implementation of the socio-economic development plan, budget plan, law and other related legal acts; (b) co-ordinate with the other organizations and parties concerned in order to gather and summarize their comments for the decree drafting, and propose findings during the meeting of the government for consideration. The government decree comes into effect from the date the Prime Minister's signature is affixed.

The process for drafting of the Prime Minister's decree shall be similar to that for the government decree discussed above.

The structure for general binding government and prime minister decrees is similar to that of the structure of the draft law. The government and prime minister decrees come into effect from the date the required signatures are affixed.