

Study for the Replication of the
Japanese Experience of Development of
the Industrial Township in South-East Asia
to India
Final Report

March 2014

Japan International Cooperation Agency(JICA)

Japan Development Institute(JDI)

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Abbreviations

| | |
|---------|---|
| ADB | Asian Development Bank |
| AKVN | Audyogik Kendra Vikas Nigam |
| AP | Andhra Pradesh |
| APIIC | Andhra Pradesh Industrial Infrastructure Corporation Ltd |
| ASEAN | Association of South - East Asian Nations |
| BKPM | Indonesia Investment Coordinating Board |
| BOI | Board of Investment |
| CBIC | Chennai Bangalore Industrial Corridor |
| CETP | Common Effluent Treatment Plant |
| CFE | Consent for Establishment |
| CFO | Consent for Operation |
| CFS | Container Fleet Station |
| CIF | Cost, Insurance and Freight |
| CST | Central Sales Tax |
| CTC | Change of Tariff Classification |
| CVD | Countervailing Duty |
| CY | Container Yard |
| DDT | Dividend Distribution Tax |
| DIPP | Department Of Industrial Policy & Promotion |
| DMIC | Delhi-Mumbai Industrial Corridor |
| DMICDC | Delhi-Mumbai Industrial Corridor Development Corporation |
| DSIRDA | Dholera Special Investment Regional Development Authority |
| DTA | Domestic Tariff Area |
| EIA | Environment Impact & Assessment |
| EPA | Economic Partnership Agreement |
| EPZ | Export Processing Zone |
| FDI | Foreign Direct Investment |
| FIA | Foreign Investment Agency |
| FIC | Foreign Investment Committee |
| FIIA | Foreign Investment Implementation Authority |
| FIPB | The Foreign Investment Promotion Board |
| FTA | Free Trade Agreement |
| GICC | Gujarat Industrial Corridor Corporation |
| GIDB | Gujarat Infrastructure Development Board |
| GIDC | Gujarat Industrial Development Corporation |
| GNIDA | Greater Noida Industrial Development Authority |
| GST | Goods & Services Tax |
| HSI IDC | Karnataka State Industrial Investment and Development Corporation |

| | |
|--------|---|
| IEAT | Industrial Estate Authority of Thailand |
| IESA | India Electronics & Semiconductor Association |
| IPP | Independent Power Producer |
| JBIC | Japan Bank for International Cooperation |
| JDI | Japan Development Institute |
| JETRO | Japan External Trade Organization |
| JICA | Japan International Cooperation Agency |
| KIADB | Karnataka Industrial Area Development Board |
| KIPP | Karnataka Investment Promotion Program |
| KUM | Karnataka Udyog Mitra |
| MAT | Minimum Alternate Tax |
| MDSDP | Market Driven Skill Development Program |
| MIDA | Malaysian Investment Development Authority |
| MIDC | Maharashtra Industrial Development Corporation |
| MoCI | Ministry of Commerce & Industry |
| MoEF | Ministry of Environment & Forestry |
| MOU | Memorandum of Understanding |
| MP | Madhya Pradesh |
| MPI | Ministry of Planning and Investment |
| MPSIDC | Madhya Pradesh State Industrial Development Corporation |
| MRP | Maximum Retail Price |
| MWCC | Mahindra World City Chennai |
| MWCJ | Mahindra World City Jaipur |
| NESDB | National Economic and Social Development Board |
| NIMZ | National Investment for Manufacturing Zone |
| NMP | National Manufacturing Policy |
| ODA | Official Development Assistance |
| OESB | Office of Eastern Seaboard Development Committee |
| OJT | On the Job Training |
| OSS | One Stop Service |
| PCPIR | Petroleum, Chemicals and Petrochemicals Investment Region |
| PPA | Power Purchase Agreement |
| PPP | Public Private Partnership |
| QVC | Qualifying Value Content |
| RBI | Reserve Bank of India |
| RCCI | Rawalpindi Chamber of Commerce and Industry |
| RIICO | Rajasthan State Industrial Development & Investment Corporation Ltd |
| ROA | Return on Assets |
| ROE | Return on Equity |

| | |
|--------|---|
| SET | The Stock Exchange of Thailand |
| SEZ | Special Economic Zone |
| SIPCOT | State Industries Promotion Corporation of Tamil Nadu Ltd. |
| SIR | Special Investment Region |
| SPCB | State Pollution Control Board |
| SPV | Special Purpose Vehicle |
| TIDCO | Tamil Nadu Industrial Development Corporation |
| UPSIDC | The Uttar Pradesh Industrial Development Corporation Ltd |
| VA | Value-Added |
| VAT | Value-Added Tax |
| WTO | World Trade Organization |

Executive Summary

Chapter I: Experiences of Industrial Park Development by Japanese Companies in Southeast Asia

1.1. Trends of International FDI and Roles of Japanese Industrial Parks

1.1.1. Outlook and trend analysis of manufacturing FDI in India and Southeast Asia

Since the implementation of India's economic liberalization policy at the end of 1991, the FDI inflow into India has been growing rapidly. By comparison, in Southeast Asia, as a result of the liberalization of the various national economies, and, opening their doors to foreign capital in the 1980s, those nations have recorded years of high economic growth, and have collectively come to be referred to as the "East Asian Miracle." FDI inflows into Southeast Asia in 1990 recorded 27 times that of India where FDI inflow was hardly measurable.

As a feature of FDI inflow into India, the service sector accounts for 51% of the total breakdown of the economy, unlike in Southeast Asia where the manufacturing sector accounts for more than half of the investment.

In Southeast Asia, industrial parks have been developed to receive FDI while economic liberalization has progressed. Since the economic open-door policy and the development of industrial parks influenced the factors of selecting industrial location, a correlation can be seen in the increase in the number of industrial parks and FDI inflows.

1.2. Industrial park development by Japanese companies in Southeast Asia

1.2.1. The main factors of the success and strengths of Japanese industry

Industrial parks in Asian countries, initially, have been developed by the initiative of governments and/or government corporations, but since the 1980s, the development scheme by private capital and/or joint development with private capital became an effective method for this kind of development. Of these, there are private proprietary or joint developments, in which a Japanese developer contributed an initial partial investment, or, some of them were developed by their own investment.

The following elements are considered as the factors strengthening the attractiveness of industrial parks developed by Japanese companies.

Table 1: The main factors and process of success of industrial parks developed by Japanese companies

| Item | Success factors |
|----------|--|
| Location | Ensuring good access to port/airport. Ensuring access to big city and neighboring port by fast, inexpensive and reliable land transport. Further the industrial parks are located in close proximity to residence of administrators and engineers, which provides ease on commuting from the center of the |

| | |
|---|--|
| | metropolis. |
| Industrial infrastructure such as water, electricity and transportation | Stable supply of utilities by Park-owned equipment in the industrial park complex |
| Availability of labor force | Introduction of vocational training centers in the industrial park complex. Labor recruitment services in collaboration with universities and/or specialized engineering colleges |
| Land Acquisition | Land acquisition has been carried out by the private sector (mainly by domestic enterprise) without the necessity of public tender; consequently, the land was acquired at economical market price. Also, certain guarantees provided after conducting due diligence on land related rights. |
| Ground condition, soil environment | Sales and marketing systems with a report of ground conditions, land surveying and pollution of soil investigation results |
| Aftercare service | A wide range of aftercare services such as support for preparation of investment permission application documents, occupancy acquisition contract, local accounting service and so on. |
| Rental factory | On it went to the construction of the building, the layout of the general assembly for a processing plant is provided as a rental factory. It contributes to the reduction of lead time for tenants to launch production |
| Logistics system | Installation of a common bonded area in an industrial park complex, and provision of an outsourcing service for a logistics information system - these contribute to the efficiency of logistics |
| Living environment | The living environment including a Japanese school, Japanese residential areas, apartments for foreigners, Japanese restaurants, DVD-rental shops, and possibly even a golf course |
| Trouble shooting mechanism | Hot lines with the concerned government service delivery agencies in the countries are developed and strong problem-solving commitment is established by the Japanese industrial park operating company |

(Source) JICA Study Team

The major successful cases are the Eastern Seaboard industrial estate development in Thailand and Bekasi industrial park development in Indonesia. The success factor was that the role sharing between public and private involvement was fully functional. Since legislation and off-site infrastructure development by the government and direct investment by private sectors have been done efficiently at the same time, the industrial cluster has been developed in both regions. The roles of the government and private sector in industrial park development can be shown as follows.

Table 2: Roles of the government and the private sector in industrial park development

| | |
|-----------------------|--|
| Private sector | (1) Development of industrial parks, sale, management (2) Direct investment by companies |
| Government | (1) Laws for attracting private companies (industrial park development by joint venture of the government and private sector and/or PPP promotion) (2) Off-site infrastructure development |

- | | |
|--|---|
| | (3) Establishment of a vocational training center |
| | (4) One-stop service provision to investors |

(Source) JICA Study Team

1.2.2. Business model / revenue structure of industrial park development

The business model of industrial park development is, similar to real estate development, securing the strategic land inexpensively, developing infrastructure and selling to private companies with value-added services. It also includes the profit structure such as providing all necessary services for companies. The profit model is summarized as follows:

- 1) Land sales by industrial park development
- 2) Infrastructure, management, and operation services after selling the industrial plots
- 3) Development of rental factories
- 4) Logistics services such as dry ports

Not only providing stable utility services such as electricity, industrial water and sewerage treatment, industrial park developers and operators also provide supports for incorporation of local enterprise, local staff employment, accounting services to tenants and so on. By providing such overall after-care services, they can secure a stable profit structure. Also, there are increasing cases to provide rental factories. Rental factories are utilized as a temporary space by companies while conducting their feasibility analysis, or, as a support tool to minimize their initial investment cost.

1.2.3. Risk Management

Practically in industrial park development and practical management, various risks arise and occasionally hinder continuing business operations. From a risk management viewpoint, ranging from the development of operational guidelines to the understanding of the legal system, the risk management measures in the industrial park development in Southeast Asia need to be observed and analyzed to derive the lessons on how to actively control those risks.

Table 3: Lessons from risk management viewpoint

| Risk factors | Lesson |
|---|--|
| Risk on site selection due to policy and political decision | Eliminating the mechanism of selection of the project site just from a supply side approach rather than the demand side, such as those defined as the industrial park area from a particular political influence, a proposed private project is often adopted for the project site selection. |
| Foreign exchange risk | For loans, which normally account for 70% to 80% of financial source for private companies, a certain facilitation measures on financing system is established to raise fund in local currency rather than in foreign currency. Moreover permission of usage of fund brought from parents companies on working capital is also made. Furthermore, applicability of foreign currency as the settlement currency is made available so that it is possible for foreign zone developers to reduce the impact of exchange rate fluctuations |

| | |
|---|--|
| Risk on changes of Institutional provision and/or permission criteria related to business license | Familiarize with stakeholders and build confirmation for legal and institutional provisions serve as a basis of business licensing |
| Operation and maintenance risk | Since regular maintenance will be required, it is important for a business entity to set aside enough internal funds for the purpose. (Maintenance frequency depends the type of infrastructure and plant) |
| Utility risk | It is important to have guaranteed utility supply system such that utility business operations relying on only public infrastructure and utility supply run by the government may cause business risk due to un-expected stoppage of utility supply by events outside the control of the operating companies, and it effects on the credibility of management company of industrial park. Thus with facilitation measure from governments on legal and regulatory framework, operating companies are facilitated to establish their own captive utility supply units at their industrial park. |
| Land acquisition risk | To reduce the risk burden on the land acquisition of private companies, the relevant government authority provides public land or performs the land acquisition procedure on behalf of the private sector. There is even a movement to assemble funds and create a capital pool specifically for land acquisition. |
| Environmental risk / residents objection | Installation of exhibition halls and information centers for the dissemination of the nature of projects and the local contribution of companies (provision of libraries, schools, scholarships, such as microfinance) is also effective |
| Funding risk | In addition to funding from foreign and domestic private banks, diversification of the funding sources such as the issuance of project bonds in the bond market, or taking advantage of public financial institutions and international multilateral development banks less susceptible to fluctuations in the market. Furthermore infrastructure funds are also used to reduce the funding risk. |

(Source) JICA Study Team

Chapter II: The Situation and Challenges of Industrial Park Development in India - In Comparison with Cases in Southeast Asia

2.1. Trends and prospects of areas and industries of Japanese investment in India

According to the Japanese Embassy in India, as of October 2013, the number of Japanese companies in India is 1,072, and, the number of sites in operation under Japanese management is 2,542. By region, the largest number of sites in operation, 866 sites, are in South India (Tamil Nadu and Andhra Pradesh), followed by 710 sites in operation in North and Northeast India, 523 sites in operation in West India, 299 sites in operation in South India (Karnataka), and 144 sites in operation in East India.

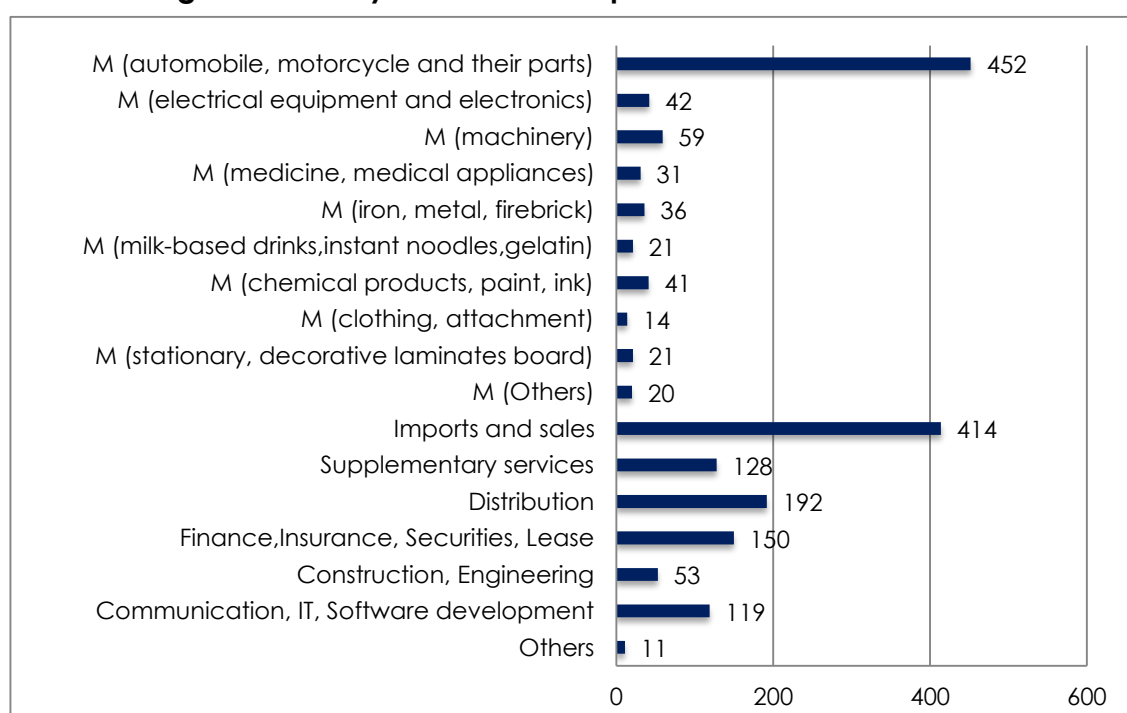
As of November 2012, out of 1,804 bases, manufacturing industry (automobile and parts, motorcycle and parts) accounted for an overwhelming majority of 452 bases. Although there are

problems in terms of trade balances, imports and sales business positions account for 23 % (414) of the total Japanese business positions in all categories.

The future trends can be forecasted as follows;

- (1) For the automobile and motorcycle industries, the outlook is for increases in operational bases engaged in production and sales of parts.
- (2) For the electrical equipment and electronics, timepiece and printer industries, a shift from importing to production and sales for import substitution is forecast.

Figure1: Industry distribution of operational bases in India¹



(Source) Compiled by JICA Study Team based "List of Japanese business positions in India" (November 2012: Japanese Embassy in India)

2.2. Possibilities, challenges and measures for investment in India in view of Japanese companies

According to "The 25th Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" by Japan Bank for International Cooperation (JBIC) in Dec. 2013, India maintains a second place in the fifth year in a row next to Indonesia as a promising country over the medium to long term, it can be seen that the Japanese companies recognize India as a promising investment country.

The top promising reasons for India are "Future growth potential of local market (87.0%)", "Cheap labor resources (25.5%)", "Local market size (25.5%)", "A supply base for assembly manufacturers (23.1%)", and "An export base to third countries (13.9%)". In particular, "Future

¹ M: Manufacturing

growth potential of local market” has higher evaluation than Thailand (60.0%), Indonesia (84.2%) and Vietnam (66.4%), and a growth potential of the domestic market in India is expected.

Simultaneously, the challenges investors face in India focus on: an “underdeveloped infrastructure (57.2%),” “tough competition with other companies (33.0%),” “unclear legal system operation (30.9%),” “labor problems (25.3%),” and “complexity in tax collection system (24.7%)”

In addition, as a challenge to companies operating in India, compared to companies operating in China and Southeast Asia, the number of companies which earn higher profit margins than in Japan is less (Table 4). 35.5% and 24.0% of the Japanese companies in Thailand and China have responded that profit margins are higher than in Japan. On the other hand, in India, only 7.3% of the Japanese companies have verified that profit margins are higher than in Japan.

Table 4: Countries more profitable than Japan (Descending order by ratio)

| Ranking | Country | “More Profitable than Japan” responses per host countries (1) | Total responses per invested countries (2) | Ratio (1)/(2) |
|------------------|-------------|---|--|---------------|
| 1 st | Thailand | 129 | 363 | 35.5% |
| 2 nd | China | 124 | 517 | 24.0% |
| 3 rd | Indonesia | 54 | 251 | 21.5% |
| 4 th | Philippines | 29 | 143 | 20.3% |
| 7 th | Vietnam | 33 | 185 | 17.8% |
| 11 th | India | 16 | 218 | 7.3% |

((Source) Compiled from “Survey Report on Overseas Business Operations by Japanese Manufacturing Companies” JBIC (Report in Dec. 2013)

The following challenges are observed with respect to the Japanese companies’ strategies as to how to improve low levels of satisfaction in sales and profits in India and how to strengthen the competitiveness of Japanese businesses in that country.

(1) Not a few Japanese companies have more than 10 key sales positions per one production position to cover customers scattered across an enormous land. These companies are consistently facing low profitability because of high distribution costs, costs of labor occupying sales positions and the costs of maintenance work for their products. Many of them are forced to choose between reducing the number of key sales positions to focus on the areas with the most important demand (customers) and increasing the number of production positions.

(2) Because the “high volume zone” in the Indian market is in the relatively low price range, efforts must be made to modify product specifications to match the needs of customers or reduce the number of parts used in products. They need to offer lower prices. At the same time, they must keep working for higher product quality and functions. They must also enhance their maintenance and other after-sale services as well as offer a full and diverse line of products.

(3) In addition, discovering and nurturing local supporting manufactures are an important issue. Japanese assemblers tend to maintain close, interdependent relations with their Japanese suppliers/subcontractors which offer products of consistently high quality. However, maintaining this cozy relationship hampers the reduction of parts and materials costs. Hence, it is important to build new relationships with local supporting manufacturers through technology transfers and provision of equipment.

2.3. Progress in manufacturing sector development, investment climate and foreign investment promotion policy of India

The Government of India has announced that it is necessary to consider the fact the growth of manufacturing sector has been limited, and the contribution of the manufacturing sector to employment and GDP is lower than that of other countries. In order to re-vitalize the manufacturing industry in terms of job creation and the acceleration of economic growth, the Government of India has announced a new National Manufacturing Policy (NMP) in November 2011.

In addition, in 2012, the Government of India announced three specific policies to promote electrical, electronic, and communications equipment industry. (1) National Telecom Policy 2012, (2) National Policy on Information Technology 2012 and (3) National Policy on Electronics 2012 were each established to start specific activities. The government is planning to provide a subsidy of 20% to tenants in Special Economic Zones for electrical, electronic, and communications equipment industry, and, 25% to tenants in non-SEZ industrial parks.

2.4. Law, Policy and Institutional Framework about Foreign Investment Promotion Policy and Industrial Zone Development in India and Southeast Asia

The law, Policy and Institutional Framework about foreign investment promotion policy and industrial park development in India and Southeast Asia are shown in the table below. Each government sets up investment laws and investment promotion organizations, and applies tax incentives to actively attract foreign investment. In developing industrial zones, development corporations under the government develop and manage industrial zones to provide tax incentives and services to investors located in zones.

1) Framework on Investment Promotion

Table 5: Country Comparison of Investment Promotion Policy

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|--|--|--|--|---|---|
| Investment Related Laws | Overall FDI Policy set by DIPP | 1977 Investment Promotion Law (Revised in 1992) | 1986 Investment Promotion Law | 1967 Foreign Investment Law | 2006 Law on Investment, Law on Enterprises |
| Investment Promotion Organization | FIPB (The Foreign Investment Promotion Board), RBI (Reserve Bank of India), FIIA (Foreign Investment Implementation Authority), Investment Committee | Board of Investment (BOI) | Manufacturing: Malaysia Investment Development Agency (MIDA) Non-Manufacturing: Foreign Investment Committee (FIC) | Badan Koordinasi Penanaman Modal (BKPM) | Ministry of Planning and Investment (MPI), Foreign Investment Agency (FIA) |
| Restrictions on Foreign Investment in the Manufacturing Sector | 100% foreign capital entry is possible except the items in the negative lists such as products reserved for SMEs | 100% foreign capital entry is possible in principle | 100% foreign capital entry is possible except the automobile industry | 100% foreign capital entry is possible except the items in the negative lists such as manufacturing alcohol and repairing bikes | 100% foreign capital entry is possible in principle |
| Land Ownership | Land ownership of foreigner/foreign corporation is possible | Land ownership of foreigner/foreign corporation is not possible, but the BOI approved companies are possible | Land ownership of foreigner/foreign corporation is possible | Land ownership of foreigner/foreign corporation is not possible. Foreigners use lands by leasing agreement. | Land ownership of foreigner/foreign corporation is not possible. Foreigners use lands by leasing agreement. |

(Source) Compiled by JICA Study Team based on JBIC/JETRO reports

2) Tax

Table 6: Country Comparison of Tax Policy

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|--|--|---------------------------------------|--|------------------------------------|--------------------------------------|
| Corporate Tax (Effective Tax Rate) | 42.024% | 23% | 25% | 25% | 25% |
| Income Tax | 30.9% | 37% | 26% | 30% | 35% |
| Domestic Sales Tax (VAT) | 12.5% | 7.0% | 10.0% (sales tax) | 10.0% | 10.0% |
| Average Tax Rate | 10.1% | 8.0% | 7.6% | 6.6% | 8.7% |
| Import Tax Other Than Tax (Collected at Customs Clearance) | Additional Tax Special Additional Tax | VAT | Sales Tax | VAT | VAT |
| Withholding Tax Rates on Dividends to Japan | 16.2% | 10% | 0% | 10% | 0% |
| Tax Incentives | Tax incentives to investment in infrastructure | Corporate income tax exemption of 3-8 | 70% corporate income tax exemption for | 30% of the investment exemption to | Corporate income tax exemption for 4 |

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|--------------------------------|--|--|--|--|---|
| | development, power development, renewable energy, chemical research development, etc. | years based on the approval of BOI. Import tax exemption of goods and equipment depending on the project | 5 years for pioneer status companies. Tax exemption for dividends distributed from the tax-exempted income | fixed asset investment in certain industry, area and investment volume | years and 50% exemption for 9 years after the taxable income start for investment in special investment areas, high tech parks and national infrastructure. |
| Funding of Companies Operating | Working capital raising prohibition by loan from HQ, funding from capital raising is also common | Foreign currency funding by loan from HQ, baht-denominated funding by loan from local banks | Loan from HQ and local banks | Loan from HQ | Loan from HQ and local banks |

(Source)Compiled by JICA Study Team based on JBIC/JETRO reports

2.5. Comparative analysis of investment climate in India and Southeast Asia

A significant investment framework cannot be found in country comparisons; however, implementation conditions in operating investment policy can make comparisons with each country. The “Doing Business 2013” can be used as a performance measure comparing the business environment of each country and region with various items conducted by the World Bank every year. Table 8 shows the rankings of 11 business topics out of 185 economies.

Table 7: Doing Business Ranking

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|-----------------------------------|------------|----------|----------|------------|------------|
| Ease of doing business | 132 | 18 | 12 | 128 | 99 |
| Starting a business | 173 | 85 | 54 | 166 | 108 |
| Dealing with construction permits | 182 | 16 | 96 | 75 | 28 |
| Getting electricity | 105 | 10 | 28 | 147 | 155 |
| Registering property | 94 | 26 | 33 | 98 | 48 |
| Getting credit | 23 | 70 | 1 | 129 | 40 |
| Protecting investors | 49 | 13 | 4 | 49 | 169 |
| Paying taxes | 152 | 96 | 15 | 131 | 138 |
| Trading across borders | 127 | 20 | 11 | 37 | 74 |
| Enforcing contracts | 184 | 23 | 33 | 144 | 44 |
| Resolving insolvency | 116 | 58 | 49 | 148 | 149 |

(Source)Doing Business 2013

According to the above table, the ranking of India is lower than Southeast Asia in terms of ease of doing business, starting a business, dealing with construction permits, paying taxes, trading across borders and enforcing contracts.

Chapter III Industrial park development and management in India

3.1. Law, Policy and Institutional Framework about Industrial Park Development

Table 8: Country Comparison of Industrial Parks

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|---|---|--|--|---|--|
| Industrial Park Related Law | 2006 SEZ Law | 1972 Law on Industrial Estate Authority of Thailand | N.A. | 2009 SEZ Law | 2006 Decree under Law on Investment |
| Industrial Park Management ↑ Organization | State government development corporation | Industrial Estate Authority of Thailand (IEAT) | No specific organization for industrial zone management, MIDA is in charge | SEZ is in a process of legislation, BKMP is in charge | Industrial Zone Management Committee |
| Tax Incentives | Corporate tax exemption for 5 years and 50% exemption for 5 years for companies in SEZs | Corporate tax exemption for 3-8 years and import tax exemption of 75% for maximum 5 years depending on the location for IEAT approved corporations | Iskandar development zone: income tax exemption for 10 years in 6 specific sectors | Batam Island: designated as a free trade zone, exemption for import duties or value-added tax for export industry | Corporate income tax exemption for 4 years and 50% exemption for 9 years after the taxable income start for investment in high tech park |
| Land Ownership | Purchase land through the state government corporation | Land ownership is possible for IEAT approved corporations | Land ownership of foreigner/foreign corporation is possible | Lease from the industrial zone management company | Lease from the industrial zone management company |

(Source) Compiled by JICA Study Team based on JBIC/JETRO reports

3.2. Business model / structure of industrial park development in India

In general industrial park project in India has been conducted by state government and private business entity.

Generally, industrial park project is carried out by State Industrial Development Corporation which is formed by the state act. State Industrial Development Corporation initiates development of land and sales of the industrial plot in accordance with the industrial development policy and plan under the guidance of industrial development policy and implementation plans along with supervision of industrial commissioner. And infrastructure development committee is established as an executive agency of policy implementation.

The mandate of state industrial development corporation is to perform industrial land development, related infrastructure development and sales/lease of the land. The role of the industrial development corporation is stipulated by state law, but in most cases, utility service delivery at the industrial area are carried out by other government / state corporations. In other words, though state industrial development corporation develops infrastructures in industrial parks such as street lights, power lines, drainage pipe, access road and, sometimes, sewage

treatment plant, actual operation of those utility is performed by separate state corporations. State power generation / distribution companies provide power, and department of public health conducts fresh water generation and sometimes supplies water, then state pollution control board supervise regulatory framework of sewage and effluent treatment as separate jurisdiction from state industrial development corporation.

The private sector's involvement in the business of industrial park development in India was encouraged by the adaption of SEZ Act in 2006. Initially, SEZ was aimed for materialization of the industrial park with full-fledged infrastructure in international standard. Tax incentives were also given to private zone developers, but, according to the general views of industrial society, the concept of SEZ has been gradually diluted and undermined by the imposition of Minimum Alternative Tax and other similar measures. It is also the fact that net positive foreign earning that is required for the companies operating in an SEZ keeps companies wishing to move to India for its market.

In response to a National Manufacturing Policy (NMP), a National Investment for Manufacturing Zone (NIMZ) is promoted as the implementation plan of progressive brown field project. The current scheme of the NIMZ project developed is supposed to proceed with the provision of land from the state government, and all required licenses and approvals are to be obtained as a package for inviting private competitive bidders for its development. The differences in the institutional framework of NIMZ and SEZ are as follows:

Table 9: Differences in institution of NIMZ and SEZ

| | SEZ | NIMZs |
|--|---|---|
| Minimum land area | 10 to 1,000 hectares depending upon the sector (higher for multi-sector SEZ, lower for niche sectors such as gems and jewelry, IT, etc. | 5,000 hectares. Processing area may include one or more SEZs. |
| Maximum area | 5,000 hectares for multi-product. | Not specified |
| Special Purpose Vehicle mandatory | Not specified | CEO of the SPV will be a senior central or state government official. |
| Can land be mortgaged by SPV? | Not specified | The state government needs to ensure that land can be mortgaged by the prospective allottees. |
| Responsibility for Environmental Impact Assessment (EIA) | Developer | State government |
| Minimum processing area | 50% | 30% |
| Cost of master-planning | Not specified | Central government |
| Renewable energy or depending on green technology | No mandate or incentive for renewable energy or green technology. | Mandatory to get a certain percentage of its electricity mix from renewable sources. |

| | | |
|---|---|---|
| | | Low interest loans and investment subsidies. |
| Special preference by government | Not specified | In government purchases preference will be given to units located in the NIMZs. |
| Interest subsidy for working capital requirement | Not specified | In government purchases preference subvention of interest on working capital by 4%. |
| Applicability of Viability Gap Funding (VGF) | Not specified | Yes |
| Incentives to promote innovation | Not specified | Nearly 50% of the expenditure incurred in filing international patents will be shared by the government. Tax exemption on expenditure incurred in taking national, international process or product certification (E.g., ISO). |
| Single window clearance | Yes | Yes |
| Tax incentives / concession to SEZ vis-a-vis NIMZ | Presently, supplies to SEZ are exempt from indirect taxes subject to fulfilment of export obligations and other conditions. | NMP proposes to provide various tax exemptions / concessions to unit establishments in NIMZ. |

(Source) PwC "Point of view National Manufacturing Policy" (2012)

3.3. Activities of industrial park development, obstacles and challenges

In the process of this land acquisition in India, the price of land and land use classification often cast issues. This defect is supposed to affect not only industrial park development projects, but also units to establish factories in the parks.

For the selection of industrial land, the location of an industrial park should be in compliance with the demand of investor, who may require good accessibility to a port and stable power, in addition to being non-agricultural land. Consequently, there is a limitation to offering cozy industrial parks in India that can supply enough support in terms of the interest of investors like infrastructure and geographic location.

Looking over the industrial park project in India, on-site infrastructure and facilities which are not performing as expected by investors are primarily power generation facilities and industrial wastewater treatment facilities. For power plants, there are very few industrial zones in India that have a captive power plant by which power is supplied to the unit in the zone. The industrial development corporation which has a mandate to develop industrial zones is not given an authority to develop power plant and distribute power within their industrial zone. Also the private sector is not seeing the power generation project in the industrial zone profitable due to not being able to produce economies of scale with the installation capacity of the power plant

and the amount at stake in a power purchase agreement with the state power distribution company. The present industrial wastewater treatment system is established on the basis that each individual company is supposed to have captive treatment facilities on their premises in compliance with the required norm of treatment by industries set forth by the government.

3.4. Activities in the operational aspects of the industrial park, obstacles and challenges

There is a big difference in the one-stop service in India in general, and the level of service scope and quality is poor in reference to the one available in Southeast Asia (Thailand, Indonesia, and Vietnam). Depending on the state, one-stop services that are conducted by government pose the difference between the actual quality and expectations of the investment company.

In order to achieve more proactively corresponding organizational setups in the future, the establishment of a one-stop service office at the place where enough demand on business administrative clearance is expected. Assistance for capacity development from JICA can be considered such as human resources development, OJT in the industrial parks in Southeast Asia, as well as dispatching Japanese experts as implementation partners.

Aftercare service is another important service provision of the zone operator. Private industrial park development operators are actively providing such services, taking advantage of the project partnership with the government in India. They intend to enhance the stronger business relationship with the tenant companies. However, industrial zones managed by the state industrial development corporation alone have neglected the service scope and quality of service provision as a whole. Therefore, the tendency is undeniable that aftercare service at public industrial zones has become perfunctory.

The table below shows a summary of the issues which state government and private zone developers are facing in terms of industrial zone development and management in India.

Figure2: Summary of the main challenges that the State Industrial Development Corporation as well as private zone developer are facing in industrial park development and management in India

| | <u>State Govt.</u> | <u>Private Sector</u> |
|---------------------------------------|---|--|
| • Master Planning | ✓ No single mandated authority to supervise industrial park development | ✓ Private sector participation in infrastructure designing is not permitted |
| • Land Acquisition | ✓ Conversion of land into non-agricultural land is impractical and challenging | ✓ Acquiring new land is difficult for private developers under the present land policy |
| • Licensing | ✓ No mandated agencies to authorize all-inclusive required infrastructure development | ✓ Overly complicated licensing system |
| • Infrastructure /Utility Development | ✓ Development of infrastructure / utility by different legal jurisdiction | ✓ Private sector participation in infrastructure / utility development is limited |
| • Operation | ✓ No uniform standards of utility services are provided | ✓ Private sector participation in operation is limited such as sub-leasing |
| • Marketing | ✓ Individual marketing / promotion from state to state ✓ Inefficient one-stop services | ✓ Problems in coordination among government agencies |
| • After Services | ✓ State Industrial Dev. Corp. not responsible for companies' operation | |

(Source) JICA study team

3.5. Guidelines and the development status of NIMZ

National Manufacturing Policy (NMP), which was announced in 2011 by the government of India, sets a policy goal to achieve the share of manufacturing sector's contribution to GDP from the current 16% into 25% by 2022, by fostering the international competitiveness of domestic manufacturing industries. For the achievement of this policy goal, the annual growth rate of manufacturing sector is deemed to be 9%, and then it is supposed to gradually increase to 12% to 14% in a sequential manner. Also the policy cites new job creation of 100 million people, and for this purpose; in particular, the creation of a capacity building program to youth in rural areas is highlighted.

To accomplish the goals stated in the NMP, a National Investment and Manufacturing Zone (NIMZ) is proposed as a major and symbolic approach. As already mentioned above, an NIMZ is to be developed as green field area in a vast land for large, medium-sized and even small scale enterprises as it is designed to enhance a mutual association / value chain between companies. In addition, a flexible administrative system is purported to be applied, and promotion of the manufacturing industry has particularly focused as its development concept.

As shown below, the development situation of NIMZ is different in the degree of effort by each

state. Also in general, the proposed location of each NIMZ is situated in the place where linkage with any sea port is weak, and land acquisition also seems to take in approximately 4 to 5 years. The progress of the projects is varied.

Table 10: Development status of NIMZ

| State | Location | Status | Industrial development Corporation |
|-------------|--|---|------------------------------------|
| Haryana | In the section between Manesar and Bawal, the location is specified as MBIR (Investment Region), | The policy of the central government on assistance measures for development NIMZ and system to be applied to NIMZ are regarded unclear, | HSI IDC |
| UP | Dadri Noida Gazabad Investment Region | Greater NOIDA Authority is supposed to carry out land acquisition together with arrangement of all required license and approval for NIMZ development. The project development and operation is considered in PPP scheme with setting up of SPV. | Greater NOIDA Authority |
| Rajasthan | - | In the step of waiting for the development strategy of the central and state governments, there is no significant movement observed yet. | - |
| MP | Pithanpur | Acquisition of the vast land like 5000ha is regarded not possible in the area of Pithanpur / Indore; hence there are no proposed plans at present. | AKVN Indore |
| Gujarat | Dholea | Dholera has been promoted as DMIC project by State government and the development is supported to be carried out in this line rather than focusing on the NIMZ. | GIDB |
| Maharashtra | Nagpur | The procedures for land acquisition are in progress. Industrial urban development projects in the area of Dighi port hinterland becomes DMIC projects, thus the project is not regarded as NIMZ project by MIDC. | MIDC |
| Karnataka | Vasanthanarasapura | Of total land for development of 5,000ha, land acquisition of 3,000ha was completed in the project site. (The remaining 2,000ha is in the process). Pre-F / S is being prepared by IL & FS, with the report application for NIMZ title is sent to DIPP. The establishment of the SPV and EIA application shall be followed. | KSI IDC |
| AP | Medak | Drawing / plot development of land was completed and the EIA application is being prepared. | APIIC |
| Tamil Nadu | - | Due to difficulties for ensuring 5000ha, the selection of candidate projects in Tamil Nadu is yet undecided. | - |

(Source) JICA study team, based on interview survey

At present the guidelines of NIMZ is vested with a strong initiative of the public sector and the structural design of the industrial township development and operation is not practically incorporated the role of the private sector. Different from DMIC or the public SEZ projects, the SPV to be formed for the NIMZ project should have a room for the private sector's participation in even at the initial stage of project designing and master planning of the project. In this regard, even in the present guidelines, for the formulation of NIMZ, the position of Mentor is allocated as the post of private sector. The mentor post of SPV is given only for two manufacturing companies, and the participation of the zone development company is not specifically mentioned so that the possible adjustment of the structural design of SPV may need to be considered.

3.6. Portfolio analysis of the industrial park in India

In the report, the 59 industrial parks are studied and related data was collected through interviews. Based on the collected data, an analysis of the scatter diagram was attempted by observing the three parameters of sales prices per unit area, total development area (ha), and the distance from the main port, as the attribute to understand the characteristics of an industrial park in India.

Based on the scatter diagram, it can be considered that the attributes of the industrial park group in India can be divided into two categories in general, industry parks in the close proximity to ports and those in a far distance from ports. As phenomenon which cannot be found in Southeast Asia, the distance from the port gets far, the sales price of the industrial zone becomes higher. On the other hand, even not a distinguishing feature, there is a trend observed that the industrial zones close to ports have relatively large total development areas.

As we analyze the portfolio features of industrial zones developed and operated whether by the state industrial development corporation (public) or by private zone developers (private), in the parameter of the total development area, sales/lease price and the distance from major ports and cities, the analysis indicators that the industrial zones developed by the private sector locates more close to the ports and the sales price of the industrial plots is cheaper than those developed by the public sector. On the other hand, when the distance from the major cities is viewed as a parameter, industrial zones of both public and private sectors are situated within almost 60km distance from major cities, and it was observed that there are not always major cities along with the major ports in the context of India.

3.7. Case study of industrial park projects in India

(1) Mahindra World City, Jaipur

Among the Mahindra group, MSDL, in charge of the real estate development business, undertook this SEZ development project in Rajasthan, after successful implementation of the same SEZ development business in Chennai. The project site began its leasehold in 2008. In MWCJ, the management structure of the SPV is made by having an equity share of 26% from

RIICO. As a development scheme of the industrial park, the land conversion from agricultural land and practical land acquisition of the entire land were performed by the Jaipur Development Authority (JDA), and then leased to RIICO. In fact the land is owned by the government, and then subleased to MWCJ further in 2006 for its development. The management scheme of the industrial park is made that a daily general business is performed by MWCJ, and for the case of operational problems occurred, as a structural measures, the Board with the presence of the Additional Chief Secretary of RIICO shall be organized to settle the issues. In addition, there is no implementation track record yet, but another customer service provision of a ready-made factory, which is called a build-to-suit model, is offered as a marketing tool of the industrial park.

(2) Mahindra World City, Chennai

Mahindra World City, Chennai (MWCC) is a SEZ project in India as the first project group of its kind and the development was undertaken with an initiative of Mahindra group together with an investment of 11% from Tamil Nadu Industrial Development Corporation (TIDCO) as a representative of the Government of Tamil Nadu. Mahindra World City, Chennai advanced its development by arranging land by themselves from 1997. Of the private SEZ business group in India, Mahindra World City, Chennai can be claimed as the most advanced industrial park with a fully equipped business environment. The park also incorporates other commercial and residential facilities, which includes hotels and schools on site as well as a common sewage treatment facility. Aftercare service is mainly provided by World City and a board meeting is regularly organized once every three months with the presence of TIDCO. There is no resident staff of TIDCO at the site.

(3) Sri City

Sri City, as a private industrial park project, with SEZ and DTA, was launched in 2008 based on a 99-year land lease. In recent years, major assemblers such as Isuzu and Kobelco have become manufacturing base tenants in the park. The management company of Sri City is a wholly-owned venture capital business owned by a company called People's Advisor, but the land acquisition itself was assisted by APIIC as the land was resold to Sri City. Power is not supplied from Tamil-Nadu State. It is supplied from the AP State with a capacity of 40MW designated for the project, and the power distribution is made to the tenants through substations owned by Sri City (contract is made between AP Power Transmission Company and tenants). In addition, in Krishnapatnam port of AP State, new power generation project are coming up with the capacity of 8,000MW in total in addition to the existing coal-fired power plant around the port. Sri City also has a plan to lay down gas pipeline to the site to run a gas-fired power station at the site. In Sri City, the Assistant Development Commissioner sent from the central government / MoCI is stationed for conducting public administrative day-to-day operations. The formality of the licensing procedure is relatively, smoothly operated.

(4) AP SEZ

APSEZ is the only one SEZ which was developed by APIIC in the state of AP. Development on the project commenced in 2007 as a certified SEZ. The land acquisition of the project site proceeded under the control of the District Controller in response to the request from APIIC. The total acquired area of 9,000 acres was then partly transferred to APIIC. While APIIC develops the on-site infrastructure facilities (road, street light and water pipeline) and supplies industrial water within the SEZ, whereas power supply is produced and provided by APTransco. The off-site infrastructure, the substation and transmission line, was developed by the construction commission where APIIC paid the development cost to the contractors. The daily operation of the SEZ is performed by the APIIC staff, and other customs clearance and related SEZ licensing services are taken care of by officials sent from the central government. Having such division of roles, various approvals from the state government have to be obtained in the state capital, located far from the project site.

Table 11: Summary of case studies of industrial parks in India

| | Mahindra World City (Jaipur) | Mahindra World City (Chennai) | Sri City | Ap SEZ |
|--|--|---|--|--|
| Management structure | JV between public and private entities | JV between public and private entities | Private entity | State Industrial Development Corporation |
| Method of Land acquisition | After acquisition by State government, lease to private business | Mostly acquired by private business | After acquisition by State government, lease to private business | After acquisition by the District Collector, transferred to the State Government |
| Classification | SEZ + DTA | SEZ + DTA | SEZ + DTA | SEZ + DTA |
| Sales contract form | 99 year lease (SEZ) | 99 year lease (SEZ) | 99 year lease (SEZ) | 99 year lease (SEZ) |
| Utility service (power and water) | Agreement on utility provision is entered into with the state government corporation | Secured by being a JV | Agreement on utility provision is entered into with the state government corporation | No |
| Captive power plant | Backup only | Backup only | × | × |
| Sewage treatment plant | ○ | ○ | ○ | × |
| One-stop service | Private operating company takes a role of liaison with the government | Private operating company takes a role of liaison with the government | Private operating company takes a role of liaison with the government | No |
| Resale to third parties of industrial land | Possible (Developers, will be the first negotiator, at market price) | Possible (Developers, will be the first negotiator, at market price) | Possible (Developers, will be the first negotiator, at market price) | Not possible (the land will be returned to the developer at a price at the time of purchase) |

(Source) JICA study team

3.8. Benchmark analysis in industrial parks in Southeast Asia and India

3.8.1. Benchmark analysis

Based on the data of major industrial parks in Southeast Asia and India, the Study Team has conducted the benchmark analysis to evaluate the competitiveness of each industrial park. Selecting the indicators of 35 items from "general information," "infrastructure," "investment

incentives," "wages," and "urban infrastructure," the benchmark score table was developed.

Comparing the industrial parks of Southeast Asia with India, industrial parks in Southeast Asia have higher evaluation points in distance from the nearest port, in on-site utility infrastructure, in investment incentives, in wage scales, and in urban infrastructure. In order to accelerate the investment in the industrial parks of India, providing value added services such as providing attractive investment incentives is required.

3.8.2. Comparison of industrial park development and management in Southeast Asia and India

From the perspective of industrial park development

Laws and regulations

Infrastructure / service specification and regulatory standard of these provisions in industrial park are necessary measures for ensuring certain extent of quality of international standard industrial park and attracting investment of international companies. The required guideline has been developed in Southeast Asia, and therefore, it is clear for zone developer to follow. On the other hand, though the guidelines are available in a special economic zone in India, it is just for the reference of infrastructure / service specification and there is no provision of rules or guideline from the central government in the general industrial zone / industrial park requirement rule.

Jurisdiction organization

The practice of assigning competent authorities on industrial park development and management is different from country to country. But in Southeast Asia, the delegation of power to a single mandated organization is clearly legally stated under the name of the head of state with respect to industrial park development and management. Therefore dysfunction of industrial park from friction between ministries due to different jurisdiction matters can be avoided.

Land acquisition

It is common in Southeast Asia to purchase land under a certain land ownership system by private businesses, and the acquisition of land by the private sector is assumed as the base of industrial park development. On the other hand, in India, institutional land acquisition by the state government has been a fundamental premise of the industrial park development. Thus there is a difference between two methods of acquiring land for development and in the division of roles of the private and public sectors. Also in Southeast Asia, when the government acquires land, the central government attempts to create a fund for the purpose.

Zoning

Since the development of industrial park in Southeast Asia is mostly conducted by the private sector, maximization of profitability from land is the core philosophy when zoning of the park

was designed, whereas planning on the use of land for non-profit activities is mostly regulated by the governments by preparing zoning rules and guidelines in Southeast Asia. On the other hand, in India, there are no clear zoning rules for industrial parks. Hence the State Industrial Development Corporations developed their own zoning plan standards for industrial parks.

Location

In Southeast Asia, there is a mechanism available for selection of the project site in the national industrial park development master plan, which was prepared through the use of ODA, hence the location of the individual business projects are also allowed in the scope of the master plan. Some states have regional development master plans in India, but a national industrial park master plan has not been formulated.

Geographical access factor

Both in India and Southeast Asia, there is a common tendency that the industrial park development is concentrated in the large cities, but the number of industrial park / special economic zones which have a good access to the port is limited in India. The industrial park business in Southeast Asia focuses on the expansion of existing industrial areas / estates while the focus of industrial area development projects in India is on greenfield projects.

Development approval

In Southeast Asia, structural reform is very advanced. The organization specified as the authorized focal point for industrial park development, based on predetermined steps necessary to build vital infrastructure and provide essential services for an industrial park, is well established and empowered to grant approval and issue licenses enabling development and operations of industrial parks to move forward. The development approval of land in the industrial park for the purpose of investment promotion and sales of land is facilitated in Thailand, Indonesia, Vietnam and Cambodia, through an efficient licensing system that focuses on how speedy / how efficiently the development period can be minimized. Another unique feature of industrial park development in those countries is the ease of access to basic information for private developers to understand guidelines and various infrastructure standards.

Entry of private zone developer and incentives

In Thailand, Indonesia and Vietnam, the industrial park development scheme was initially made by the central and local governments, but since the 1990s, entry permits have been issued to private zone development companies, and development by private players is progressing. In Cambodia, there is even a set of incentives given for private zone developers.

Restrictions on foreign investment

While India allows even foreign companies to enter the industrial park development / special zone development market, restrictions on real estate development by 100% foreign capital are often applicable in Southeast Asia. However, in the industrial park development and

management business, in more than licensing, there are needs of a wide range of field support along with the local business practices. Hence, consequently it becomes the responsibility of local companies/partners to cater to such needs. Thus, in models of industrial park development in Southeast Asia, actual JVs between local & foreign capital have been functioning as the best practice.

Coordination with departments in relation to linked infrastructure / utility development

In Thailand, IEAT is given the privilege of being able to conduct development and operations of industrial parks, inclusive of all required services and infrastructure facilities for tenants. Even in private industrial park development projects by private operators, Indonesia and Vietnam have a representative focal institution, which have a legal basis in bearing the obligation and mandate to support infrastructure development & utility services by private zone developers through the Ministry of Commerce and Industry and Ministry of Planning and Investment respectively. In other words, as members of the development of the industrial park authorities, the Board of IEAT has members of Ministry of Industry, Civil Service Commission, Ministry of Transportation, Ministry of Planning, Ministry of Defense, Ministry of Planning, Revenue, Tourism Bureau, power company and 2 representatives from private sector, which can be worked as a consultation and coordination body for smooth installation of various necessary infrastructure.

The committee system, like the above, can be seen in some states even in India, and it has been effective to a certain extent in terms of linked infrastructure development. However, in the SEZs of India, even though the development commissioner under the Ministry of Commerce and Industry is authorized to supervise the development and operation of SEZ, approvals in relation to other ministries (pollution control and labor) lying not under the jurisdiction of Ministry of Commerce cannot be obtained in an efficient and simple manner. Therefore, some individual projects apply to a listing of Project Monitoring Group of the state government or the Cabinet Committee for Infrastructure under the Prime Minister's Office of the Central Government as a status so that coordination of different linked infrastructure development can be established.

Environment impact assessment

For an industrial park development company, the preparation of an EIA is required in any countries. However, in some countries like Indonesia and Vietnam, under certain conditions where EIA was finalized at the time of industrial park development, units to come and invest in the industrial park do not require full-fledged EIAs but a relaxed simpler form of an EIA. On the other hand, Thailand seeks a strict adaptation to environmental regulations.

From the perspective of industrial park management and operation

Customs duties

For the customs business, different method in particular is not taken so far between India and

Southeast Asian countries, but the customs offices are often installed in a number of individual industrial parks in Vietnam and Cambodia, so that the efficiency of logistics by having a customs office at an industrial park is taken into consideration.

Residential/housing and commercial facilities

Housing supply for industrial park workers is sometimes one of the encouraged policies in many countries. But in practice, whether it leads to residential and commercial development besides industrial parks depends on the local housing culture and marketability at the individual project site or country. A policy-induced unilateral government intention would sometime end up in developing an unattractive housing complex. The trend in India does not imply the employees will be living in the housing compartment facility next to an industrial park, but it is rather common for workers to commute from the villages around the industrial zone. Hence, with the exception of foreign employees, development of the housing compartment in industrial parks is not so common in India.

However, it is also a fact that residential and commercial facility development in Southeast Asia has become an important source of revenue for the industrial park developers, township development along with the implementation measures of public services and surrounding social infrastructure has become a successful model by creating synergistic effects in Indonesia, Thailand and Vietnam. Township development around the industrial parks in Southeast Asia brings about rich social life infrastructure and urban development, which offers business as well as social life to workers in the industrial park.

Power supply

Industrial parks in Southeast Asia, in particular Japanese industrial parks, attract investor's confidence by offering stable power supply system with IPP installation at their parks. However, from the business side, when IPP business focuses only on tenant companies in the industrial park, the business should embrace risk in scale and buyers. Hence most of IPP business is based on a condition that the surplus power from IPP (the amount of power that exceeds the demand in the industrial park) should be sold externally to power distribution companies in the region and ensure the economy of the business through reasonable power purchase agreement with the power distribution companies.

Due to the provisions of prevailing standard Power Purchase Agreements, the IPP power generation business is facing problems in India, in that the operators are confined to the risk hedge measures by suffering the imposition of sudden rises in coal prices relative to the formerly agreed price of power supply between state power distribution companies. Because of this imposition, the price of power cannot be properly adjusted with rising fuel costs. Moreover the Cross Subsidy Surcharges in current law is causing high cost of electricity sales. Consequently, it is a reality that cost / risk to promote IPP projects to be taken up in industrial park would become greater than the expected benefits from the projects. Also to do IPP business

in industrial parks in India, managers must consider the ways to synchronize with existing self-generators that have become normal practice of individual units in industrial parks.

Water supply

Otherwise, there is no difference for the water supply system of the industrial park operation in between India and Southeast Asia, but there is a feature point in India that some industrial zones in India do not allow the industries to use a large volume of water resources, and regulation on water recycling is imposed.

Sewage treatment

It is found that the concept of wastewater is bit different from Southeast Asia and India in that terms of a sewage (domestic wastewater) and effluent (industrial wastewater) are clearly defined separately. There is a separate regulatory framework for the industrial wastewater and domestic wastewater, and the system design for treatment is also made assuming that the treatment is going to be individually processed. At present it is extremely rare that domestic wastewater a treatment plant (centralized processing facility) is available in an Indian industrial zone and it is rather common for individual units/companies to install their own treatment plant at their premises and process treatment by their own in accordance with regulations.

Effluent treatment

In Thailand, Indonesia, Vietnam and Cambodia, it has become a standard for industrial park to equip a common industrial wastewater treatment plant at the site from the beginning. The availability of a treatment plant which accepts both domestic and industrial wastewater after initial treatment at the plant is also the first and most important condition for units/companies to consider investment in the industrial park now.

It is illustrative of the current situation in India that for industrial parks developed by the state government corporation, there are only a few that have industrial wastewater treatment facilities, and then individual companies have their own treatment facilities provided the company has enough space and expertise to operate them. CETPs for small businesses are running, but they are operating with a target of single industry (such as the leather and dyeing industry), and for the development of new CETP for ordinary industrial clusters, issues have been encountered with the availability of land and the scope of drainage. Hence it is difficult to set up CETP at existing industrial cluster as they wish. If India intends to install a captive CETP in the future, an industrial park is the deal site for setting up such utility that allows the wastewater treatment on the assumption that industrial wastewater from unspecified industries can be treated collectively in accordance with the specified inlet standard; and CEPT, under such a development scheme, can dispose of the effluent and remain in compliance with the provisions of SPCB's outlet standard.

Industrial waste treatment

The processing scheme of industrial waste in the industrial park does not differ from India and Southeast Asia. But the location of the industrial waste treatment plant is not in conjunction with the industrial park development by region in India. Consequently, it seems that business planning and system design are often required in advance of factory investment.

Human resource development

In order to improve the productivity of workers in industrial parks, those parks have to become places of practical human resource development to encourage employees and local people to become involved in vocational training in each country. Even in India, in order to increase the stability of the workforce in the region, a 'Tool Room' in association with industrial park development operators would deliver a curriculum where hands-on training of the machine tool and production management can be provided, so that it can serve as measures to facilitate the competitive advantages of industries.

Sales method

Sales methods vary from country to country but, a lease agreement of 50 years is common in Indonesia, Vietnam and Cambodia, whereas there are some states in India which provide lease periods of 99 years. For investors this element can be a relatively an attractive option.

One stop service

Specific organizations are established by state law, such as the One Stop Service Act in effect in each state. In response to the transfer of authority to the organization, these organizations practice one-stop service or one-stop facilitation services for the delivery of a variety of licensing. However, at present, the central government still holds a significant power on business licensing and the one-stop service practiced by the state government has been facing difficulties in improving the performance of approvals of work in this regard.

Also, it should be highlighted that the organization/agency, designated as a one-stop service provider, is defined in law, and its power is enforced by that law in that the head of state clearly holds the legitimacy of position in Southeast Asia. The recruitment of staff of a one-stop service provider is often made from senior officers who have extensive practical experience and are expected to work as full-time staff. Human resource development and training is carefully undertaken to ensure that the employees understand the mindset of the private sector. Often such training programs are conducted in Japan and other countries.

From the perspective of units/companies in industrial park

Condition of entry

As a condition for entry into an industrial park, units/companies are expected to be export-oriented in EPZ. But there is no case in Southeast Asia like an Indian SEZ where units/companies are expected to be a positive net foreign income earner. In this respect, there

occupies a mismatch between companies who observe India as offering attractive domestic markets and the conditions of entry to SEZs. Hence it is a major hindrance for a foreign investor who considers investing in India.

Incentives for investment

Thailand, Indonesia and Vietnam offer incentives for investment when investment is made in a rural area. There are tax benefits and non-tax benefits. The former is a tax-exemption from customs duties and corporate income tax for certain foreign companies and the latter may vary from the establishment of 100% foreign-owned companies to land ownership rights for foreign companies. The difference can be seen between India and Southeast Asia in terms of applying the tax incentives by the scale of investment projects (incentives for investment to the Northeast region in India is also present).

Lease/sales agreement

Lease periods of industrial parks in India, depending on the specific state, is equivalent to those available in Southeast Asia. However, the problem of land defects casts a serious shadow for Japanese companies looking into the Indian market. Depending on the country, when moving to an industrial park, the seller of the land takes responsibility for any land defects in Southeast Asia, whereas in India, the risk of land defects is very high. This is a critical subject for investors to consider investing and certainly needs improvement.

Option of lease/land title transfer

In India, the transfer / resale of the industrial land of the industrial park is regulated in a strict manner. In practice, it is nearly impossible for a company to resell or transfer a land title to a third party. However, the land property of an industrial park / SEZ developed by a private sector company can be resold or transferred into a third party at market value as it is practiced in Southeast Asia, and it is contributing to the improvement of liquidity / assets even in India.

Regulations and conditions associated with funding

There was a stringent restriction for applicability of two-generation loans for foreign currency funding in India, but due to the depreciation of the rupee in recent years, as part of the induction measures of foreign currency into the domestic market, restrictions are now relaxed, and the level of restriction measures of funding is as equal as the funding measures in Southeast Asia.

Environmental impact assessment

In the industrial parks in Indonesia and Vietnam, if the parks are granted an EIA clearance as an industrial park, a detailed EIA is not required of units/companies in the industrial park. On the other hand, in India, EIA clearance is the subject for each and every company operating in

the industrial zone. An EIA is the most time-consuming subject to gain investment approval, and it is the pending factor of development in most Indian states. It appears from this reality, that there is a need of improvement by examining the comparative advantages with other countries from the point of international investors.

Various licensing, plant construction licensing, operation licensing

In the Indian business licensing system, business licensing which are under the jurisdiction of central government would often pose difficulties in its acquisition by comparison with state matters. In Southeast Asia, licensing provision is available at even private industrial parks that government staff are dispatched and stationed as a full-time staff as processors of business licensing and services to be carried out in a timely manner for the benefit of investors.

The difference between Southeast Asia and India in factory construction can be seen in the following illustration. Since the construction period is unpredictable in India, the activities of plant design, civil engineering, building construction and the process of equipment installation cannot be done in an intermittent manner as it is practiced in Southeast Asia. Consequently, the factory construction period in India in comparison with Southeast Asia would be 1.75 times longer. When it comes to the case of factory construction to be done in two years in Southeast Asia, it could require 3.5 years in India.

Certification of origin

India imposes the applicability conditions of FTA by meeting both the achievement of the local content condition of the products from member countries and change of the HS code at the same time, thus the use of FTA is more difficult than trading with other countries.

Parts procurement rate

Local content in India appears to be high at first glance. But when it comes to variety of manufactured products, supporting industries are not grown with a wide range of industries, which have grown to a large extent in Southeast Asia.

Power

Unlike Southeast Asian countries, captive power plants in industrial parks are not commonly available in India. The situation is assumed to come from the lack of adequate measures for IPP private operators to reduce business risk, and, from state industrial development corporations not responsibly mandating the duties, development authorities, and power to investors.

Industrial water

Industrial water supply is not seen as a major difference between India and Southeast Asia.

But the privatization of the water supply project is advancing in Southeast Asia.

Wastewater treatment

Common wastewater treatment facilities that can process both domestic wastewater and industrial wastewater at once are available in the industrial parks of Southeast Asia. Thus it is not required for each individual unit/company to install its own treatment facilities, or otherwise simplify the system for treatment. In this regard, there is a difference in the system design for wastewater treatment between India and Southeast Asia. That is, individual companies must be in line with regulatory standards specified by CPCB by industry and each individual set out a wastewater treatment facility of its own. Among investors there is a view that building wastewater treatment facilities is not a requirement for investment in the case of Southeast Asia. To get approval of wastewater treatment facilities is a cumbersome process. It is believed that the authority of the state industrial development corporation is insufficient to be responsible for building the required infrastructure and providing service delivery, which should include the installation of industrial wastewater treatment facilities.

3.8.3. The parameter analysis of the industrial park in the major ASEAN countries and India

A data set on industrial parks was selected on the basis that the industrial parks are in an advanced marketing stage in which a certain level of infrastructure development was completed, and also have succeeded in attracting investors so far to the parks. As parameters, the following were considered; 1) Total area, 2) average plot size of each tenant, 3) share of Japanese companies out of the total development area, 4) the distance from major ports, 5) amount of captive power capacity per tenant, 6) amount of water supply per tenant. In the analysis the average value of the countries under study was obtained, and the figures of each parameter in each country were illustrated in positional relationships.

From this analysis, it was revealed that the parameters of industrial parks in Thailand locate in more or less average but well-balanced places. In Vietnam, even though relatively large areas of development and a high visibility of Japanese companies is observed, there are fewer captive power and water supply units functioning than in other countries in industrial parks. It is also noted that Indonesia has a far better power supply system with its own captive systems in industrial parks. To the contrary, when it comes to India, the advance degree of Japanese companies in Indian industrial park is less comparable to other countries, and it is observed that industrial parks locate disadvantageously far from major ports in many cases. Furthermore, the captive power supply in India at industrial parks is absolutely non-existent by comparison to other countries.

3.8.4. Financial analysis of government corporation in responsible for the industrial park development

For government corporations of India and Thailand which are engaged in industrial park development, financial statement was analyzed to reveal the actual situation of those corporations. The Industrial Park development corporations of both India and Thailand have been operating businesses by investing in land and building, then earning the revenue from them.

For checking the source of income and expenditure, the annual report of each corporation and an interview survey with the treasurer was used. Sources of income, as the main industrial park operators, are mainly a land lease fee / land sales, management fee, and water supply and street light services. Expenditures are mainly from the maintenance cost of utilities and infrastructure (water supply, building, road, street lighting, utilities, etc.), sales promotion, and general and administrative expenses.

Rate of return of each entity shows that AKVN-Indore, IEAT of Thailand and Mahindra World City Developers Ltd hit more than 40%., while KSIIDC gets minus, and GIDC reaches a break even result. However, in terms of the total asset turnover, both IEAT and Mahindra World City Developers Ltd come to 26%, and it is revealed that total assets were effectively invested and utilized in the business. On the other hand, other state industrial development corporations in India attain relatively poor figures, and it is known that they are not effectively using their assets.

3.9. Demand forecast of necessary industrial infrastructure

The demand forecast of off-site infrastructure development has been assumed for realization of the national manufacturing policy set by the Government of India.

Based on the World Development Indicators announced by the World Bank, the multiple regression analysis for demand forecasting up to 2022 was conducted. In this analysis, the following elements are used as such the number of employees, value added of agriculture, manufacturing, other industries and the service sector, between 2003 and 2012.

Targeting the vision to attain 25% of the GDP contribution from the manufacturing sector, together with an additional 100 million jobs created by 2022, India is expected to reach a power demand 10 times greater than current demand, the need for new roads is expected to be 5 times greater, and the railway freight volumes and container volume at port transactions are expected to increase by 4 times and 11 times respectively from the current situation. In other words, it can be interpreted that if there is no implementation of the infrastructure development to meet those levels of demand, the policy targets that the NMP envisaged will not be achieved. Also, when compared with the actual value in recent years of China, infrastructure development in India is illustrated as being delayed, and in order to achieve the policy goals by 2022, it is regarded as essential for India to implement the infrastructure development to the same level as the current China status.

Chapter IV: Recommendations for industrial park development in India

4.1. Development trend and recommendation for industrial park development in India by Japanese companies

1) Recommendations for industrial park development in India

The Study Team conducted a survey for Japanese manufacturing companies doing business in India through home and field surveys, comparing industrial parks in Southeast Asia with equivalent parks in India.

There are no companies involved in industrial parks in India that measure up to the position of Southeast Asia in this evaluation. The satisfaction with industrial parks in India is lower than that of Southeast Asia.

The evaluation of basic infrastructure such as roads, power provision, water supply, and urban infrastructure such as expatriates' living environment is particularly low. For administrative services to the industrial park management side such as one-stop services, there were a lot of answers that they could not expect any services from the State Industrial Corporations.

However, companies operating in the private industrial parks have answered that the infrastructure is not inferior to that of Southeast Asia. These successful cases of industrial parks are expected to be spread throughout India.

Based on the above evaluation, the requests for industrial park development for manufacturing companies in India are as follows:

- An industrial park with full infrastructure is necessary in order to attract Japanese companies or their administrative services (precision spring manufacturing).
- An industrial park providing administrative services is necessary that can do business without any delays or obstructions after the decision to set up a factory is taken (electrical equipment manufacturing).
- An industrial park providing factories for rent is necessary as India does not have rental factories like Southeast Asia (metal manufacturing).
- Industrial parks in India do not allow the construction of facilities other than factory buildings, and companies need to build a dormitory without having to report the fact. Setting up a workers factory is indispensable for the industrial park management, and an overall industrial township development is necessary including a dormitory, and commercial and other housing facilities (sewing processing).
- The defect liability needs to be determined in case the defect was found in a plot area of an industrial park (printing ink manufacturing).
- The State Industrial Development Corporations need to understand the importance of wastewater treatment facilities, and the necessary facilities need to be installed inside industrial parks (automobile parts manufacturing).

4.2. Analysis of factors affecting management decisions of Japanese FDI in comparison with India and other Asian countries

The basic and primary concern in India is how to deal with ever-intensifying competition with rival companies. Other factors of concern are the demand for a reduction in prices from clients, the increase in procurement costs, the quality of employees and the difficulties in quality control.

In the institutional aspect, impediments for investment Japanese companies operating in India are facing must be resolved without delay. The Indian governmental authorities need to study and solve promptly the problems pointed out by the Japanese chambers of commerce and industry in India and the Japan Machinery Center for Trade and Investment (JMC) in Japan.

4.3. Policy recommendations to the industrial park development in India

1) Policy recommendations

Land acquisition and industrial park development in India has been driven by the State Industrial Development Corporation. The situation varies from state to state, and it is necessary to examine the challenges and counter measures state by state.

First, the roles of the central government and the state government in industrial park development can be classified as follows:

| | |
|-------------------------------------|---|
| The roles of the central government | The legislation necessary to achieve the goals and vision for the development of manufacturing industry development, investment promotion program development, organizational structure, human resource development, and large scale infrastructure development |
| The roles of the state government | Land acquisition, industrial park development support for private developers, off-site infrastructure development in collaboration with the central government, investment promotion program by state |

In order to develop industrial parks successfully through public-private partnerships, resolving issues in all areas is required and the central government, state government, the Japanese government and private developers must become partners to eliminate all obstacles.

In the industrial park development success cases of Southeast Asia, a concrete action plan with a clear goal and direction established by a strong political will has been the success factor. In India, the development authority has been given to the state government, and, if the political will of the Chief Minister exists, industrial park development through public-private partnership will be successful and an increase in employment and direct investment is achievable.

The Study Team has summarized the policy recommendations to increase the direct investment of private manufacturing companies as follows, including the improvement of the industrial parks by the State Industrial Development Corporation in India and promotion of

industrial park development by the private sector.

1. Establishment of an industrial park committee

It is highly recommended to set up an industrial park committee chaired by the Chief Minister and composed by several departments in charge of industrial park development and operation. The infrastructure is not developed enough in the current industrial parks, and private developers must obtain each license from multiple departments of the government of the state. Private manufacturing companies have to develop infrastructure and obtain permits on their own. Such an industrial park committee has to include departments in charge of infrastructure development and operation (construction, power, water and wastewater). A framework is recommended to be formed that results in a final decision being made by the Chief Minister, the chairman of the relevant committee if there is a problem.

2. Creating guidelines for industrial park development

In connection with the above, currently there is no consistency in respect to management and infrastructure development in industrial parks by the State Industrial Development Corporation and private developers. Therefore, it is highly recommended to develop guidelines for industrial park development, to be consistent in terms of investor support for infrastructure development and management.

3. Clarification of the roles between the government and the private sector

The current situation of industrial parks developed by the State Industrial Development Corporation is that only land acquisition and road development is in place, but power, water and sewerage is not installed in industrial parks. In addition, land acquisition is the biggest concern in industrial park development to the private sector. Therefore, the roles of the government and private sector have to be separated clearly. The State Industrial Development Corporation shall conduct land acquisition, and, private developers shall develop infrastructure and a management system for industrial parks.

4. Ensuring marketing tools for investors

Both the central government and state government have few marketing tools for private investment promotion. Information about existing industry and industrial parks in India available to Japanese companies is insufficient. It is necessary to hold India investment seminars specifically for Japanese companies regularly, providing investment information about India.

5. Deregulation in the land-use regulation

In the current industrial parks of the State Industrial Development Corporation, resale of land, land-collateral loans and operation of rental factories by sub-leasing is limited. It is highly recommended to mitigate these regulations, to increase the liquidity of the land and create business opportunities through private operators. The state government has a concern over the speculation of land prices after land resale, but it would be possible to suppress the rise in land

prices by making a contract requiring a company to start operation within three years of land acquisition.

6. Development of human resource development programs

Promoting capacity building programs for the staff of the State Industrial Development Corporation and vocational training programs for developing human resources in general will strengthen the capacity of manufacturing personnel to work in these factories.

2) Proposed industrial park development

There is a possibility to expand Japanese investment at the same time as implementing the proposed program above. By selecting 2-3 states that possess the political will to start certain pilot projects successfully and spread to each state, job creation and manufacturing promotion in India would be possible. JICA can consider supporting pilot projects in 2-3 states to develop industrial parks via grants or soft loans focusing on problems of the legal system, logistics, labor issues, and/or land issues necessary to the development of manufacturing. Lists of industrial parks in India that can expect the accumulation of Japanese companies in the future are as follows.

Figure

- 1) Eastern Haryana Industrial Park
- 2) Rajasthan Neemrana and Giloith Industrial Park
- 3) Gujarat Mandal Industrial Park
- 4) Gujarat Dholera Industrial Park
- 5) Maharashtra Khed City Industrial Park
- 6) Karnataka Tumkur Industrial Park
- 7) Andhra Pradesh Krishnapatnam Port Hinterland Industrial Park
- 8) Andhra Pradesh Sri City Industrial Park
- 9) Tamil Nadu Chennai suburbs Industrial Park

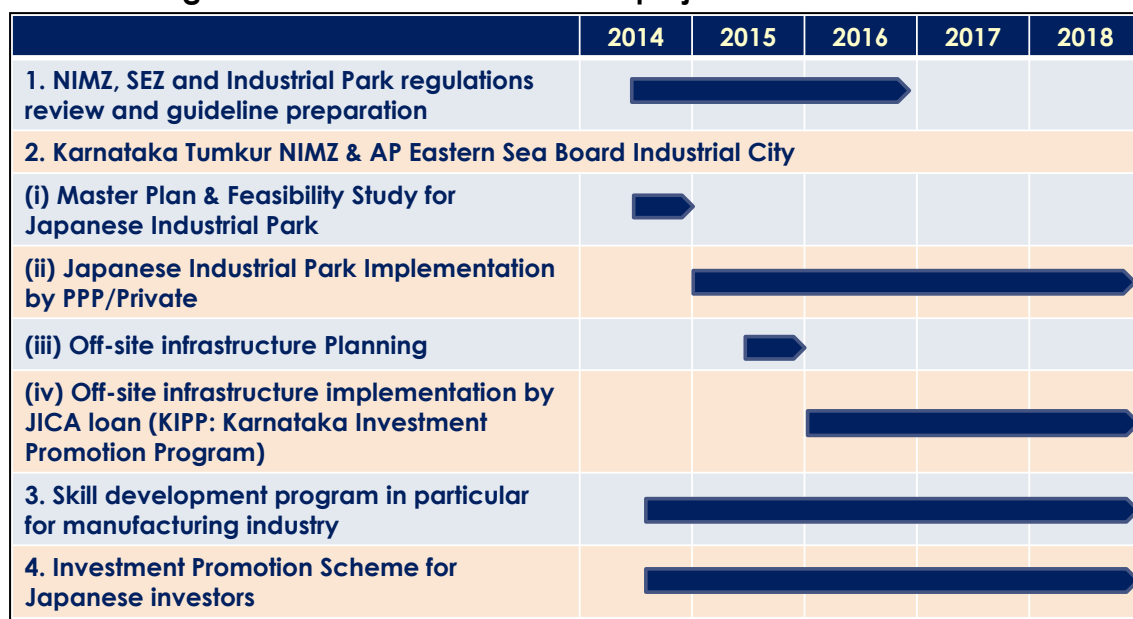
There are three Japanese automotive clusters in India: 1. Suburbs of Delhi (UP and Haryana) for Suzuki and Honda, 2. Karnataka for Toyota, and 3. Tamil Nadu for Nissan. In addition to that, Honda and Suzuki have decided to set up factories in Gujarat. The supporting industries of the automotive industry in Tier 1, Tier 2, and Tier 3 have been already formed in the suburb of Delhi, supplying to Suzuki and Honda, and have been expanded to Neemrana in Rajasthan recently with a lack of industrial parks.

The supporting industries are expected to expand in the future. Industrial park development in the Chennai suburbs is underway.

4.4. Recommendation of JICA projects from the study team

The study team recommends proposed JICA projects in the future are as follows.

Figure3: The recommended JICA projects in the future



(Source) JICA Study Team

1. Institutional improvements of NIMZ, SEZ and industrial parks, and guideline development support (2014 summer – end of 2016)

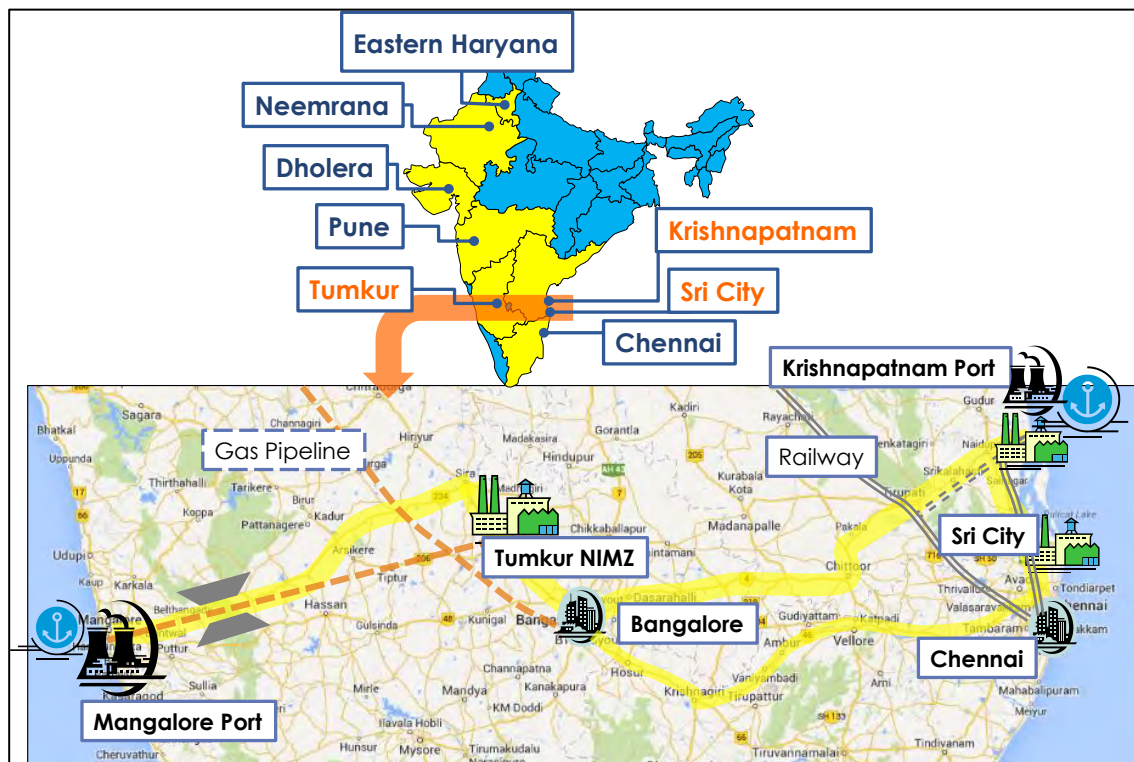
Many challenges are found in industrial parks developed by the State Industrial Development Corporation as well as Special Economic Zones (SEZs) certified by Ministry of Industry and Commerce, as described in Chapter 2. They have not been able to attract private manufacturing companies. In addition, the guideline for an NIMZ has not been developed. Thus, it is possible to consider improving the institutional framework and developing the guidelines for NIMZs, SEZs, and industrial parks. The main component of the study will be the development guideline addressing the need to separate the roles of the central government and state government, and to promote industrial park development by private developers.

1. The SEZ law review, and specific goals, an implementation plan, and development guidelines for NIMZ
2. Development guidelines for industrial parks by the State Industrial Corporation and private developers

| | |
|-----------------|---|
| Goal | To review the current development of NIMZ, SEZ and industrial parks, and to develop guidelines for private developers to accelerate Japanese manufacturing companies' investment in India |
| Outcome | <ul style="list-style-type: none"> Guidelines for NIMZ, SEZ and industrial parks are established Industrial park development is carried out based on the guidelines |
| Activity | <ul style="list-style-type: none"> To review the SEZ bill of the central government and to develop guidelines necessary to implement the specific goals, implementation plan and implementation To develop guidelines for industrial park development by the State Industrial |

2. Pilot project assistance (Karnataka, Andhra Pradesh Industrial Park Development)

Figure 4: Karnataka, Andhra Pradesh industrial park development



(Source) JICA Study Team

In the short term, Karnataka has received a high evaluation.

To develop the electrical, electronic, OA, and precision machinery industry in both the domestic market and overseas market in the medium term, it is necessary to develop an industrial park with sufficient power and infrastructure located adjacent to the port. To meet the conditions of port, power and road for industrial park development, Andhra Pradesh would be selected. The CBIC project has been carried out by JICA, and the synergy with the off-site infrastructure development is also expected.

Gujarat also has plans to develop road, railway and airport around the Dholera industrial township; the possibility to form a cluster in the future is high.

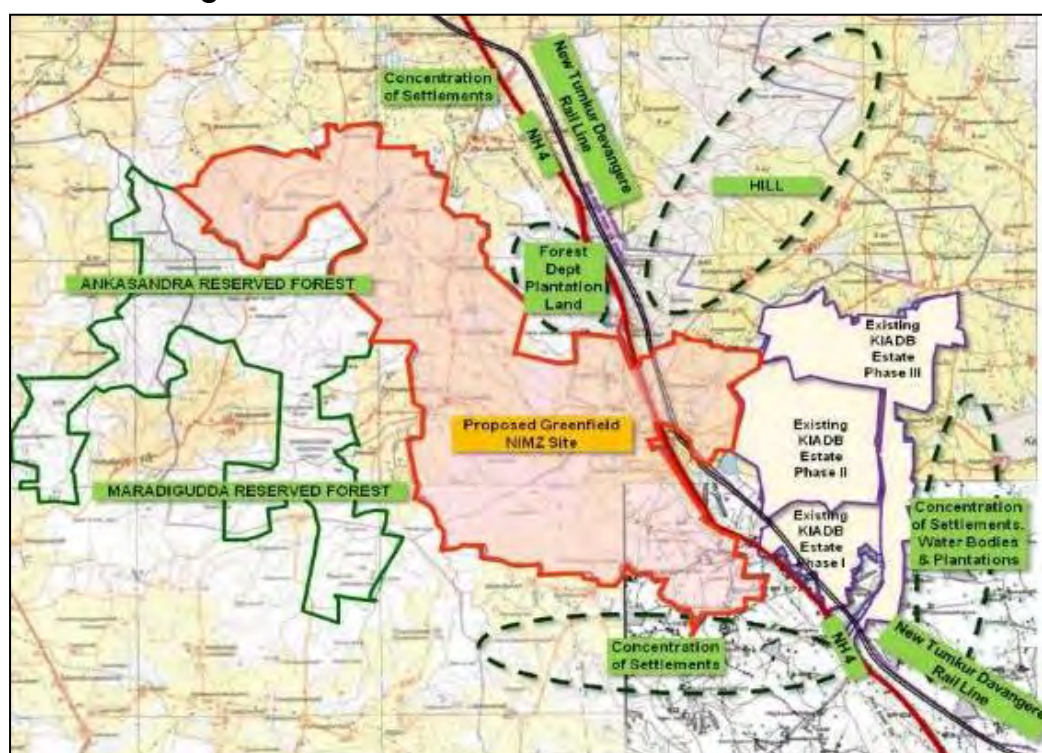
The Study Team would recommend starting pilot projects in 1) Karnataka Tumkur NIMZ, 2) Andhra Pradesh Sri City, or 3) Andhra Pradesh Krishnapatnam Port Hinterland.

1) Karnataka Tumkur NIMZ

The Karnataka state government has identified a 5,000ha land site to develop as an NIMZ.

Out of 5,000ha, 3,000ha has been acquired, and the remaining 2,000ha has been in the acquisition process. Located 70km north-west of Bangalore along the National Highway 4, a part of the land has been developed as Vasantha Narasapura Industrial Park. The pipeline connecting Dabhol, Maharashtra, and Bangalore has passed through the site, and the access to the reservoir is also sufficient. Karnataka State Industrial Investment Development Corporation (KSIIDC) has showed its intention to develop 300-500ha of land as a Japanese industrial park. Suppliers of the automotive industry and the electrical, electronics, and information communications equipment industries are expected to form a cluster in the Tumkur NIMZ.

Figure5: Potential site of Karnataka Tumkur NIMZ

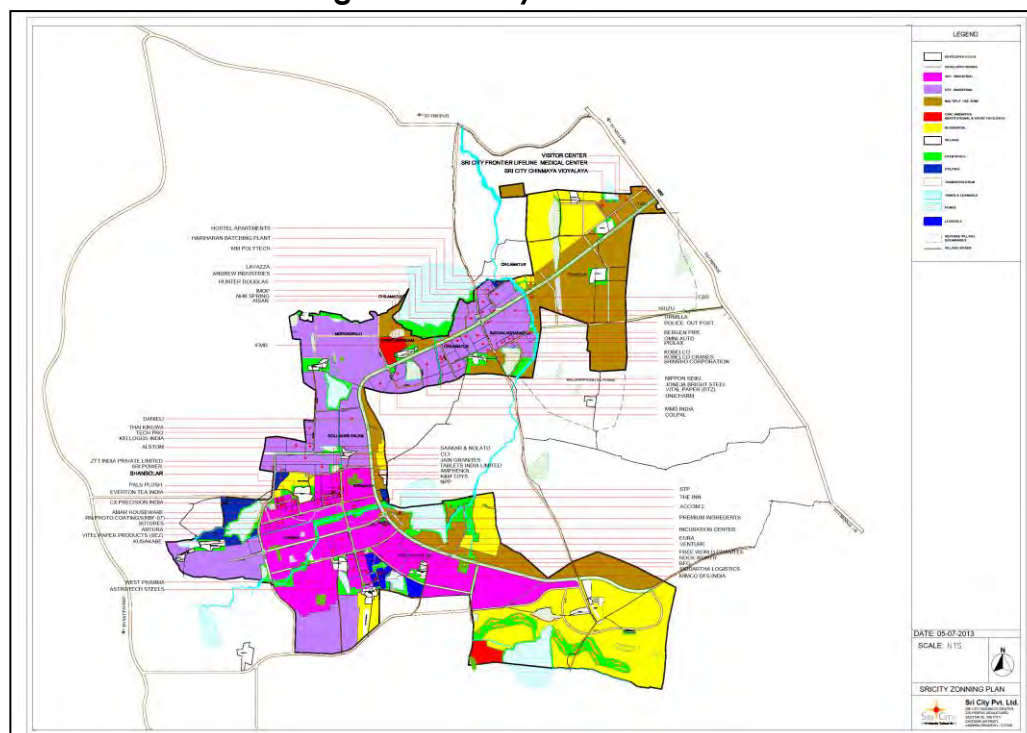


(Source)Karnataka State Industrial Investment Development Corporation (KSIIDC)

2) Andhra Pradesh Sri City

Sri City has started its operation in 2008 as a private industrial park with an SEZ and DTA, with a lease agreement of 99 years. Japanese leading assemblers such as Isuzu and Kobelco have decided to set up factories in recent years. Sri City is located in the south part of Andhra Pradesh State and 55km from Chennai. Sri City could enjoy the infrastructure of the major city and acquired the land at low cost. The entire area is 6,000 ha. Sri City has been focusing on the development of industrial parks, and is seeking a business partner to develop commercial and residential areas for a township development in the future. Expansion of the automotive industry and industrial machinery industry such as construction machinery, agricultural machinery, and industrial machinery is expected.

Figure 6: Sri City Master Plan

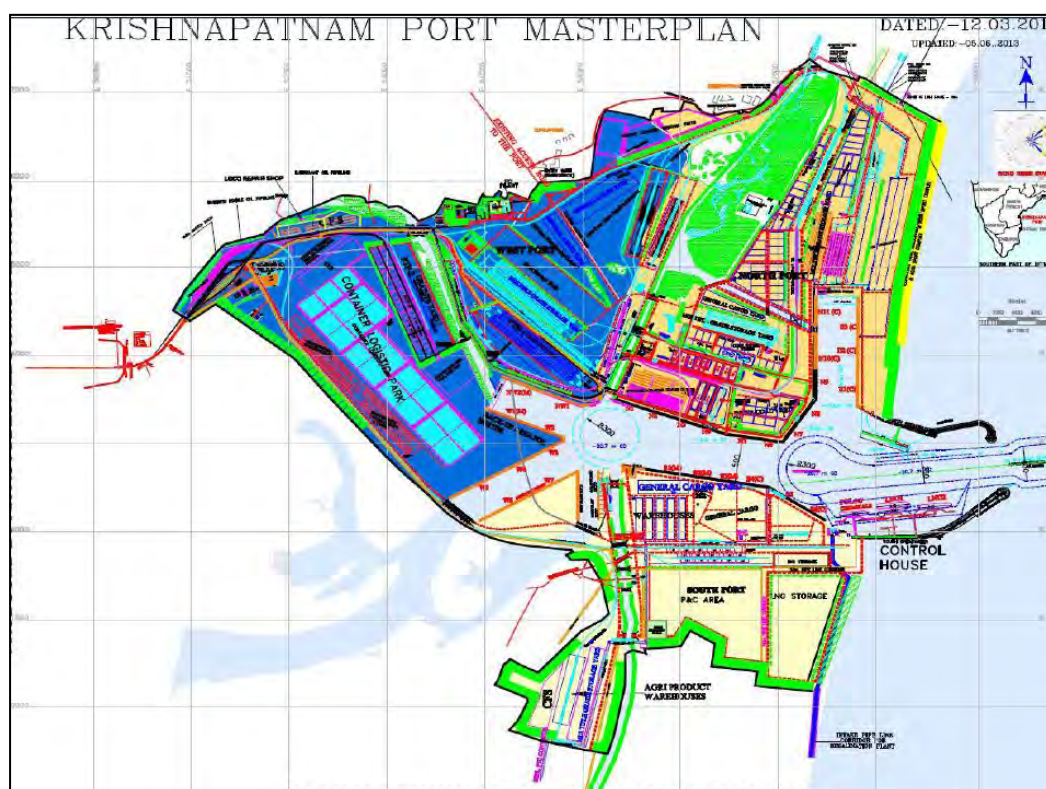


(Source) Sri City

3) Andhra Pradesh Krishnapatnam Port Hinterland

The Krishnapatnam port, a deep seaport of 18.5m water depth, located 180km from Chennai, has been developed and is fully operated by a private company. It is scheduled to have a 6 million TEU annual handling capacity. The new power generation plant is in progress along with the existing coal-fired power plants in the hinterland of the port. After completion, the Krishnapatnam port will have a power generating capacity of 8,000MW after combining with several power plants. There is a plan to connect the gas pipeline to the industrial park to make gas power generation. The developer is looking for a business partner to develop an industrial park. Steel, chemical, petrochemical and export industries are expected to set up factories there.

Figure 7: Krishnapatnam Port Master Plan



(Source) Krishnapatnam Port

Possible projects in the pilot projects implementation will be considered as follows:

i. Master Plan and Feasibility Study of the industrial park development for attracting Japanese companies (2014 summer – end of 2014)

A master plan and feasibility study of 2-3 industrial parks to attract Japanese companies is recommended to be conducted. Also, the conditions under which Japanese developers can participate shall be negotiated with the state government, and the developer candidates shall be selected. The utilization of the investment scheme of JICA also is recommended to be examined.

| | |
|-----------------|---|
| Goal | To develop a basic plan of the industrial park for attracting Japanese manufacturers and to examine the possibility that a private company shall participate as a developer. |
| Outcome | <ul style="list-style-type: none"> Master plan of the industrial park development on the candidate sites is formulated Based on the master plan, a study is conducted to assess the feasibility of the project |
| Activity | <ul style="list-style-type: none"> To identify the candidate sites and implement measurement, geographic, and environmental research To develop a master plan including the needs of Japanese manufacturing companies To analyze the feasibility based on a master plan To develop a business plan with the assumption that the private companies shall participate as developers |

ii. Implementation of industrial park development through PPP scheme that the private companies shall participate as developers (2015 - onward)

Utilizing the overseas investment scheme of JICA, an industrial park development is recommended to be conducted in joint venture with the state government and private developers.

iii. Off-site infrastructure planning (2015 summer – end of 2015)

In developing an industrial park, required off-site infrastructure (power, water, sewerage, access roads, highway and railway connecting major cities) is recommended to be planned.

| | |
|-----------------|---|
| Goal | To identify off-site infrastructure required for industrial park development such as power, water and sewerage, access roads, and highways, and develop a basic plan |
| Outcome | <ul style="list-style-type: none"> Off-site infrastructure required for industrial park development is identified Basic infrastructure plan is formulated |
| Activity | <ul style="list-style-type: none"> To collect basic information related to off-site infrastructure To formulate a basic infrastructure plan reflecting the intention of industrial park developers To formulate a project implementation plan based on a basic infrastructure plan |

iv. Off-site infrastructure development utilizing Japanese ODA loan (2016 -onward)

The selected off-site infrastructure is recommended to be developed by utilizing Japanese ODA loan, especially for the Karnataka Investment Promotion Program (KIPP) that has been planned at present.

3. Skill development program for the manufacturing industry (2014 summer - onward)

Skill sets in the manufacturing industry requires a different skill in each area, and it is necessary to educate and train to identify the skills that companies need. The Market Skill Development Program that started 40 years ago in Singapore required all of that country to promote manufacturing, and, similarly, the introduction of such a program in every state in India would become an important factor to develop the manufacturing industry in India. It is considerable to develop a market skills development program through JICA support, and to form a framework for dispatching Indian engineers to Japan through the internship program to provide them with technical guidance. Not only the automotive industry, but also electrical and electronics, industrial machinery, precision machinery, OA equipment, shipbuilding, and material industry can introduce internship programs to train Indian engineers.

| | |
|-----------------|--|
| Goal | Skill development program for manufacturing industry: to develop a basic plan of the program and to implement the program |
| Outcome | <ul style="list-style-type: none"> A basic plan for a skill development program for the manufacturing industry is developed Competitive human resources for the manufacturing industry are developed |
| Activity | <ul style="list-style-type: none"> To develop a basic plan of the program and to undertake training |

| | |
|--|---|
| | <ul style="list-style-type: none"> To form a framework for sending Indian engineers to Japan through an internship program to provide technical guidance and implement the program |
|--|---|

4. Investment promotion program for Japanese investors (2014 summer - onward)

The investment promotion program in India has not been sufficient, and it is necessary to proceed with the investment promotion program actively in collaboration with the central government and the state government.

| | |
|-----------------|---|
| Goal | To accelerate Japanese manufacturing investment in India, an investment promotion program shall be established with the collaboration of the central government and the state governments of India, and investment seminars shall be implemented |
| Outcome | <ul style="list-style-type: none"> The capacity strengthening of staff of the central government and the state government is achieved through the investment promotion program development The needs of the Japanese companies considering investing in India are achieved through providing information on industrial parks in India |
| Activity | <ul style="list-style-type: none"> To develop an investment promotion program about India with the collaboration of the central government and the state governments To implement investment seminars regularly and support business matching by introducing Indian companies |

Through the promotion of the above four projects, as a package, improvement of industrial parks by the State Industrial Development Corporation and promotion of the industrial park development by the private sector shall be achieved. That will lead to an increase in direct investment of private manufacturing companies in India.

Chapter I

Experiences of Industrial Park Development by Japanese Companies in Southeast Asia

1. Experiences of Industrial Park Development by Japanese Companies in Southeast Asia

1.1. Trends of International FDI and Roles of Japanese Industrial Parks

1.1.1. Outlook and trend analysis of manufacturing FDI in India and Southeast Asia

1) Trends in FDI Inflows in India and Southeast Asia

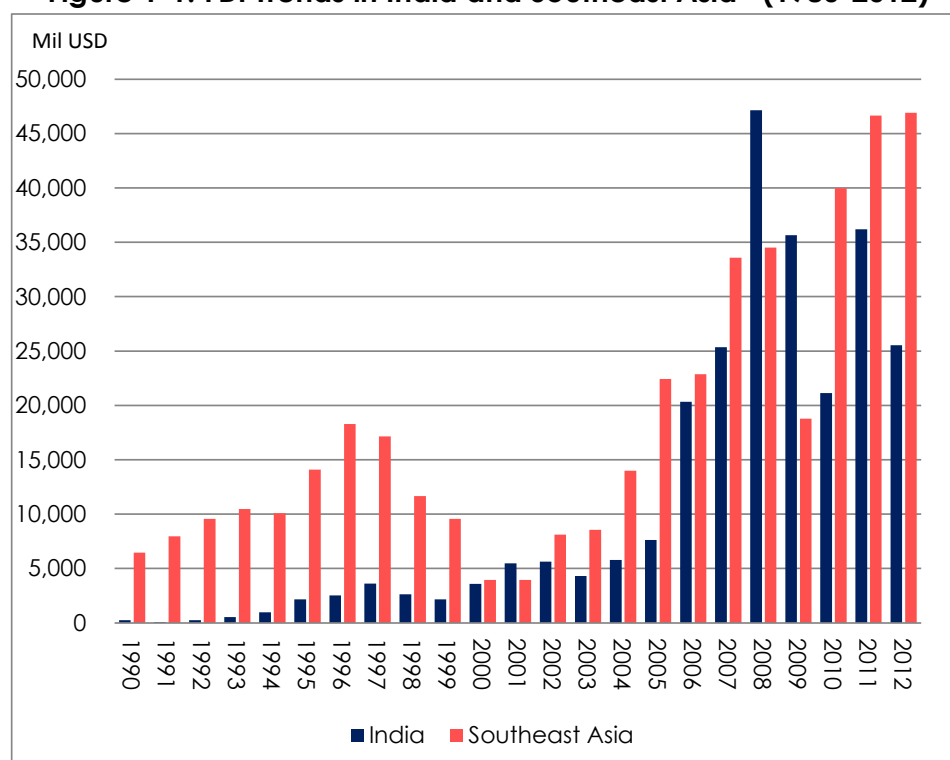
Since the implementation of India's economic liberalization policy at the end of 1991, the FDI inflow into India has been growing rapidly. As a result of the focus on the development in the fields of energy, communications, and urban planning to promote FDI by the Government of India, FDI inflows, only US\$79 million in 1980, reached US\$47,138 million in 2008. However, as recent as 2012, the Indian economy recorded the worst economic growth rate in the past 10 years. The rising inflation rate has become a big problem for investors in India and overseas. As a result, the investment interest has waned, and the FDI inflows to India recorded a 41.69 percent year-on-year decrease in 2012

By comparison, in Southeast Asia, as a result of the liberalization of the various national economies, and opening their doors to foreign capital in the 1980s, they have recorded years of high economic growth, and have collectively come to be referred to as the "East Asian Miracle." FDI inflows in Southeast Asia in 1990 recorded 27 times that of India where FDI inflow was hardly measurable. In addition, FDI inflows into Southeast Asia temporarily declined at the time of the world economic crisis in 2008, but made a remarkable recovery after that. FDI inflows in 2012 registered US\$46,901 million in 2012 (Figure 9).

2) Trends in FDI in India

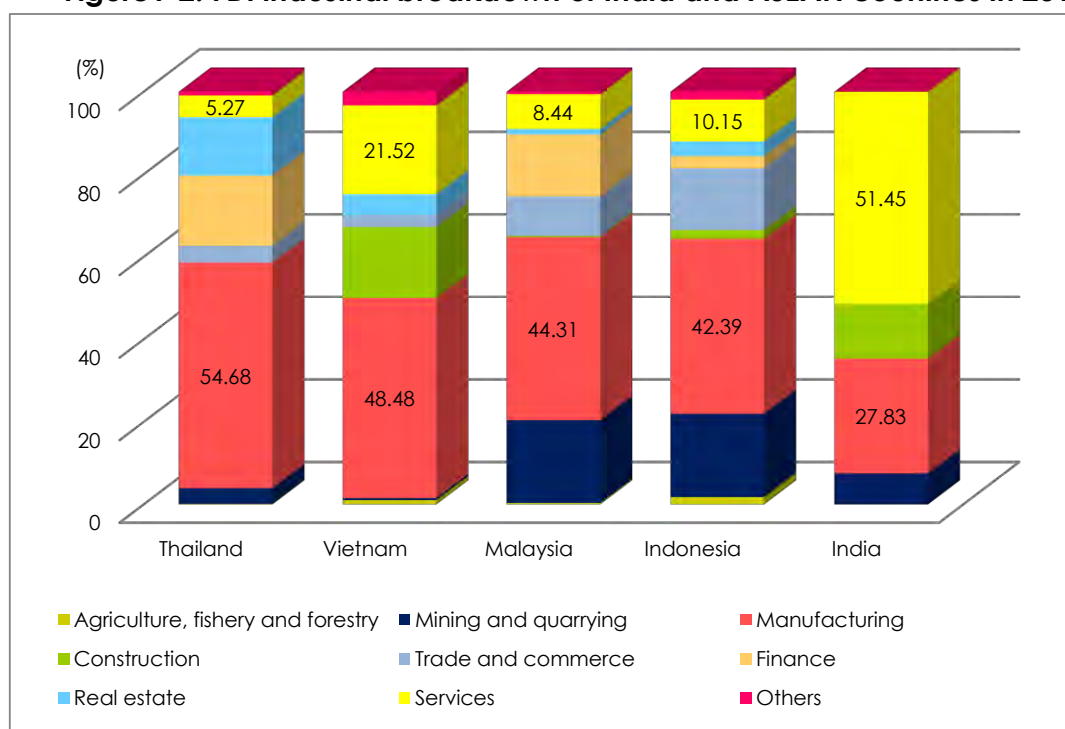
As a feature of FDI inflow into India, the service sector accounts for 51% of the total breakdown of the economy, unlike in Southeast Asia where the manufacturing sector accounts for more than half of the investment (Figure 10). With the opening of its retail supermarket to foreign capital in 2012, investment into the service sector in India can be expected to increase continuously for the foreseeable future. However, investment in the manufacturing sector, as described later in detail, has various barriers such as a lack of infrastructure, land acquisition constraints, and labor issues.

Figure 1-1: FDI Trends in India and Southeast Asia² (1980-2012)



(Source) UNCTAD Statistics

Figure1-2: FDI industrial breakdown of India and ASEAN countries in 2011



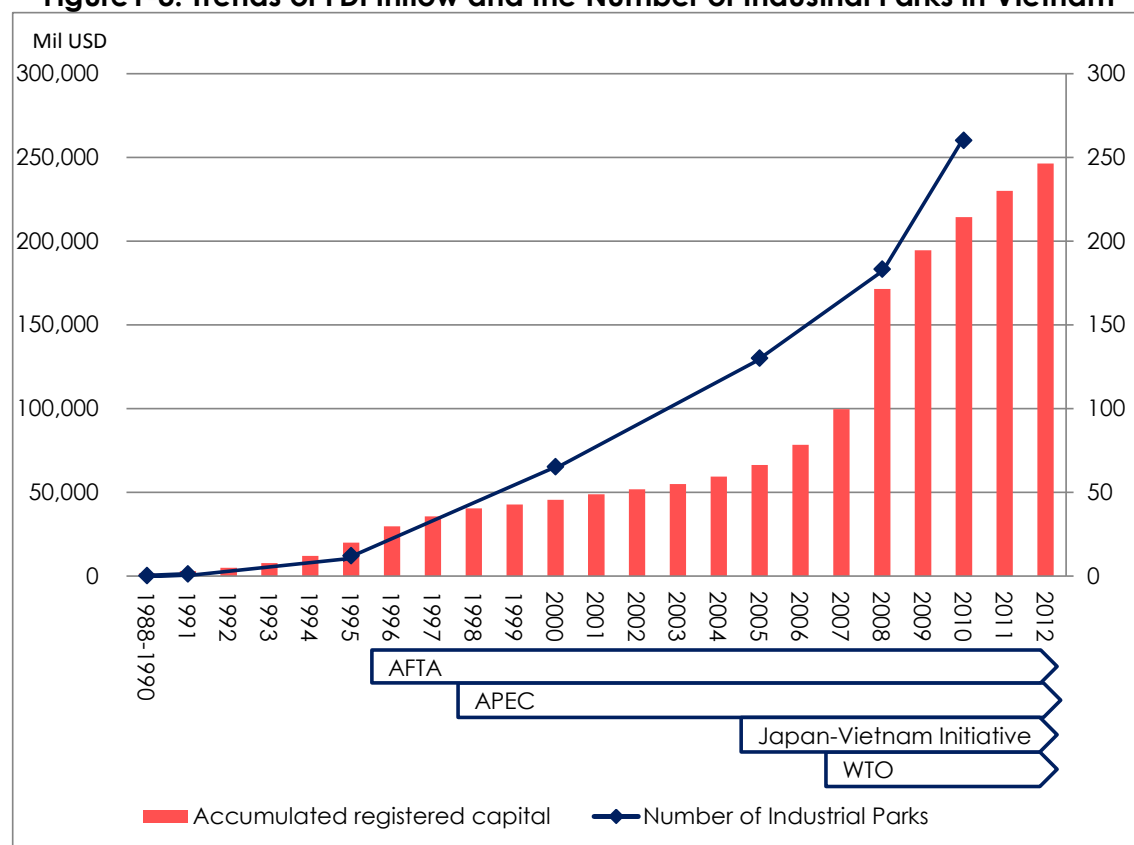
(Source) ASEAN FDI database, MoIC, SIA News Letter

² Total of Indonesia, Malaysia, Vietnam and Thailand

3) Correlation of FDI Inflow and Industrial Park Development

The relationship between FDI inflow and the number of industrial parks can be seen in the graph below, using Vietnam as an example.

Figure1-3: Trends of FDI Inflow and the Number of Industrial Parks in Vietnam



(Source) Ministry of Planning & Investment (MPI), Vietnam

In Vietnam, attracting FDI and developing industrial parks had progressed at the same time with the opening its door to foreign capital and economic reform – the so called “Doi Moi” begun in 1986. Supported by the policy of the Vietnamese government to attract foreign investment in an aggressive way, industrial parks, 260 as of 2010, have been developed including developers from Japan, Singapore and Taiwan and Vietnam. The major industrial park developments are Tan Thuan Export Processing Zone in 1991 (a joint venture of Vietnam and Taiwan), Amata Industrial Park in 1994 (a joint venture of Thailand and Vietnam), Nomura Hai Phong Industrial Park in 1994 (a joint venture of Japan and Vietnam) and Vietnam Singapore Industrial Park in 1996 (a joint venture of Singapore, Vietnam, and Japan).

Although industrial park development has expanded as a result of encouraging FDI policy since the 1990s in Vietnam, the country that attracted the most attention as an investment destination in the 1990s was China - known as the “factory of the world.” China also expanded its domestic market through economic growth. However, the rapid increase of FDI to China led

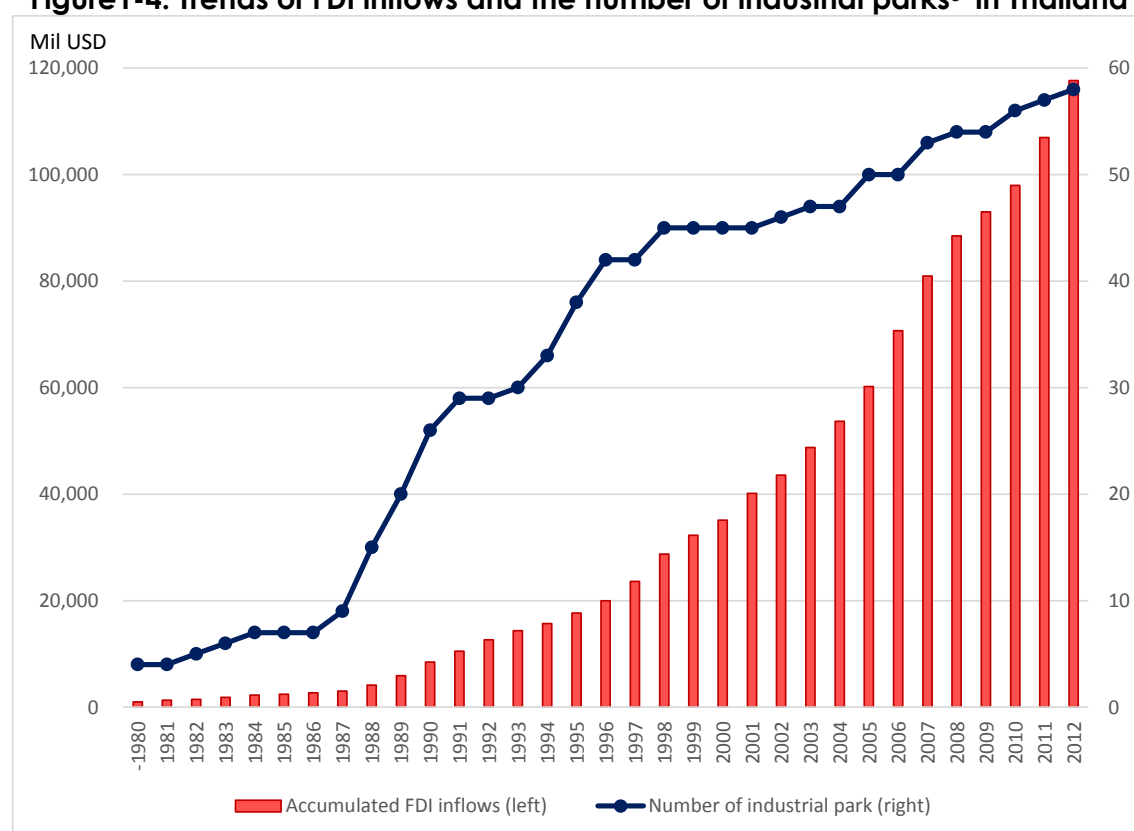
to rising labor wages and tight labor supply and demand. In addition, the risk of over-concentration in China became apparent after the concern over the revaluation of the Chinese Yuen, SARS (2002-2003), and anti-Japanese demonstrations (2005) were reported as having taken place.

During 2000s, Vietnam started to attract attention as an investment destination – coming to be known as “China plus one.” FDI inflows recorded the highest in 2008; with projects numbering 1,557 carrying approved investment of US\$71,712.6 million and a disbursed investment of US\$11,500 million.

Thus, industrial parks have been developed to receive FDI while economic liberalization has progressed. Since the economic open-door policy and the development of industrial parks influenced the factors of selecting industrial location, a correlation can be seen in the increase in the number of industrial parks and FDI inflows.

In addition, trends of FDI inflows and the number of industrial parks in Thailand are shown below:

Figure1-4: Trends of FDI inflows and the number of industrial parks³ in Thailand



³ The total number of 62 industrial parks has been identified in Thailand, but the graph does not account for the industrial park establishment year is unknown.

(Source) Industrial Estate Authority of Thailand (IEAT) and the Bank of Thailand

Earlier than Vietnam, Thailand started to promote the export promotion policy of industrialization leveraging the FDI from overseas.

The major organizations promoting investment in Thailand are the Board of Investment (BOI) established based on the “Investment Promotion Act in 1977” and Industrial Estate Authority of Thailand (IEAT) established base on the “Industrial Estate Authority of Thailand Act in 1979.” Since the 1980s, industrial parks have been developed by a form of IEAT, a joint venture between IEAT and private companies. Major industrial parks development include Ladkrabang Industrial Estate in 1987 (IEAT), Rojana Industrial Park in 1988 (joint venture of Nippon Steel, Sumikin Bussan, and Thailand conglomerates), and Amata Nakorn Industrial Park in 1989 (joint venture of ITOCHU Corporation and Amata Corporation). Thailand has 62 industrial parks in total at present; 11 industrial parks developed by IEAT, 32 industrial parks jointly developed by IEAT and private companies, and others developed by private companies. Industrial park development had progressed from the late 1980s to the early 1990s, and industrial park expansion or development of rental factories can also be found in recent years.

1.2. Industrial park development by Japanese companies in Southeast Asia

1.2.1. The main factors of the success and strengths of Japanese industry

History of industrial park development by Japanese companies

Industrial parks in Asian countries, initially, have been developed by the initiative of governments and/or government corporations, but since the 1980s, the development scheme by private capital and/or joint development with private capital became an effective method for this kind of development. Of these, there are private proprietary or joint developments, in which a Japanese developer contributed an initial partial investment, or, some of them were developed by their own investment. Those Japanese affiliated industrial parks are hereinafter evaluated empirically for their success factors, and then we will look into the examples and success factors for major manufacturing industry being attracted to these parks. It should be noted that, whenever a sales representative and business support has been provided by a Japanese trading company providing certain guarantees, the industrial park has also been regarded as a Japanese industrial park in this study.

Table 1-1: The list of main Japanese industrial parks and Japanese management companies in Southeast Asia

| Country | Name of Industrial Park | Name of Japanese management company | Country | Name of Industrial Park | Name of Japanese management company |
|-----------|--|---|------------|---------------------------------------|---|
| Thailand | Amata Nakorn Industrial Estate | Itochu Corporation | Vietnam | Nomura Hai Phong Industrial Zone | Nomura Securities |
| Thailand | Amata City Industrial Estate | Itochu Corporation | Vietnam | Dai An Industrial Zone | Forval Corporation |
| Thailand | Rojana Industrial Park | Nippon Steel & Sumikin Bussan Corporation | Vietnam | Long Binh Techno Park Industrial Park | Sojitz Corporation |
| Indonesia | MM2100 Industrial Town | Marubeni Corporation | Vietnam | AMATA Industrial Park | Itochu Corporation |
| Indonesia | East Jakarta Industrial Park | Sumitomo Corporation | Vietnam | Long Duc Industrial Park | Sojitz Corporation, Daiwa House Industry, Kobeeco Eco-Solutions |
| Indonesia | Karawang International Industrial City | Itochu Corporation | Myanmar | Mingaladon Industrial Park | Mitsui & Co (pulled 2006) |
| Indonesia | Greenland International Industrial Center | Sojitz Corporation | Philippine | Lima Technology Center | Marubeni Corporation |
| Indonesia | Daiwa Manggala Industrial Town | Daiwa House Industry | Philippine | First Philippine Industrial Park | Sumitomo Corporation |
| Indonesia | Bukit Indah Industrial Park | Taisei Corporation | India | Omega Township | JGC Corporation, Marubeni Corporate Bank |
| Indonesia | Delta Silicon (Lippo Cikarang Industrial Park) | Forval Corporation | India | Sojitz Motherhood Industrial Park | Sojitz Corporation |
| Vietnam | Thang Long Industrial Park I/II | Sumitomo Corporation | | | |

(Source) JICA Study Team

Japanese industrial parks are located in most of the ASEAN countries like Thailand, Indonesia, Philippines, Vietnam, and Cambodia (in Malaysia and Brunei there are only industrial parks or export processing zones developed by either those governments or government corporations). Fundamentally, there is no special difference in development policy and/or incentives with preferential terms given either institutionally or fiscally to Japanese-sponsored industrial parks as opposed to non-Japanese-sponsored industrial parks. How does a Japanese industrial park become successful as compared with any other industrial park? This study proposes to look into the strengths of the Japanese industrial parks.

| Process and key of success of industrial park development in Southeast Asia | |
|---|--|
| (1) | After the Plaza Accord in 1985, relocation of manufacturing facilities in China, Southeast Asia by Japanese companies increased. |
| (2) | Although industrial parks had been developed by the government corporations exclusively, development by the private sector more quickly became important. Development of legislation for PPP schemes, guidelines for industrial park development and one-stop service for investors started in Thailand and Indonesia. |
| (3) | The competition of the private industrial developers was seen after the development of industrial parks by PPP model. In addition, by competing among neighboring countries, land acquisition, land use, legislation and one-stop service further improved. |
| (4) | Services to the industrial parks became diversified and improved. |
| (5) | Off-site infrastructure development by the governments, World Bank, ADB, JICA, etc. began to spread. |
| (6) | The governments implemented the planning in the city suburbs and development to avoid the excessive concentration in the metropolitan area. Traffic congestion became a serious issue due to the rapid population growth and delay of infrastructure development. |
| (7) | Therefore, the Thai government introduced the policy to develop industrial parks and industrial cities 50km away from the metropolitan area. The policy spread to Malaysia and Indonesia thereafter, and, was introduced into Cambodia, Laos, and Myanmar. |
| (8) | Training of human resources has been expanded. |
| (9) | As the industrialization progresses, training of human resources became an important issue, and skill development programs were started in both the government and the private sector. |
| (10) | For example, Toyota set up their own skill development center to improve the skills of laborers. |
| (11) | Under the strong leadership, Asian countries competed to enhance the industrial park development, |

off-site infrastructure development, one-stop service improvement and skill development program. Therefore, they experienced the high economic growth called the "Asian Miracle" for 25 years since the 1980s.

Lessons for India and Examples of PPP (Indonesia Bekasi industrial city development)

1. A one million jobs-creation initiative was proposed to the Government of Indonesia in 1989.
2. The Industry vice Minister showed support for the proposal, and he advised pursuing the one million jobs creation initiative to President Suharto.
3. Three Presidential Decrees were issued in 1989 including: a PPP bill, a land acquisition bill, and an Industrial Park Act.
4. The department of industrial parks was established in the Ministry of Industry, and some industries started to open up to the private sector such as EPZ.
5. The first PPP project began in Bekasi in 1990 as a joint venture of a Japanese company and a local company, and went on to achieve a huge success.
6. After the success, five industrial parks were developed (3,500ha scale) within the Bekasi and Karawan areas; and other industrial parks have been developed under the PPP scheme at 80 locations spread across the country.
7. Out of the five locations, four industrial parks were developed by Japanese companies, and many Japanese companies started to concentrate in the Bekasi and Karawan areas.
8. The key to success was that all parties agreed to the one million jobs initiative and played a necessary role.
 - (1) Central government: 1. law revision, 2. infrastructure development (highway, communications, power, port development, water supply facilities, etc.), 3. education and training facilities, 4. Introduction of one-stop service
 - (2) The Ministry of Industry and the Indonesia Investment Coordination Board (BKPM): Investment promotion of the central government, policies and guidelines making of industrial parks and investment promotion
 - (3) The Bekasi State Government: land acquisition, resettlement, such as school construction and housing for residents
 - (4) Private sector: Industrial park development
9. There are many land issues, corruption issues and lack of infrastructure in Indonesia in the late 1980s. The situation was worse than the current situation in India. Few experts thought a one million job creation initiative was feasible in Indonesia.
10. However, it is a good lesson also for India that it was possible to achieve the one million job creation initiative by believing the goal would solve the problems. It would be possible to learn from the success story of Indonesia and carry out further improvement, and better results would come out more quickly. The way success is almost the same as Indonesia.

As shown in the example of Indonesia, the roles of the government and private sector in industrial park development can be shown as follows.

Table 1-2 : Roles of the government and private sector in industrial park development

| | |
|--------------------------|--|
| Private companies | (1) Development of industrial park, sale, management (2) Investment by companies |
| Government | (1) Laws for attracting private companies (industrial park development by joint venture with the government and private sector, PPP promotion) (2) Off-site infrastructure development (3) Establishment of vocational training centers (4) One-stop service provision to investors |

(Source) JICA Study Team

Strengths of the Japanese industrial park

In any countries, Japanese industrial parks are the most preferable and attractive destinations for Japanese manufacturing industry investment. In particular, the following elements are considered as the factors strengthening the attractiveness of industrial parks developed by Japanese companies.

Table 1-3: The main factors and process of success of industrial parks developed by Japanese companies

| Item | Success factors |
|---|--|
| Location | Ensuring good access to port/airport. Ensuring access to big city and neighboring port by fast, inexpensive and reliable land transport. Further the industrial parks are located in close proximity to residence of administrators and engineers, which provides ease on commuting from the center of the metropolis. |
| Industrial infrastructure such as water, electricity and transportation | Stable supply of utilities by Park-owned equipment in the industrial park complex |
| Availability of labor force | Introduction of vocational training centers in the industrial park complex. Labor recruitment services in collaboration with universities and/or specialized engineering colleges |
| Land Acquisition | Land acquisition has been carried out by the private sector (mainly by domestic enterprise) without the necessity of public tender; consequently, the land was acquired at economical market price. Also, certain guarantees provided after conducting due diligence on land related rights. |
| Ground condition, soil environment | Sales and marketing systems with a report of ground conditions, land surveying and pollution of soil investigation results |
| Aftercare service | A wide range of aftercare services such as support for preparation of investment permission application documents, occupancy acquisition contract, local accounting service and so on. |
| Rental factory | On it went to the construction of the building, the layout of the general assembly for a processing plant is provided as a rental factory. It contributes to the reduction of lead time for tenants to launch production |
| Logistics system | Installation of a common bonded area in an industrial park complex, and provision of an outsourcing service for a logistics |

| | |
|----------------------------|---|
| | information system - these contribute to the efficiency of logistics |
| Living environment | The living environment including a Japanese school, Japanese residential areas, apartments for foreigners, Japanese restaurants, DVD-rental shops, and possibly even a golf course |
| Trouble shooting mechanism | Hot lines with the concerned government service delivery agencies in the countries are developed and strong problem-solving commitment is established by the Japanese industrial park operating company |

(Source) JICA Study Team

Success factors of Japanese industrial parks

The main factors that Japanese industrial parks have built for success in attracting manufacturing industries, according to experienced industrial park developers in Japan, can be broadly divided into: (1) location, (2) infrastructure services, and (3) the management company's ability.

Location

An industrial park project is a pure real estate business, which generates profit from the development of land and building, together with the delivery of necessary utilities and maintenance services. Customers purchase and/or lease the factory space of land as a commodity, then, sales companies calculate a selling price and/or determine the rent for the floor space. Industrial park operators receive not only rental fees but also service fees for utilities or aftercare for tenants. In the real estate business, the land condition appeals to customers. Consequently the value of the real estate is dependent on the location in the first place. Therefore, as a developer of an industrial park, the location as to where to develop an industrial park shall become a very important success factor. As long as the appropriate location was not selected, an industrial park will not attract sufficient manufacturing companies to make the economic equation work. More specifically, the following conditions must be satisfied.

Accessibility to ports and airports with reliable, fast, and inexpensive transport links are the important factors of attractive industrial parks in that road access intended to carry raw materials and products via land transportation to the surrounding large cities and ports needs to be directly linked with the industrial park. The availability of a labor force of general workers and skilled managers and engineers, from surrounding cities and towns, commanding reasonable wages is also an important factor for the selection of attractive industrial parks from the viewpoint of manufacturing companies. While wages, mobility of workers, and labor piracy are high in big cities, it is rather difficult to ensure the availability of workers in rural areas to meet the skill requirements and vocational capacity needed for work in the manufacturing industry.

Furthermore, if foreign office managers are coming from home/foreign countries, a

comfortable living environment should be provided in and around the industrial park. Foreign managers and technicians tend to want to live in big cities to be able to enjoy dining, shopping, and entertainment. For Japanese people, the presence of safety, modern stores, Japanese food supplies, and a Japanese school can be a very important factors contributing to the success of the industrial park. Industrial parks must be in close distance from the center of the metropolis so that their foreign managers can commute by a car. However, in cases where the location of an industrial park is relatively far from cities, the provision of comfortable and convenient transportation or the provision of a particularly desirable social amenity, such as a golf course, can determine the success or failure of the industrial park experience. Some industrial parks such as Amata Nakorn Industrial Estate in Thailand provide a commuter bus operating between Bangkok city and the industrial park as well as the golf course. Consequently the attractiveness of the industrial park location is enhanced by such social services.

In Binh Duong province of southern Vietnam, an industrial park was built into the urban development plan of the local city so that infrastructure development, together with apartment construction for park-workers and local residents, as along with planned commercial facilities would serve to improve living conditions surrounding the industrial park. Those efforts are made to increase the attractiveness of the land location, increase the resident population, and to ensure activation of labor markets and city functions.

In addition, the following has become an important success factor in selecting a location by industrial park developers - the stability of the ground and the possibility of soil contamination. The ground condition is an important factor for manufacturing plant construction, in particular, for industries using heavy machinery. The identification of soil and sand being used for landfill also needs to be checked. The preparation of an environmental assessment report in light of specific discussions with investment companies becomes another success factor for industrial parks to attract manufacturing companies.

Infrastructure Services

Manufacturing companies require various inputs like electricity, telephone, internet, water, sewage treatment, transportation services, and housing. The presence of those elements of industrial infrastructure in Japanese industrial parks is generally high. And, upon attracting Japanese manufacturing companies, the quality of clean water and adequate power to meet demand also need to be equal with that in Japan, in that a high quality, stable supply, at an affordable price of utility service are necessary. In this respect, the availability of power generation facilities and a sewage treatment plant in an industrial park becomes an important point for providing assurance for manufacturing companies to consider advancement of their production base in that park. In addition, not only bank ATM machines and branches of Japanese banks are placed in the administration buildings of a Japanese industrial park, but DVD-rental shops, convenience stores, tennis courts, gymnasiums, and travel agencies are also

commonly available in such parks. The management office also serves as a sales office. There is also a meeting room that can be used freely by tenants when the industrial park is under construction.

Large-scale off-site infrastructure which supports production activities in the industrial park in terms of logistics and the power supply system also become important factors for an industrial park to attract manufacturing companies in that ports, airports, highway, long-distance transmission lines, and substations are all included in the off-site infrastructure. Off-site utility services, with respect to a stable supply of these is the responsibility of the host country side, not the park developers or foreign tenants, but it is highlighted here that a Japanese industrial park has built a close cooperation with the state-owned company and related ministries and local governments to ensure a stable service provision of off-site infrastructure and utilities. Even when off-site infrastructure development was come into the picture, in Southeast Asia, ODA has been widely used for public works in connection with the Japanese industrial park development plan, and, it has played a critical role (see below). Rather than only from the profit of suppliers, the price of infrastructure services is to be determined from the point of the development needs of the country as a whole, in this line ODA has been used well for development of industrial park projects in Southeast Asia.

Managing Company's Ability

As factors for successfully attracting companies to any Japanese industrial park, management efficiency and good customer support services are also important. When investors consider constructing a factory, foreign investors face many problems in particular. The management company of a Japanese industrial park provides business support and guidance with the best standard of resources available in the local context so as to ensure that the companies' business plan is on track. These supports and guidance include all kinds of business services like company formation, marketing support, creation of investment licensing documents, local accounting, HR support, and consulting services such as match-making, customs duties, introduction of local universities as a source of skilled labor, and any required trouble-shooting. A sincere and quick response to customers' requests is an important success factor for attracting manufacturing companies into the Japanese industrial parks. In one particular industrial park that experienced some good results, the president of the management company worked around the clock using his personal resources until the problem was solved. If there is no spirit of diligent and responsible service delivered to managing the park on a consistent basis over time, then even an industrial park enjoying state-of-the-art equipment, an attractive physical infrastructure, and the best of locations may not be able to attract the serious and sustainable investors. So, there is a tendency among manufacturing companies, in particular, small and medium-sized manufacturers, to expect a certain level of service provision at the time they are considering making an investment as well as after advancement to the Japanese industrial park. It becomes a great advantage for manufacturing companies to be able to access those services

which are not available in any industrial park other than a Japanese industrial park.

Furthermore, often in some cases of overseas investment, it can easily take up to two years, and, in the worst case scenarios, for a variety of reasons, four years can pass by before a plant can commence operations. But among assembling companies such as those for consumer electronic products, many argue that it is too time-consuming and counterproductive to endure two to four years before plant operation. Responding to such concerns, industrial park developers started offering rental factory space for certain companies with the layout of the general assembly processing plant provided to expedite the commencement of manufacturing operations. This business model of providing rental factory space is quite popular now in Southeast Asia among Japanese industrial parks. Even though rented factory facilities may not be installed in all Japanese industrial parks, because an increasing number of small and medium-sized companies are considering overseas expansion, the demand for rental factory space is on the rise. Ota Techno Park is a unique industrial park in Thailand developed and managed by a company called AMATA PCL, and it has a complex designed for accommodating small and medium-sized companies, and required operational supports are provided so that it contributes greatly to shortening the lead time of tenants to start up their manufacturing operations.

In addition, one of the characteristics of Japanese industrial parks in Southeast Asia lies in its mode of development and operation mechanism mostly carried out by trading companies. Industrial park development is closely associated with land issues, and in countries of Asia, where legislation on land is not well presented, and whereas there is a fundamental difference from Japan in the concept of land ownership, long term development of the land for this purpose may lead to trouble related to land occupation over time. In this regard, good reason exists to reduce the risks of land acquisition by having access to the land already cleared by a Japanese trading company. This is arguably the most crucial impetus for Japanese manufacturing companies in choosing to locate their operations in industrial parks developed by Japanese trading companies, rather than acquiring land by themselves in the host country.

In addition to the three points mentioned, of course a good investment environment in the host country is a basic premise for attracting direct investment in massive quantities. Unfortunately, there are many problems still in India in this regard. Improvement in development management policy at the central government level overall is an important issue that must be addressed in parallel with necessary improvement measures of the industrial park management at the individual state level.

In order for industrial parks to function as a meaningful economic and industrial instrument to generate employment, income, and tax revenues, it is not good enough just to designate the area as the industrial park land and process land allotment. If there are no attractive features provided in the land, there are few possibilities for attracting manufacturing companies to the

land. In Southeast Asian countries, there are many cases where an industrial park was developed by government officials who do not understand the needs of investors. Then, most of those industrial parks remain idle for many years. There are many elements that need to be put in place for an industrial park to attract investors and those needs are diverse in terms of institutional organization, adequacy of funding, and professional attention to development detail. In India, the mythology of industrial parks - that they somehow magically guarantee the automatic generation of economic benefit - must be abandoned. For industrial parks to be attractive and become successful, much effort and professional attention by management companies is required.

The most important kind of business rule in the market economy is the satisfaction of the customer. This applies to all industries, including industrial park projects. It is neither the industrial park developer nor the government bureaucracy that should determine which company and from what industry should locate in their industrial parks. It should be the decision of manufacturing companies themselves evaluating the alternatives and deciding where to locate their operations. Therefore in order to attract direct investment, policy makers must know what potential corporate customers need and be able to satisfy those needs in a high quality manner. In general, discrepancies between the customers and industrial park developers are found in industrial parks in India such as system design, infrastructure development planning, and actual operation.

Although there are special industrial parks like the "Hi-Tech park", "Software park" and "Pharmaceutical industrial complex" in India available as platforms for development in the software engineering, IT, and R&D industries in India, those are less effective for attracting manufacturing industries as described above. Such specialized park development does not generate a wide impact on improvement of integrated industrial clusters, and has little association with peripheral industries so that the scale of employment creation becomes marginal and the economic multiplier effect remains relatively small.

Industrial Park Development Case

In the case of industrial park development in Southeast Asia, as a good example, through assistance from Japan, the eastern seaboard industrial zone development in Thailand was remarkably noted as the most successful case - eventually contributing to the development of attractive grounds for the location of manufacturing industries in the region.

For the purpose of solving the structural over-concentration of industrial locations in and around Bangkok city, the government delineated and adopted a policy to give more incentives to the industries when they locate their production base far outside of Bangkok city on the periphery of the Bangkok metropolitan region. Eventually this policy, together with the gradual development of eastern coastal areas in Thailand, has played an important role in forming the present decentralized spatial allocation of industrial activity in Thailand. The eastern seaboard is

comprised of three provinces, Chunsao, Chonburi, and Rayong, which are located 80 ~ 200 km away from Bangkok, and these region's development was initiated in the 1980s and the 1990s in large-scale. Broadly speaking the main contents of the development was divided into two parts; the industrial area development in Map Ta Phut in Rayong province mainly for the petrochemical industry; and, the industrial park development in connection with the development of the new port at Laem Chabang. In these development projects, the Office of Eastern Seaboard Development Committee (OESB⁴) that was formed under the National Economic and Social Development Board of (NESDB), took charge of all regional industrial development projects - facilitated through the use of Japanese yen loans through ODA.

The core ODA projects in the eastern seaboard regional development were such as those listed below; the construction of the Bangkok-Chonburi-Pattaya highway, the laying of the railway network, development of Laem Chabang commercial port as an alternative to Bangkok port, and the development of industrial parks. Those infrastructure projects become the industrial basis for attracting investment and population to the region. The industrial park was initially developed in coastal areas close to Laem Chabang, but in the 1990's, the center of development was shifted inland along Route 331. The feature of development scheme of the industrial parks in the region is that the strong initiative not only taken by government-owned corporations but also drawn from private companies, including Japanese, which carried out the development of industrial parks. Having a well-functioning industrial park development and an effective industrial decentralization policy, the new location of automotive factories in Thailand was concentrated 80 ~ 120 km away from Bangkok. This trend can be seen in recent years relative to investment locations of Japanese automotive parts manufacturers as well.

⁴ OESB was re-organized from the Bureau of the Eastern Seaboard Development Committee, which was formed with a structure where the prime minister headed the organization, and deemed to conduct policy making for the development of the eastern seaboard region. OESB was given with the provision of much stronger jurisdiction from the original role of the Bureau in order to proceed and implement the tangible development projects in the region.

Table 1-4: Project summary in Thailand Eastern Seaboard Development Plan

| | |
|---|---|
| Map Ta Phut area Development | ① Map Ta Phut Industrial/Urban Complex Project ② Map Ta Phut Port Project ③ Gas Separation Plant Project |
| Laem Chabang area Development | ④ Laem Chabang Port Project ⑤ Laem Chabang Industrial Estate Project |
| Water Resource Development/ Water Pipeline Project | ⑥ Nong Pla Lai Project ⑦ East Coast (Dok Krai - Map Ta Phut) Water Pipeline Project ⑧ Map Ta Phut - Sattahip Water Pipeline Project ⑨ Nong Kho-Laem Chabang Water Pipeline Project ⑩ Nong Pla Lai - Nong Kho Water Pipeline Project |
| Railway Project | ⑪ Si Racha - Laem Chabang Railway Project ⑫ Sattahip - Map Ta Phut Railway Project ⑬ Klong Sip Kao - Kaeng Khoi Railway Project |
| Road Project | ⑭ Chonburi - Pattaya New Highway Construction Project ⑮ Bangkok - Chonburi Highway Construction Project ⑯ Outer Bangkok Ring Road (East Portion) Construction Project |

Table 1-5: Eastern Seaboard Development Plan in the Eastern Thailand List of ODA-loan projects

| Project name | Loan agreement | Closing date of loan disbursement | Loan amount (million yen) | Loan amount disbursed (million yen) |
|---|----------------|-----------------------------------|---------------------------|-------------------------------------|
| Development of the Map Ta Phut area | | | | |
| ① Map Ta Phut Industrial/Urban Complex Project | October 1983 | October 1991 | 3,507 | 1,415 |
| ② Map Ta Phut Port Project (1) | September 1984 | March 1995 | 5,811 | 3,112 |
| ② Map Ta Phut Port Project (2) | October 1985 | September 1993 | 18,045 | 3,017 |
| ② Map Ta Phut Port Project (3) | September 1987 | February 1997 | 3,395 | 1,387 |
| ③ Gas Separation Plant Project | July 1982 | July 1985 | 15,050 | 14,998 |
| Development of the Laem Chabang area | | | | |
| ④ Laem Chabang Port Project (1) | September 1984 | June 1993 | 4,172 | 3,178 |
| ④ Laem Chabang Port Project (2) | November 1986 | November 1993 | 12,383 | 4,843 |
| ④ Laem Chabang Port Project (3) | February 1990 | May 1995 | 8,438 | 5,888 |
| ⑤ Laem Chabang Industrial Estate Project | October 1983 | October 1992 | 2,812 | 2,376 |
| ⑤ Laem Chabang Industrial Estate Project (2) | September 1987 | September 1993 | 3,003 | 1,938 |
| Water Resource Development/ Water Pipeline Project | | | | |
| ⑥ Nong Pla Lai Project | September 1983 | January 1995 | 4,357 | 3,226 |
| ⑦ East Coast (Dok Krai - Map Ta Phut) Water Pipeline Project | July 1982 | April 1987 | 8,570 | 3,868 |
| ⑧ Map Ta Phut - Sattahip Water Pipeline Project | November 1988 | March 1994 | 1,459 | 1,050 |
| ⑨ Nong Kho - Laem Chabang Water Pipeline Project (E/S) | September 1984 | April 1987 | 144 | 103 |
| ⑩ Nong Pla Lai - Nong Kho Water Pipeline Project (E/S) | October 1983 | October 1990 | 1,283 | 415 |
| ⑩ Nong Pla Lai - Nong Kho Water Pipeline Project (E/S) | February 1990 | June 1995 | 304 | 156 |
| ⑩ Nong Pla Lai - Nong Kho Water Pipeline Project (E/S) | January 1993 | May 1999 | 8,562 | 4,102 |
| Railway Project | | | | |
| ⑪ Si Racha - Laem Chabang Railway Project | September 1988 | July 1996 | 1,013 | 820 |
| ⑫ Sattahip - Map Ta Phut Railway Project | September 1988 | January 1997 | 3,003 | 2,826 |
| ⑬ Klong Sip Kao - Kaeng Khoi Railway Project | February 1990 | December 1996 | 8,158 | 7,598* |
| Road Project | | | | |
| ⑭ Chonburi - Pattaya New Highway Construction Project (1) | November 1983 | March 1994 | 4,117 | 4,074 |
| ⑭ Chonburi - Pattaya New Highway Construction Project (2) | September 1991 | January 1997 | 5,870 | 4,513 |
| ⑮ Bangkok - Chonburi Highway Construction Project (1) | December 1990 | April 1999 | 15,497 | 13,435 |
| ⑮ Bangkok - Chonburi Highway Construction Project (2) | September 1993 | January 2000 | 21,827 | 18,572* |
| ⑯ Outer Bangkok Ring Road (East Portion) Construction Project (1) | December 1990 | April 1999 | 12,953 | 11,828 |
| ⑯ Outer Bangkok Ring Road (East Portion) Construction Project (2) | September 1993 | January 2000 | 12,475 | 11,622* |
| Eastern Seaboard Development Plan (E/S) | | | | |
| | September 1983 | September 1995 | 1,710 | 1,343** |
| | | Total | 178,768 | 133,737* |

(Source) JICA, 1999

Figure1-5: Location of ODA loan projects in the Eastern Seaboard Development Plan

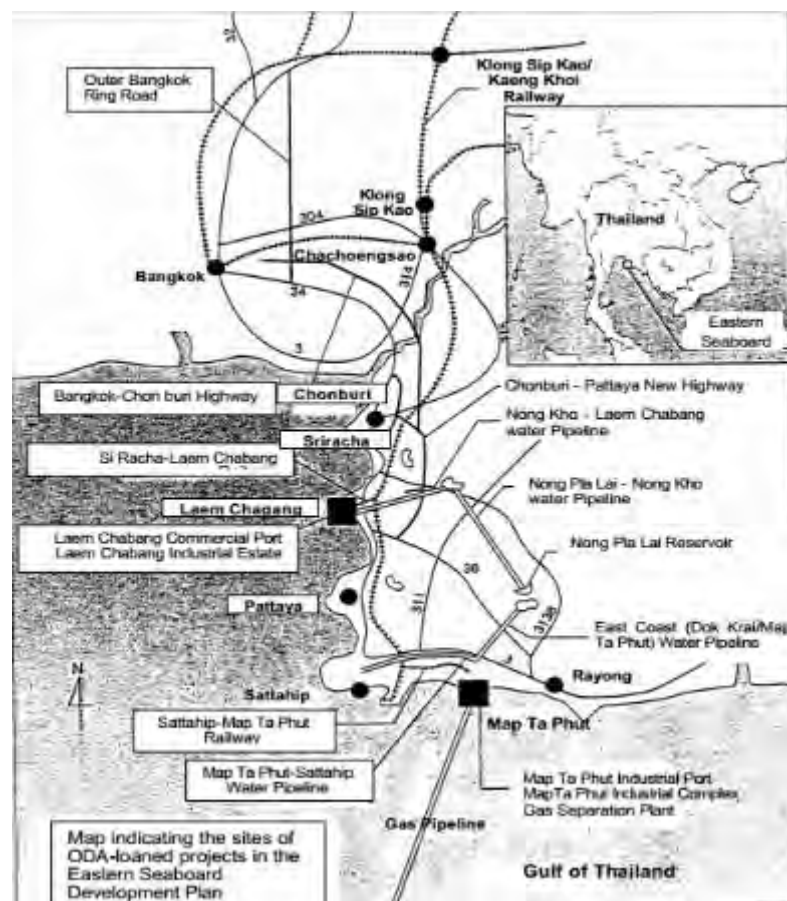
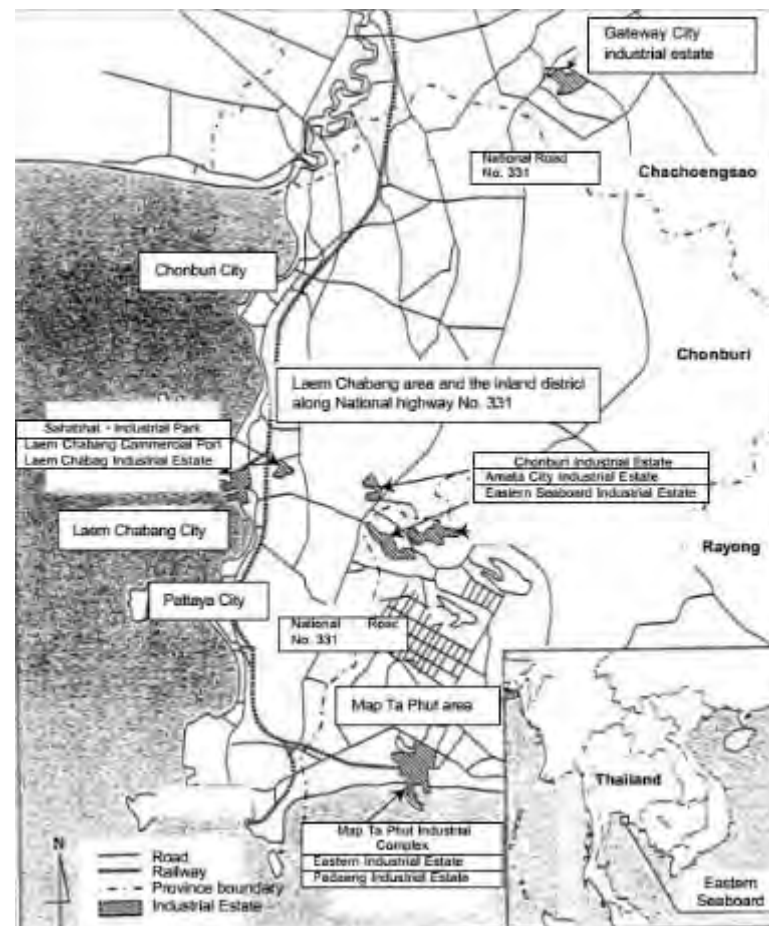


Figure1-6: Location of industrial estates in the Eastern Seaboard



(Source) JICA, 1999

In the Eastern Seaboard industrial zone development, with the assistance of Japanese yen loans, the development fund was heavily devoted to the industrial infrastructure development projects such as described above between 1982 and 1993, and the total amount of ODA loans amounted to JPY 178.7 billion. Starting with the discovery of natural gas in Map Ta Phut, industrial development initiatives in the eastern area of Bangkok progressed over the course of 10 years - then the region became a very attractive area for manufacturing industries compared to other regions of the country.

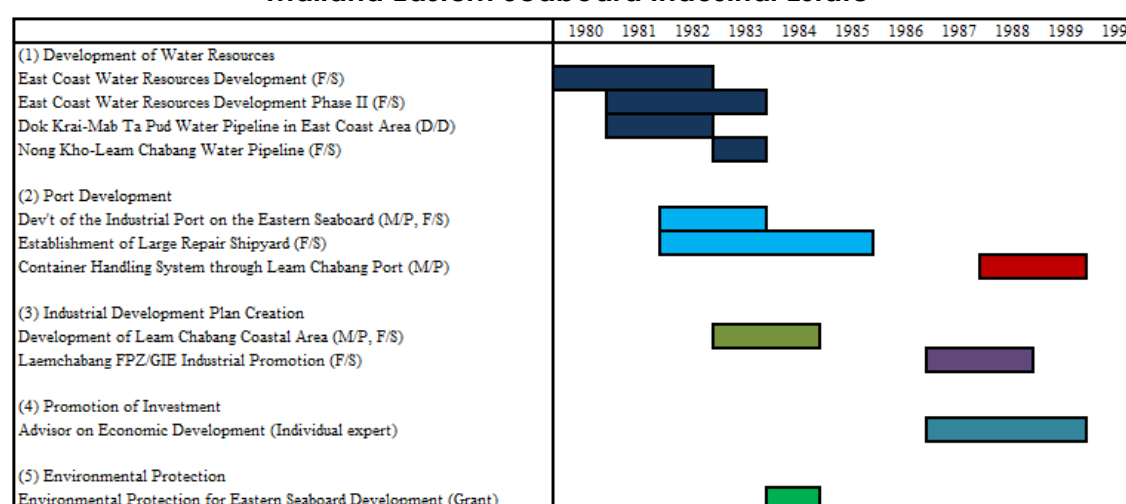
Table 1-6: Yen loan amount for Thailand and share for the Eastern Seaboard Development Plan

(unit: million yen)

| Fiscal year | Loan amount | Share for ESDP |
|-------------|-------------|-----------------|
| 1982 | 84,240 | 21,570 (25.6%) |
| 1983 | 67,360 | 1,720 (2.6%) |
| 1984 | 49,432 | 9,927 (20.1%) |
| 1985 | 60,793 | 23,537 (38.7%) |
| 1986 | 32,489 | 12,287 (37.8%) |
| 1987 | 72,646 | 3,003 (4.1%) |
| 1988 | 49,493 | 13,948 (28.2%) |
| 1989 | 66,357 | 14,798 (22.3%) |
| 1990 | 43,773 | 28,455 (65.0%) |
| 1991 | 84,687 | 9,065 (10.7%) |
| 1992 | 127,375 | 6,362 (5.0%) |
| 1993 | 104,462 | 34,100 (32.6%) |
| Total | 804,107 | 178,768 (21.2%) |

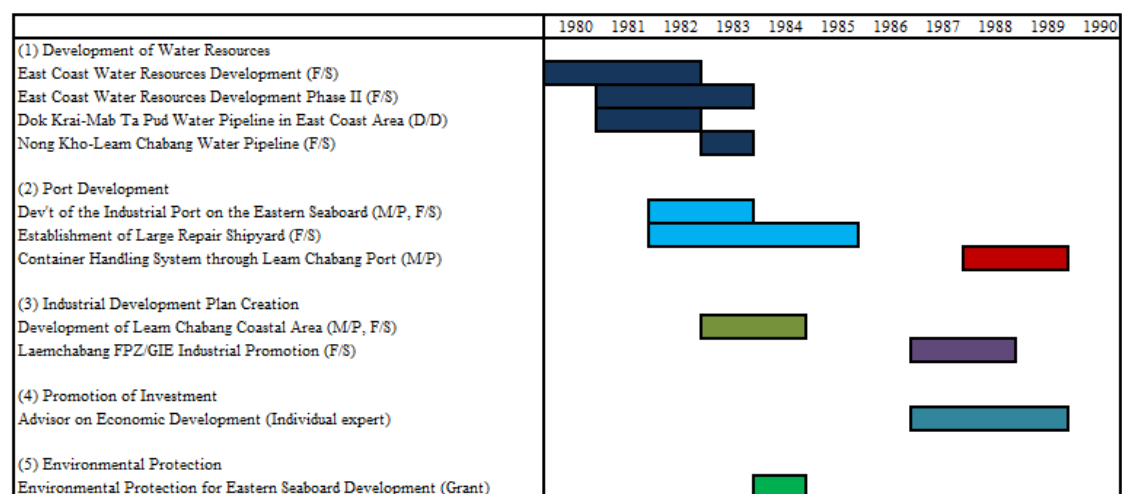
(Source) JBIC (JICA, 1999)

Figure1-7: The technical assistance projects and their development period in Thailand Eastern Seaboard Industrial Estate



(Source) JICA, 1999

**Figure1-8: The yen loan projects and their development period in Thailand
Eastern Seaboard Industrial Estate**



(Source) JICA, 1999

The role of this eastern seaboard industrial area development projects in the promotion of manufacturing industries in the country was certainly significant. As shown in the table below, if the added value creation in the manufacturing sector between 1981 and 1995 are compared, the share in the metropolitan area decreased while the portion in the Eastern Seaboard industrial zone increased dramatically. The share of value-addition created in amount of manufacturing industry to the total was about 38% in the metropolitan area, whereas the majority of share of value-addition was derived from the manufacturing industry in the eastern seaboard industrial region. This fact clearly suggests how the Eastern Seaboard region was successful in attracting manufacturing industry.

**Table 1-7: Added value in the manufacturing industry by region in Thailand
(1981~1995)**

| | Nation | Metro-po itan area | East (ESB) | Central region | West region | East-nort h region | North region | South region |
|---|--------|-----------------------|---------------|-------------------|----------------|-----------------------|-----------------|-----------------|
| Growth rate of added value in the manufacture industry | | | | | | | | |
| 1981-86 | 5.6% | 5.6% | 5.0% (4.9%) | 6.1% | 7.7% | 7.0% | 4.9% | 2.4% |
| 1986-91 | 15.5% | 15.5% | 15.1% (15.1%) | 23.4% | 13.3% | 12.9% | 12.4% | 14.0% |
| 1991-95* | 10.7% | 6.9% | 22.0% (22.0%) | 20.0% | 14.8% | 18.7% | 17.7% | 9.4% |
| Share of added value in the manufacture industry | | | | | | | | |
| 1981 | 100% | 72.2% | 11.2% (10.6%) | 3.3% | 3.1% | 3.9% | 3.5% | 2.7% |
| 1995 | 100% | 63.2% | 15.8% (14.9%) | 6.5% | 3.6% | 5.0% | 3.8% | 2.1% |
| Amount of added value/gross product in the manufacture industry | | | | | | | | |
| 1981 | 23.2% | 36.1% | 33.3% (42.5%) | 16.7% | 13.1% | 6.7% | 6.7% | 6.4% |
| 1995 | 30.8% | 37.6% | 47.6% (55.0%) | 42.2% | 26.3% | 13.4% | 13.2% | 7.5% |

(Source) NESDB, JICA, 1999

In the early 1980s, when the development plan of the Eastern Seaboard industrial zone began to take shape, the macro-economic situation of Thailand was not so good, due to sluggish foreign exchange reserves and the economic downturn caused by a drop in exports. The Thai government even received a structural adjustment loan at two times from the World Bank in 1982. At that time, information emerged from the World Bank that even if the eastern seaboard industrial zone development was made, there is little expectation that investment demand would come to Thailand. However, a sharp rise of the Japanese yen by the Plaza Accord of 1985 brought Thailand into a new stage. Standing at the threshold of a vast increase in Japanese direct investment into the country, the Thai government decided in 1986 to proceed with the development of the eastern seaboard industrial zone through a new port and industrial parks development.

Table 1: Macroeconomic indicators of Thailand in the 1980s

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
|---|------|------|-------|------|------|-------|------|------|-------|-------|-------|
| Actual GDP growth rate (%) | 5.0 | 5.9 | 5.4 | 5.6 | 5.8 | 4.6 | 5.5 | 9.5 | 13.3 | 12.2 | 11.2 |
| Financial-deficit-to-GDP ratio (%) | -5.1 | -3.5 | -6.5 | -4.0 | -3.5 | -5.3 | -4.3 | -2.3 | 0.7 | 3.1 | 4.7 |
| Current-account-balance-to GDP ratio (%) | -6.4 | -7.4 | -2.7 | -7.2 | -5.1 | -4.0 | 0.6 | -0.7 | -2.7 | -3.5 | -8.5 |
| Export growth ratio (%) | 18.4 | -4.0 | -11.9 | 2.1 | -3.7 | -10.4 | 6.2 | 9.8 | 8.4 | 1.1 | 2.8 |
| Import growth ratio (%) | 4.4 | 9.9 | -4.3 | -4.9 | -2.1 | -2.8 | -3.1 | 11.6 | 6.8 | 5.0 | 5.6 |
| Dead service ratio (%) | 14.4 | 19.4 | 20.3 | 23.7 | 25.3 | 29.5 | 27.7 | 21.6 | 18.3 | 15.3 | 14.3 |
| Foreign currency reserves (months) | 1.7 | 1.7 | 1.7 | 1.6 | 1.8 | 2.2 | 2.8 | 2.9 | 3.1 | 3.9 | 4.1 |
| Direct investment (million dollars) | 225 | 197 | 176 | 313 | 328 | 241 | 318 | 728 | 1,321 | 2,828 | 1,981 |

(Source) IIF (JICA, 1999)

There is a factor, which casts an important impact and brought successful results in the development program of this eastern seaboard industrial zone. The lesson learned from the successful case was the host country's timely in-depth review and accuracy on the timing of executing the investment plan and scale adjustment with the appropriate timing due to that review. Individual projects that make up the region's development have to be addressed effectively in order to promote the business in line with economic conditions of the times. Also the development model of the industrial park also opened its doors to the role of private developers, in the situation where almost all industrial parks development was carried out by the Industrial Estate Authority of Thailand (IEAT). The decision to bring private investors was met with a speed required for matching up with the requirement of private foreign investors to consider alternative industrial base in the eastern seaboard industrial zone. Those acts on institutional reform was taken up to the present status of an industrial park in the region that they are still one of the favorable grounds for investors, and now, the eastern seaboard of Thailand has become one of the most active industrial hubs in Southeast Asia.

On the other hand, when we compare the background of industrial area development between Southeast Asia and India to date, most of the industrial areas of suburban development in India were carried out by the public sector under the influence of local government and state government. This means that for historical reasons, placing value on rural development and agriculture, the public sector tends to develop the rural areas surrounding urban areas to the neglect of more urbanized areas. Both Southeast Asian countries and India have similar paths in industrial zone development, utilizing rural suburban areas as investment destinations for foreign capital and major metropolitan areas as labor pools for investment projects. The difference between Southeast Asia and India can be characterized in the formation of the outskirts industrial area. While the suburban development of the Southeast Asian countries is intended primarily to develop the areas as the new industrial region, Indian cases show that suburban industrial development seems to incorporate small and medium-scale factories, which are already located in the urban areas, with relocation and redevelopment relegated to suburban areas.

1.2.2. Business model / revenue structure of industrial park development

There are industrial parks developed by government corporations in Southeast Asia such as Malaysia (MIDA), Philippines (PEZA) and Thailand (IEAT), but the majority of industrial parks are developed by private companies.

The business of industrial parks is a long span ranging from development, sales, service provision to tenants and infrastructure management.

First, Japanese industrial park developers secure the land for an industrial park with a local

partner and get approval for development. At this stage, although the marketing survey shall be conducted to expected tenants, no contracts or reservations are made with potential tenants. After the infrastructure is developed that considers requirements for flood control and environmental standards in Southeast Asia, and construction is completed, tenants will be attracted to locate operations there. However, there are cases when industrial plots are sold out in a short period of time or sold over a long time. It is difficult to follow a business plan on cash flow from initial investment to fund recovery.

An industrial park itself can make profits by buying the land and selling industrial plots, but there are opportunities to develop complex businesses. For example, private industrial parks in Southeast Asia have a profit structure of providing operational services to tenants. Other than providing stable utilities such as electricity, industrial water and wastewater treatment, they provide support for local incorporation, local staff employment and accounting services to tenants. By providing overall after-care services, they can secure stable profit structure. Also, there are increasing cases to provide rental factories. Rental factories are utilized as a temporary space for companies to determine project feasibility or a support tool to minimize the initial investment cost.

Also, building a good relationship with tenants through providing these services develops new businesses such as procurement of parts, logistics and warehouse support. These businesses are advantageous to Japanese trading companies by utilizing existing business networks.

Touching upon operating revenue of industrial park, even though each business has different revenue model, based on several cases of the industrial park operation, the followings could be the main business income sources.

1) Revenue from sales of developed land

For the development cost of land at industrial park, it would normally come to around US \$ 25 per square meter in average in Southeast Asia. And then sales price of the developed land would come to US \$ 45 per square meter, thus gross profit would be US \$ 20 per square meter or so. In the case of property of 300 ha, sales will be US \$ 60 million. From the revenue, the cost of employee, management and borrowing interest etc. are deducted, and those costs would be accumulated to around US \$ 30 million, which is half of sales in eight years in some cases of industrial park projects. Also if the land development was designed for including commercial and residential zone, sales price can also be higher. In some areas market property price of those purposes can be US \$ 80 per square meter on average.

Consequently, revenue from land sale of industrial park together with commercial and residential facilities, appear to be bring the profit to the investment with 25 percent in the IRR generally. However, it is not bringing good business profitability as projects are

taking place in high risk developing countries.

2) Revenue from industrial park management

Management service fee is based on a concept of administrative expenses charges of properties management to be claimed to tenant companies. The profit margin is likely to be set at 10-15% to the cost on the actual. It has a mechanism to collect administrative charges about US \$ 5 ~ 7 per square meter in a month in general. Profit rate is around 10-15% or so.

3) Revenue from utility supply

Utility supply business like industrial water and sewerage treatment would contribute to the revenue of the industrial park business to a certain extent if the development and operation of the utility service facilities are managed by the operating company. Depending on the country and region, industrial water would be supplied approximately in US \$ 0.03 per cubic meters, and wastewater / sewage treatment could be charged in about US \$ 0.35 per cubic meters. In the case of water supply business of 10,000 cubic meters / day, and sewage treatment for 80% of the water supply scale, the following annual revenue can be assumed.

(1) Industrial water: $10,000 \text{ cubic meters} \times \text{US } \$ 0.03 / \text{day} \times 300 \text{ days}$
= US \$ 90,000

(2) Wastewater / Sewage treatment: $8,000 \text{ cubic meters} \times \text{US } \$ 0.035 / \text{day} \times 300 \text{ days}$ = US \$ 84,000

(3) Cost of operation could be about 20%, and the profit out of the business would be around US \$ 1.4 Million per year in water and sewerage treatment business.

4) Other revenue

As for the other business operation, revenue from the development and management of logistics services, dormitory and housing for expatriates and for middle and high-income people, hotel and restaurant etc. could be other sources of income for industrial park operating company. However, these businesses would only be materialized after industrial park began to take off, as these are peripheral business support service, thus it can be a pillar of the business as subsequent revenue streams. The profit from these service operations could be about 20 to 30% to the investment on the average rate of return. In addition, the provision of business administration services such as investment-related procedures assistance or recruitment and staffing service are regarded as a service and, this area of service are run on the cost-cover base.

Furthermore, even though there are not many cases existing for the Japanese industrial park project, but an IPO is the greatest contribution to the business in term of profit as

the project founder can take founders profit of 10-20 times of the invested capital, provided the project has a room of further expansion of its industrial park operation. There are more than 20 companies of industrial park and SEZ operating companies so far which have already implemented an IPO in Asian countries.

The private industrial park operators sometimes play a role as a representative of the industry to negotiate with government agencies on behalf of the tenants and recommend improvement of laws and regulations. Operators have also become important stakeholders for the government; for example, the government conducts a survey or explains to operators about the introduction of new laws or some change in the legal system. For this reason, the industrial park operators collect the full information about the latest change to the legal system and provide that information to tenants.

The business model of industrial park development is, similar to real estate development, securing the strategic land at the lowest possible price, developing infrastructure and selling to private companies with value-added services. It also includes the profit structure such as providing all necessary services for companies.

1.2.3. Risk Management

Practically in industrial park development and practical management, various risks arise and occasionally hinder continuing business operations. From a risk management viewpoint, ranging from the development of operational guidelines to the understanding of the legal system, the risk management measures in the industrial park development in Southeast Asia need to be observed and analyzed to derive the lessons on how to actively control those risks.

In this study, the measures required to make industrial park development in India smooth and effective shall be examined by looking at the risk management lessons from industrial park development and operation in Southeast Asian countries to date. The risk ranges from politics, business operations, environment, and funding, etc. This exercise aims to capture the best practices in a way that we could learn the lessons, as much as possible, from the practical industrial estate development and management business in Southeast Asia. The following are risk management measures of industrial park development and operations often observed in Southeast Asia.

Table 1-8: Lessons from risk management viewpoint

| Risk factors | Lesson |
|---|---|
| Risk on site selection due to policy and political decision | Eliminating the mechanism of selection of the project site just from a supply side approach rather than the demand side, such as those defined as the industrial park area from a particular political influence, a proposed private project is often adopted for the project site selection. |

| | |
|---|--|
| Foreign exchange risk | For loans, which normally account for 70% to 80% of financial source for private companies, a certain facilitation measures on financing system is established to raise fund in local currency rather than in foreign currency. Moreover permission of usage of fund brought from parents companies on working capital is also made. Furthermore, applicability of foreign currency as the settlement currency is made available so that it is possible for foreign zone developers to reduce the impact of exchange rate fluctuations |
| Risk on changes of Institutional provision and/or permission criteria related to business license | Familiarize with stakeholders and build confirmation for legal and institutional provisions serve as a basis of business licensing |
| Operation and maintenance risk | Since regular maintenance will be required, it is important for a business entity to set aside enough internal funds for the purpose. (Maintenance frequency depends the type of infrastructure and plant) |
| Utility risk | It is important to have guaranteed utility supply system such that utility business operations relying on only public infrastructure and utility supply run by the government may cause business risk due to un-expected stoppage of utility supply by events outside the control of the operating companies, and it effects on the credibility of management company of industrial park. Thus with facilitation measure from governments on legal and regulatory framework, operating companies are facilitated to establish their own captive utility supply units at their industrial park. |
| Land acquisition risk | To reduce the risk burden on the land acquisition of private companies, the relevant government authority provides public land or performs the land acquisition procedure on behalf of the private sector. There is even a movement to assemble funds and create a capital pool specifically for land acquisition. |
| Environmental risk / residents objection | Installation of exhibition halls and information centers for the dissemination of the nature of projects and the local contribution of companies (provision of libraries, schools, scholarships, such as microfinance) is also effective |
| Funding risk | In addition to funding from foreign and domestic private banks, diversification of the funding sources such as the issuance of project bonds in the bond market, or taking advantage of public financial institutions and international multilateral development banks less susceptible to fluctuations in the market. Furthermore infrastructure funds are also used to reduce the funding risk. |

(Source) JICA Study Team

Risk due to political and policy action

As mentioned in the previous section, in preparing for industrial park development, selection of a suitable project site location is very important. In this line, it is important to note in this mechanism of forming an industrial park business that the view point from the demand side becomes critical, as opposed to that from the supply side, normally influenced by political

power. Manufacturing companies, as customers to industrial parks, evaluate the site location from their point of view. In this regard, in the countries and regions (such as KAPET of Indonesia) without clear legal definition of business licensing of the zone developer and guidelines to that effect, the obligation and role of industrial park developers and governments is opaque. Industrial park selection was mostly conducted by governments and the concept of a risk sharing scheme between the public and private sectors on how the risk and burden shall be covered in the process of industrial park development and operation is not often clearly stated so that smooth performance in the management and operation of the industrial park would not be attained in most cases.

For this reason, in the bidding procedures for concessions in industrial park projects, rather than being a "government led project" (Solicited project), a "private sector led project"⁵ (Unsolicited project) was often selected as the development form of industrial parks in Southeast Asia such as in Thailand, Indonesia and Cambodia⁶. However, it was also true that there are many cases where concessions are given without competitive bidding to the proposed project from the private sector - often becoming a breeding ground for corruption for a long time. In recent years, depending on the countries, it has become a trend that the governments' proposed projects have a priority in Southeast Asia. This is due to the much faster lead times required for concessions to be granted, and, the support measures provided by the government being more generous than that of private sector proposed projects. In order to eliminate minor corruption in the current administration by proceeding with a government project, the speed and support measures are managed by government officers. Consequently, the competence of the officers would determine the project development process, and in reality, there is an obvious limit in the officer's competence in developing a project in a smooth manner. Recognizing this reality, there is again a movement to re-evaluate the options of private sector led projects as a means of expediting the development process.

Foreign Exchange Risk

It is not always possible to raise funds solely from the domestic market like in Vietnam or Indonesia due to the high interest rate. There are certain cases that require funds to be arranged through loans from financial institutions and investment funds coming in from abroad. At some point, there becomes a need to remit dividends to foreign sponsors, or to pay financial interests to overseas financial institutions. Many industrial park business tenants receive earnings in the domestic currency of the host country. That has to be exchanged into foreign currency to repatriate those earnings.

⁵ The term "private sector led-project" refers to a project development scheme in which a private sector entity arranges the land, without passing through the acquisition process of the government or by formal bidding, and yet, the industrial park development concession is obtained subsequently from the government.

⁶ Amata Industrial Estate (Thailand), Rojana Industrial Park (Thailand), EJIP (Indonesia), MM2100 (Indonesia) and PPSEZ (Cambodia) etc.

When facing the risk of a transactional loss with a host country's currency exchange, usually the best way of hedging the risk, from the point of private developers, is to transmit the business income outside the host country as early as possible. It is also better to arrange the required loans, which normally account for 70 to 80% of the required capital, through local currency rather than in foreign currency. Then it would consequently reduce the impact of unavoidable currency fluctuations. However, if borrowing in local currency was not reasonable in relation to interest rates, there is a provision in Southeast Asian countries that the borrowings from the parent companies can be used as an option for working capital. It should also be noted that in many industrial parks in Southeast Asia such as MM2100 of Indonesia, tenants make payments in US dollar to avoid the risk of exchange rate fluctuations.

Systems and licensing change risks associated with business rights

Dispute resolution, which defines the procedure when a dispute occurs between a host government and a foreign operating company, will also determine court jurisdiction and applicable law. If the company was raising the necessary funds from financial institutions in the form of the "project finance," the number of stakeholders will not be limited to the private company and its host government, but will expand to include those financial institutions that have provided the means to develop the project. Business rights become important risk management factors, since business rights are regarded as the condition of a loan. Consequently the lenders become also important stakeholders.

Table 1-9: Case of Map Ta Phut Industrial Estate, Thailand

Map Ta Phut industrial estate in the south-west of Bangkok opened in 1988, a concentrated industrial cluster where automobile, electrical and heavy industries like chemical and petrochemical industries are located. In the industrial estate, there was a case in 2009 that the Supreme Court of Thailand revoked all of the once licensed business operations due to the lack of pledged procedures by the government. As a result, the 76 existing businesses and new businesses in this industrial park (total investment of 400 billion baht) were forced to stop operations. This case was originally begun with the claim from residents who protested their suffering of environmental damage caused by industrial wastewater in 2009, and filed a lawsuit for suspension of projects that had already been approved. The resident claimed that industrial projects neglected the requirements to observe the rule set forth for granting business licenses. But when a business license was granted prior to the change of the constitution, there was no requirement stated in accordance with the provisions of the Constitution that no obligation to conduct a hearing or review the health impact assessment was seen, and those are newly incorporated in Section 2 Article 67 of the constitutional amendment made in 2007. In the normal interpretation of the law, the projects approved must be based on the law of earlier and won't be affected by the laws newly set forth. But due to the lack of proper guidelines to advance the project development by the Thai government, the case continued up to 2010 when the authorities at last formally made a manual for the approval of business licenses with the development of an impact assessment method, hearings, and installation of third-party organizations.

The environmental protests that occurred in the industrial estate together with the subsequent public awareness and social movement among local residents impressed the importance of environmental concerns upon the Government of Thailand. However, at the time when the

Japan-Bangkok Chamber of Commerce and Japan External Trade Organization in Bangkok reviewed the case, the need for a policy to prevent protests from residents became clear, along with the need to develop public-private partnerships with the Thai government to consider the impact on local residents.

Operation and maintenance risk

The operation and maintenance risk is the risk related to any interruption of continuous operations and management of industrial parks. Such a risk may become apparent if the management company was outsourcing utility services⁷ to other parties then due to its insufficient operation and maintenance capability or lack of the necessary funds for the performance, the operation of the industrial park is compromised.

Utility Risk

The utility risk is the risk that occurs when any aspect of park infrastructure such as transmission lines, pipelines, power lines, and water supply required for the project is not in place by the time of the park opening for business, and/or becomes dysfunctional from continuous industrial park operation. For private industrial park management, it can be a subject of risk management if these logistics and power services through off-site infrastructure development by public authorities are delivered on time and provided on the base of agreed quality.

For the industrial park management, to attain commitment from partner governments and government agencies to put reliable infrastructure in place in a timely manner becomes critically important to the functioning of the park. In this line, there is a provision of even guarantee on logistics and electricity services through off-site infrastructure demonstrated by IEAT of Thailand. However, the external electricity and water supply from the national agency or a state government would not remove the risk of a business situation where the utility service was disrupted. Therefore in the private industrial park development project, the utility supply with the necessary infrastructure investment is often carried out on their own base in the industrial park projects in Thailand and Indonesia. In Rojana Industrial Park of Thailand and MM2100 of Indonesia, not only backup power during peak hours but also power generation project is embraced in the industrial park project as it is their own investment. For materializing such private utility service project, government also applies flexible administrative regulations together with legal system, and facilitates active involvement of large volume power purchase agreement with such private utility suppliers. In addition, as an example of industrial water generation and water supply business, EJIP of Indonesia has their own industrial water

⁷ In the industrial estate such as IEAT of Thailand, the utilities service operation is often outsourced to private companies (either through Joint Venture or solely contracted to single private operators). The operation and management by the private is widely adopted even for the case of public industrial park projects.

generation facility at their premises.

Land Acquisition Risk

For the industrial park development In Southeast Asia, the biggest challenge is to select, acquire, and attain the proper conditions for use of the land. Land acquisition (or land use license/rights) by the private sector can be a challenge. Potential risks in acquiring land in Asia can be problematic so government authorities have assembled various measures to reduce the burden on the private sector, through the provision of public land, or, alternatively, by carrying out land transactions on behalf of the private sector (ex. Thang Long Industrial Park). For example, the creation of guidelines on development and management of industrial parks, and, an environmental impact assessment was speedily performed, and the reform of legal system, if necessary, for land arrangement of the industrial park by private operators was also implemented. These guidelines and legal reform have contributed to the establishment of a mechanism where commercialization of industrial park development projects was enhanced with provision of the transparency and predictability in the business development procedures. Moreover, there is a movement to install domestic funds that pool the required funds necessary for land acquisition.

Environmental Risk

The environmental risk is that the risk may occur when an adverse effect on the social and natural environment may be observed, then the approval of the development of the industrial park from the authorities may be unobtainable or even cancelled, or it may lead to opposition among residents, and the additional cost for environmental measures would result in a hindrance to project advancement.

In order to avoid that risk, local contributions become effective in particularly in the case of a large-scale regional plan that includes an industrial park development, as a means of establishing good relationships with local residents. In Indonesia, local contributions through the form of a small fertilizer plant and library were just an example, and, sometime scholarships to local students or micro-finance to residents were offered in the Philippines. Showing respect to the fate of residents was another way in that a donation was made to a temple in Thailand and the church in the Philippines and even the construction cost of those was provided by some developers.

There are development and operation guidelines of industrial parks together with a mechanism by which pre-measurements of the adverse effects on the natural environment were proposed and the monitoring system of the implementation measures was presented. The government is now actively involved in the monitoring of the implementation compliance set forth in the guidelines.

Funding Risk

As the means of fund raising, in addition to local and foreign private banks, utilization of project bonds in the bond market, or taking advantage of public financial institutions and international multilateral development banks, which are less susceptible to trends in the market are presently considered. The funding from infrastructure funds is also studied in Southeast Asia so that diversification of the funding sources is facilitated to reduce the funding risk.

In India, loan arrangement between parents companies and subsidiaries are considered to be what is known as "foreign commercial borrowing" so that it is confined in its borrowing period and amount as well as its use - only for investment in the infrastructure sector. The funds were not to be used as working capital. The rupee debt repayment and the general repayment is a different structural norm from the cases in Southeast Asia.

Summary of risk management measures on industrial park development and operation

First of all, site selection is the crucial element to greatly affect the continuity of the business of industrial park. In the stage of land selection, enough consideration on marketing factors which can appeal to the customers, for instance, close proximity to the port and accessibility to national highway, can be a reduction measure of economic risk of business itself in advance. Also under the policies that promote industrial park development by private operators, in Southeast Asia countries like Thailand and Vietnam, the government purchases the land from the residents at the stage of land acquisition, and infrastructure development can be made in collaboration with the private sector on this land. In this case, the standard of infrastructure, facility operation, and maintenance are given in the development and operation guidelines of the industrial park. The measures to share these information and guideline between the public and private sectors would eventually reduce the business risk of the private sector.

Secondly, provision of utility service in the industrial park can only be made available if external infrastructure like power lines, water pipes, gas pipelines and access roads was delivered. But the external infrastructure system to be developed and operated by the government can be a business risk for the private zone developers in some cases. As a countermeasure to this, in the case of the industrial park development by the private sector, mechanism is come up with its own investment of power plant, industrial water generation, supply facilities and wastewater treatment facilities in their industrial park such that the park does not depend on the utility services of external utility service as it is well demonstrated in Indonesia.

For assisting necessary risk management measures on business licenses and fund-raising issues, the government makes a guideline for industrial park development and operation, and

share a clear procedure of licensing system through active disclosure of formalities and required documents to further increase predictability of the business plan.. Also regarding to environmental risks, consensus development procedures among stakeholders is carried out with explanation to local residents in accordance with guidelines, and funding risk of private zone developers, a certain measure to make use of public funds can also be applied to the private industrial park development project as the project has a nature to continue in the long term span as the essence of business.

Chapter II

The Situation and Challenges of Industrial Park Development in India

- In Comparison with Cases in Southeast Asia

2. The Situation and Challenges of Industrial Park Development in India - In Comparison with Cases in Southeast Asia

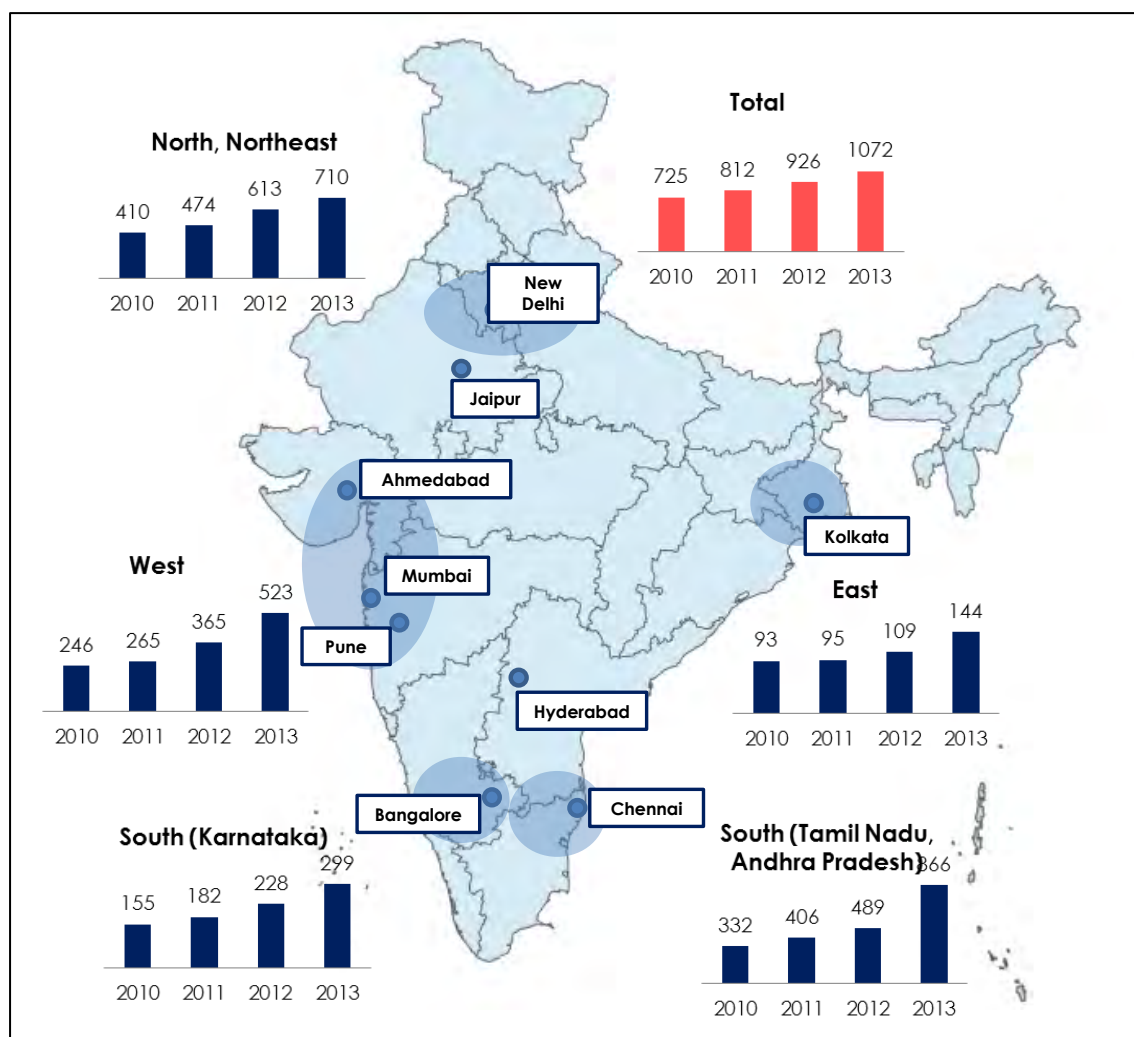
2.1. Trends and prospects of areas and industries of Japanese investment in India

1) Trends of Japanese companies in India

According to the Japanese Embassy in India, as of October 2013, the number of Japanese companies in India is 1,072, and, the number of sites in operation under Japanese management is 2,542. The number of Japanese companies in the country increased 15.7% from the previous year, and the number of sites in operation increased 40.9% from the previous year. The number of Japanese companies set up the new operational sites has increased, at the same time; the companies already set up their operational sites have increased their sites in India. However, by comparison, the number of Japanese companies operating in India is far fewer than those operating in Southeast Asia - 1,458 companies in Thailand, 1,255 companies in Indonesia, and 1,077 companies in Vietnam⁸. Trends in the number of operational sites over the past four years and the distribution map of Japanese companies in each region are shown below.

⁸ JETRO HP

Figure2-1: Japanese companies' distribution map in India



(Source) Japanese Embassy in India

By region, the largest number of sites in operation, 866 sites, are in South India (Tamil Nadu and Andhra Pradesh), followed by 710 sites in operation in North and Northeast India, 523 sites in operation in West India, 299 sites in operation in South India (Karnataka), and 109 sites in operation in East India.

Major companies and industries are shown in the following table.

Table 2-1: Major Japanese companies and industries

| Region | City / State (number of operation sites) | Major companies and industries |
|---------------------|--|--|
| North and Northeast | Delhi (175) | Sales company includes manufacturers, trading companies, financial companies and representative offices. |
| | Haryana, Rajasthan (404) | Factories and sales companies such as Suzuki, Honda (two-wheel), Panasonic, Daikin, auto parts, machinery trading, and consumer goods. |
| | Noida, UP (72) | Honda (four-wheel), Yamaha, Sumitomo Electric, and |

| | | |
|------------------------------------|-----------------|---|
| | | automobile parts companies. |
| West | Gujarat (84) | Dainippon Ink, TOTO, chemical and automobile parts companies. |
| | Mumbai (248) | NYK, Yamatake, Pentel, Toyo Engineering, trading, finance, shipping, and pharmaceutical companies. Expansion of consumer goods manufacturers aiming at domestic market. |
| | Pune (107) | Ebara Corporation, Sharp, Keihin, Yazaki Corporation, Bridgestone, and automobile parts. Japanese assembly manufacturers are not present, but the accumulation of the automotive industry progresses. |
| South (Karnataka) | Bangalore (299) | Toyota, Honda, Komatsu, Fanuc, Nissin Foods, Citizen, machine tool, semiconductor, IT, and automobile parts. |
| South (Tamil Nadu, Andhra Pradesh) | Chennai (523) | Nissan, Ajinomoto, Toshiba, Aloka, Komatsu, Uni-Charm, Kobelco, machinery trading, and auto parts. |
| East | Kolkata (144) | Dainippon Ink, Kubota, Hitachi Construction Machinery, steel, and trading company. |

(Source) JICA Study Team in reference to JETRO reports

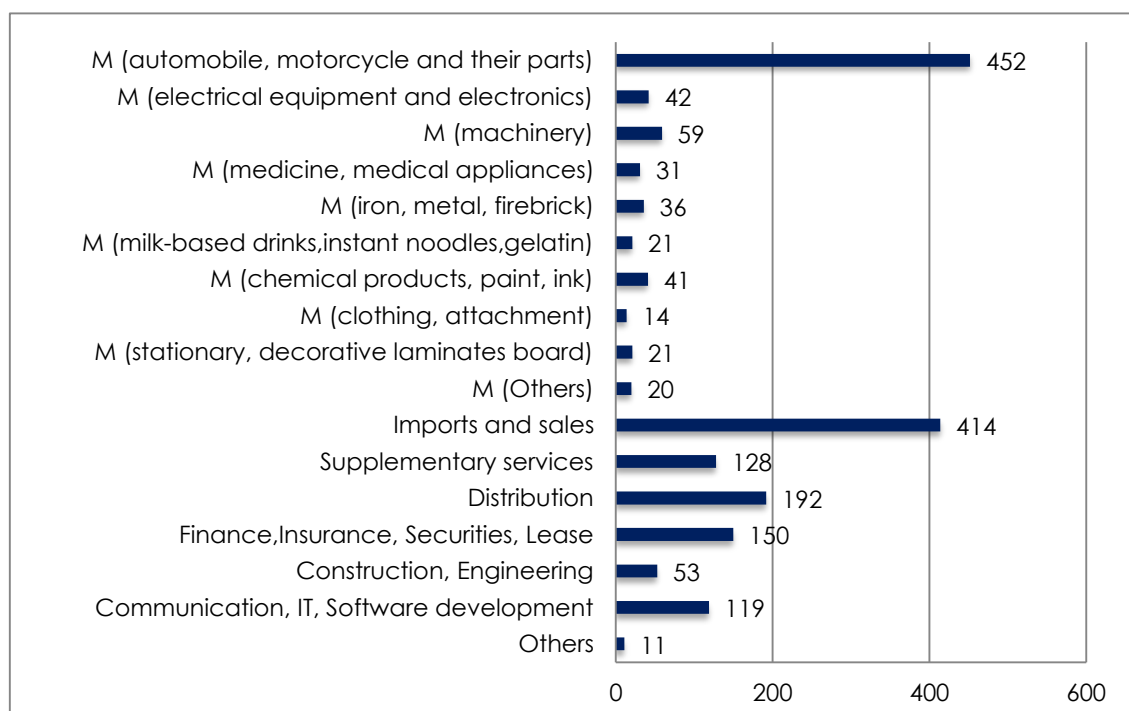
The suppliers of Suzuki, Honda (four-wheel, two-wheel), Yamaha are concentrated in the North and Northeast as they have factories, also in South India, the number of automobile supplies is expanding as Toyota Motor Corporation of Bangalore expanded its operation in 2008 and Nissan Motor started operation in Chennai in 2010. In 2012, Suzuki has announced plans to set up a third factory in Gujarat. The expansion of suppliers in Gujarat will likely to accelerate in the future to develop as a new integrated area of the automotive industry.

Thus, there is a trend of the Japanese companies operating in India to locate their factories in proximity to their assemblers (four-wheel, two-wheel). Machinery manufacturing and logistics companies are also related to the automobile industry. Industrial clusters have not expanded in industries other than the automobile industry.

2) Analysis of Japanese business positions in India by industrial sector accumulated up to November 2012

The Study Team has classified the 1,804 operational bases of Japanese companies in India as of November 2012 by industry. Manufacturing industry (automobile and parts, motorcycle and parts) accounted for an overwhelming majority of 452 bases. The latest list was released in January 2014. But, as this latest list does not categorize production positions and sales and maintenance bases clearly, so the JICA Study Team does not depend on it.

Figure2-2: Industry distribution of operational bases in India⁹



(Source) Compiled by JICA Study Team based "List of Japanese business positions in India"
(November 2012: Japanese Embassy in India)

Although there are problems in terms of trade balances, imports and sales business positions account for 23 % (414) of the total Japanese business positions in all categories (1,804). A breakdown of the total number of imports and sales business positions shows that there are 142 in automobile and motorcycle parts, 86 in electrical equipment and electronics, 11 in factory automation (FA) equipment, 34 in machine tools, 4 in construction machinery, 5 in elevators, 9 in cameras, 6 in timepieces, 14 in copiers and printers, and 103 in importing companies. The largest number of Japanese business positions in India is in the automobile and automobile part, and, motorcycle and motorcycle part sectors. However, those engaged in manufacturing number over 200, with the larger remainder engaged in sales and maintenance. As Japanese businesses are primarily domestic sales in the vast Indian market, actually the number of businesses engaged in physical distribution or financing is relatively large.

⁹ (1) "M" stands for "Manufacturing", and "M" includes not only production bases but also many sales and maintenance bases, which the latter is almost 70% of "M".

(2) Operational bases for electronic equipment and electronics break down into 20 in air conditioning, 15 in electronic parts, 3 in semi-conductors, 4 in LED, which are include production bases and sales and maintenance bases.

(3) Operational bases for machinery break down into 12 in generators, 35 in weighing and measuring, and 12 in tools including production bases and sales and maintenance bases.

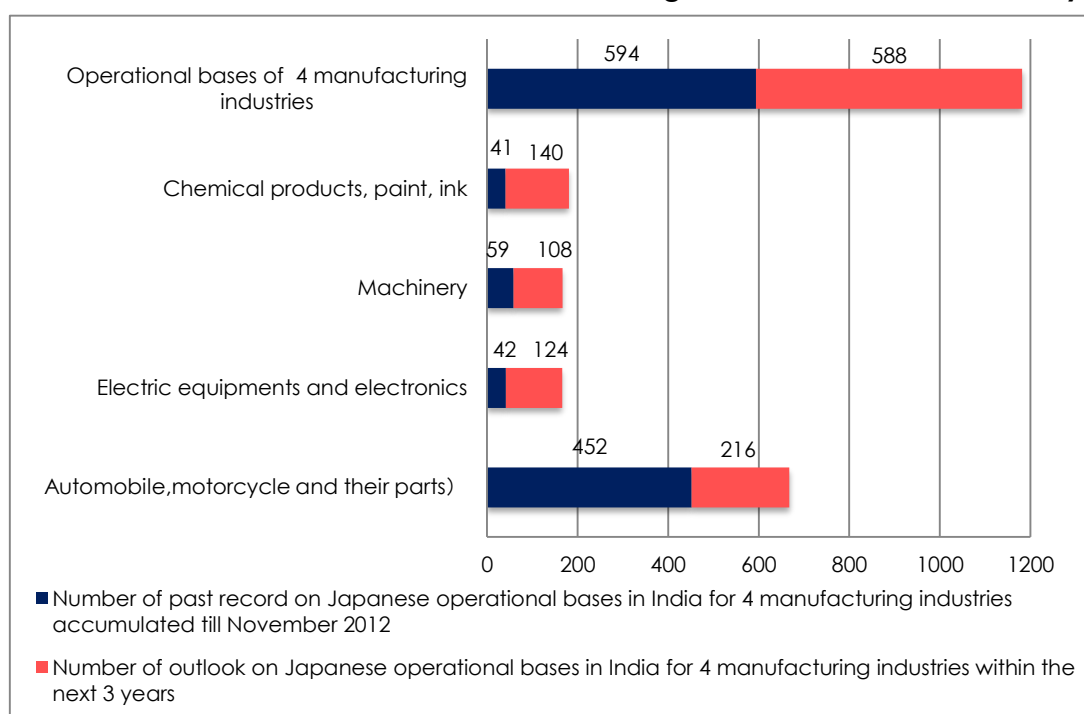
(4) Operational bases for supplementary services break down into 52 in accounting/attorney/consulting, 30 in maintenance, 9 in employment agencies, 11 in restaurants, 6 in rent house agencies, 13 in advertising, 7 in travel agencies.

3) Analysis of the outlook for Japanese operational bases including not only production but also sales/maintenance in India for 4 manufacturing industries within the next 3 years

The List shows that Japanese manufacturing industries have average 3 sales and maintenance bases to 1 production base. So, it is estimated that 147 in future production positions within the next 3 years surveyed by JBIC report will lead to establishing 441 in new sales/maintenance bases.

- (1) For the automobile and motorcycle industries, the outlook is for increases in operational bases engaged in the production and sales of parts.
- (2) For the electrical equipment and electronics, timepiece and printer industries, a shift from importing to production and sales for import substitution is forecast.

Figure2-3: Outlook for Japanese business positions including production and sales/maintenance in India for 4 manufacturing industries within the next 3 years



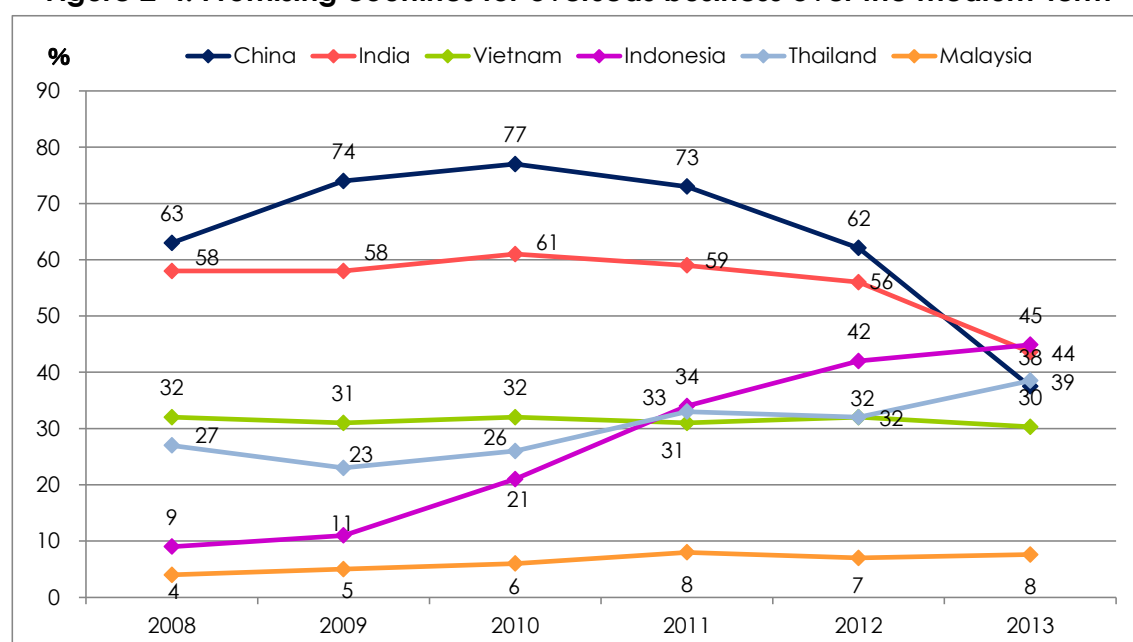
(Source) Compiled by JICA Study Team based on a "List of Japanese business positions in India" (November 2012: Japanese Embassy in India) and "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" (November 2013: JBIC)

2.2. Possibilities, challenges and measures for investment in India in view of Japanese companies

1) Possibility of investment in India

According to “The 25th Survey Report on Overseas Business Operations by Japanese Manufacturing Companies” by Japan Bank for International Cooperation (JBIC) in Dec. 2013, India maintains a second place in the fifth year in a row next to Indonesia as a promising country over the medium to long term, it can be seen that the Japanese companies recognize India as a promising investment country (Figure 20).

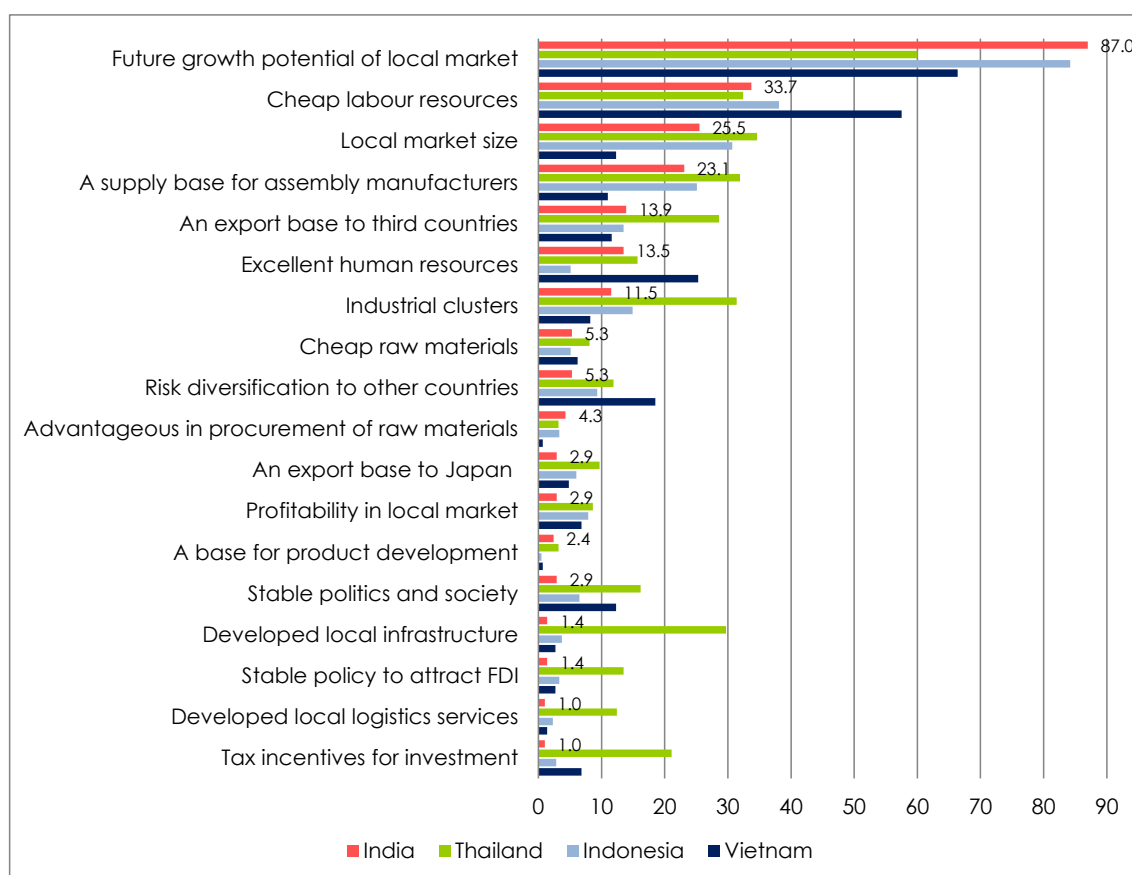
Figure 2-4: Promising countries for overseas business over the medium-term



(Source) Compiled from “Survey Report on Overseas Business Operations by Japanese Manufacturing Companies” JBIC (Report in Dec. 2013)

Figure 21 shows the top promising reasons for India are “Future growth potential of local market (87.0%)”, “Cheap labor resources (25.5%)”, “Local market size (25.5%)”, “A supply base for assembly manufacturers (23.1%)”, and “An export base to third countries (13.9%)”. In particular, “Future growth potential of local market” has higher evaluation than Thailand (60.0%), Indonesia (84.2%) and Vietnam (66.4%), and a growth potential of the domestic market in India is expected. The Study Team has conducted interviews with companies already invested in India and interested in investing in India. The conclusions reached in those interviews are as follows.

Figure2-5: Promising countries for overseas business over the medium-term (advantages)



(Source) Compiled from "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" JBIC (Report in Dec. 2013)

Table 2-2: Promising reasons for investment in India as derived by the study team survey

| Potential of local market |
|--|
| <ul style="list-style-type: none"> The domestic demand in the Indian market over the medium to long term will exceed that of Southeast Asia (example: precision spring manufacturing); The two-wheel demand in Thailand has been slowing down, there is no doubt that India will be an important base for two-wheel vehicles in the future (automotive gasket manufacturing); Increased bidding opportunities for public projects is expected due to the expansion of demand for infrastructure (railway vehicle, electrical equipment manufacturing) Similar to developed countries, as literacy progresses, demand for printing in the middle class will increase (printing ink manufacturing); It is necessary to find a way out to India with the recognition that the Japanese market is shrinking and the demand in Thailand and India will reach a ceiling (auto parts) at some point; |
| Cheap labor cost |
| <ul style="list-style-type: none"> With the labor cost rising in China, there is a need for selection of a second overseas base (for special |

| |
|--|
| <p>industrial machinery manufacturing);</p> <ul style="list-style-type: none"> • Labor cost in India is relatively low in comparison with the United States and Mexico (metal parts manufacturing); |
| Size of local market |
| <ul style="list-style-type: none"> • There are a number of negative factors in India such as the pervasive underdeveloped infrastructure, etc., but the expansion of domestic demand cannot be ignored (precision machine tool manufacturing); • Expansion of a growing middle class with healthy consumer appetite and the automobile market in India (auto parts); • Based on local market demand, new products will be developed (auto parts); |
| Supply base for assembly manufacturers |
| <ul style="list-style-type: none"> • Since the assembly manufacturers have factories, suppliers also have to follow the trend (auto parts); • The materials processing business can be considered from the use of scrap iron discharged from the assembly manufacturers (automotive recycling and parts manufacturing); |
| Export base to a third country |
| <ul style="list-style-type: none"> • There is a potential as an export base to Europe, Latin America and Asia market (printing ink manufacturing); • Starting from domestic sales to meet domestic demand, aiming at expanding exports to Middle East and African markets would be possible (agricultural machinery manufacturing); • There is a possibility to export to Indonesia and Thailand from India as producing a vehicle at a lower price is possible by utilizing a local supply chain (trading); • Exporting from India can be considered by forming a supply chain linking India and ASEAN countries in the future. Labor-intensive parts shall be produced in India and other parts shall be produced in the ASEAN countries by production sharing (rubber products) |

(Source) JICA Study Team

Japanese FDI aims at vast domestic markets, resulting in high ratio. This aim is a definite advantage to Japanese FDI, but it may lead to a trade deficit situation.

It is true that local production in India by FDI is expected to have an import substitution effect upon the Indian economy, but it will bring a massive import of machinery and materials at the beginning. Additionally, it takes a long gestation period for import substitution to be realized as evidenced in other countries.

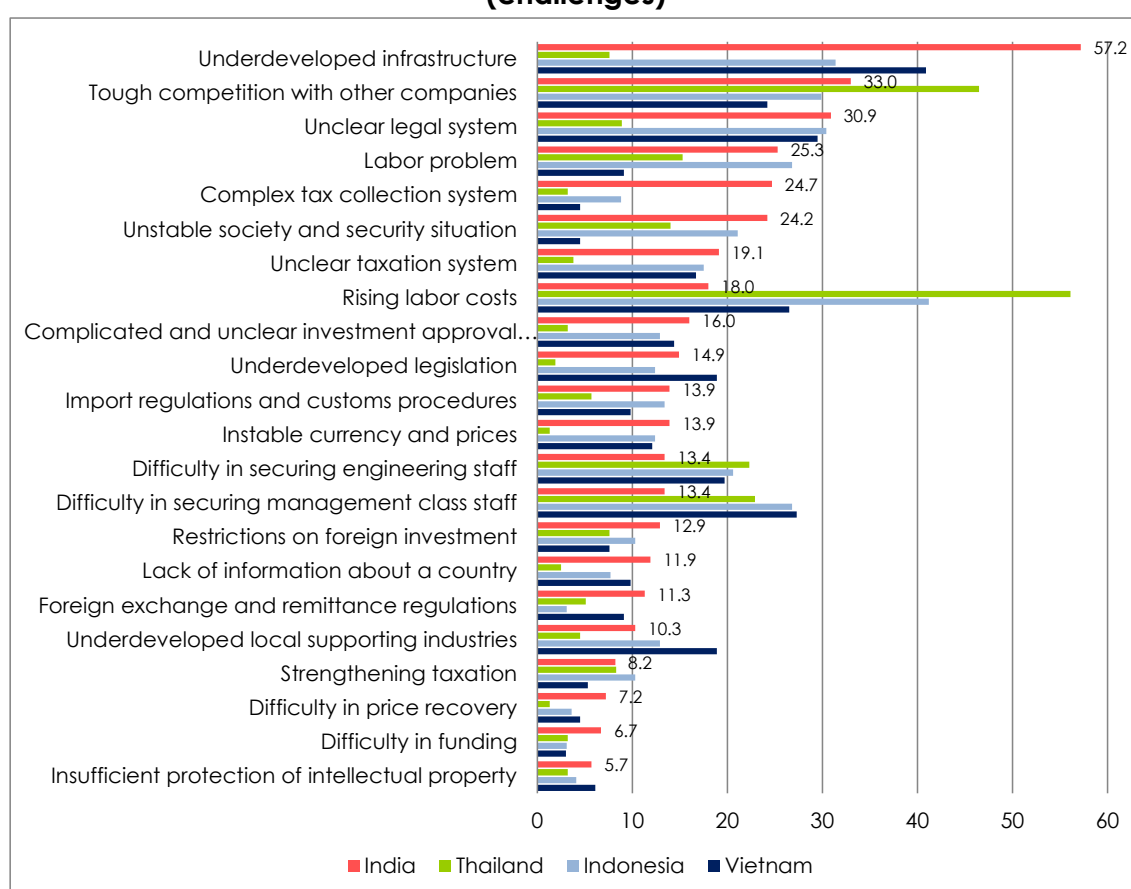
Compared with Southeast Asia, India could exploit its geographical advantage and become an export base to European, Middle Eastern, and African markets. In addition, since the non-Japanese automobile assembly manufacturers have formed a supply chain historically, finished vehicles can be produced at a low price by procuring parts at a low cost in India. It would be possible to export to Southeast Asian markets in the future at competitively low

prices.

2) Challenges of investment climate in India

Simultaneously, the challenges investors face in India focus on: an “underdeveloped infrastructure (57.2%),” “tough competition with other companies (33.0%),” “unclear legal system operation (30.9%),” “labor problems (25.3%),” and “complexity in tax collection system (24.7%)” (Figure 2-6).

Figure2-6: Promising countries for overseas business over the medium-term (challenges)



(Source) Compiled from “Survey Report on Overseas Business Operations by Japanese Manufacturing Companies” JBIC (Report in Dec. 2013)

Challenges in specific investment are listed in “2.5. Investment environment – a comparative analysis of India and Southeast Asia.” In addition, as a challenge to companies operating in India, compared to companies operating in China and Southeast Asia, the profit margin of companies higher than Japan is less (Table 2-3). Fully 35.5% and 24.0% of the Japanese companies in Thailand and China have responded that profit margins are higher than in Japan. On the other hand, in India, only 7.3% of the Japanese companies have verified that profit margins are higher than in Japan.

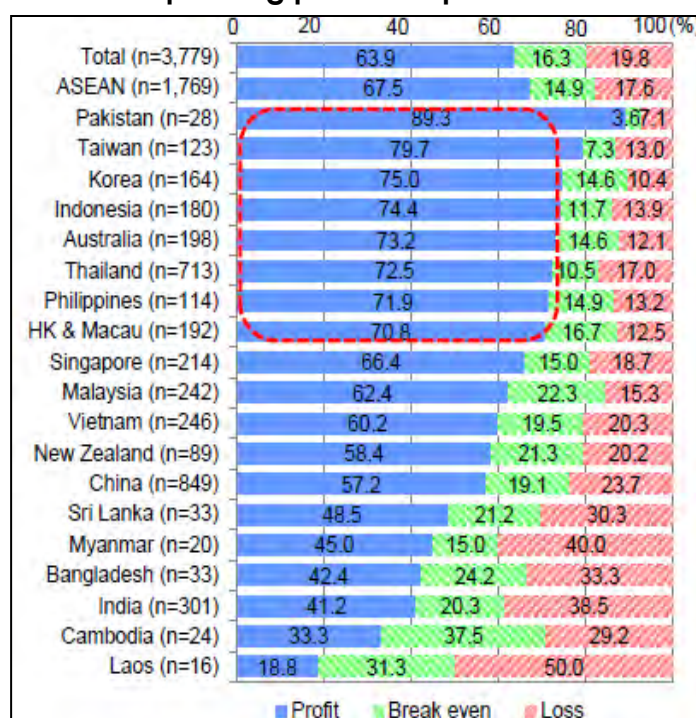
Table 2-3: Countries more profitable than Japan (Descending order by ratio)

| Ranking | Country | "More Profitable than Japan" responses per host countries (1) | Total responses per invested countries (2) | Ratio (1)/(2) |
|------------------|-------------|---|--|---------------|
| 1 st | Thailand | 129 | 363 | 35.5% |
| 2 nd | China | 124 | 517 | 24.0% |
| 3 rd | Indonesia | 54 | 251 | 21.5% |
| 4 th | Philippines | 29 | 143 | 20.3% |
| 7 th | Vietnam | 33 | 185 | 17.8% |
| 11 th | India | 16 | 218 | 7.3% |

(Source) Compiled from "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" JBIC (Report in Dec. 2013)

In Table 2-3, the descending order by ratio shows the higher to the lower ranking of profitability than Japan. Japanese satisfaction with profitability was higher in Thailand and China. On the other side, Japanese satisfaction for profitability was lower in India, at only 7.3%.

Figure2-7: Estimated operating profit of Japanese FDI in 2012 by country



(Source) Quoted from "Survey of Japanese-Affiliated Companies in Asia and Oceania" JETRO (Report in Dec. 2012)

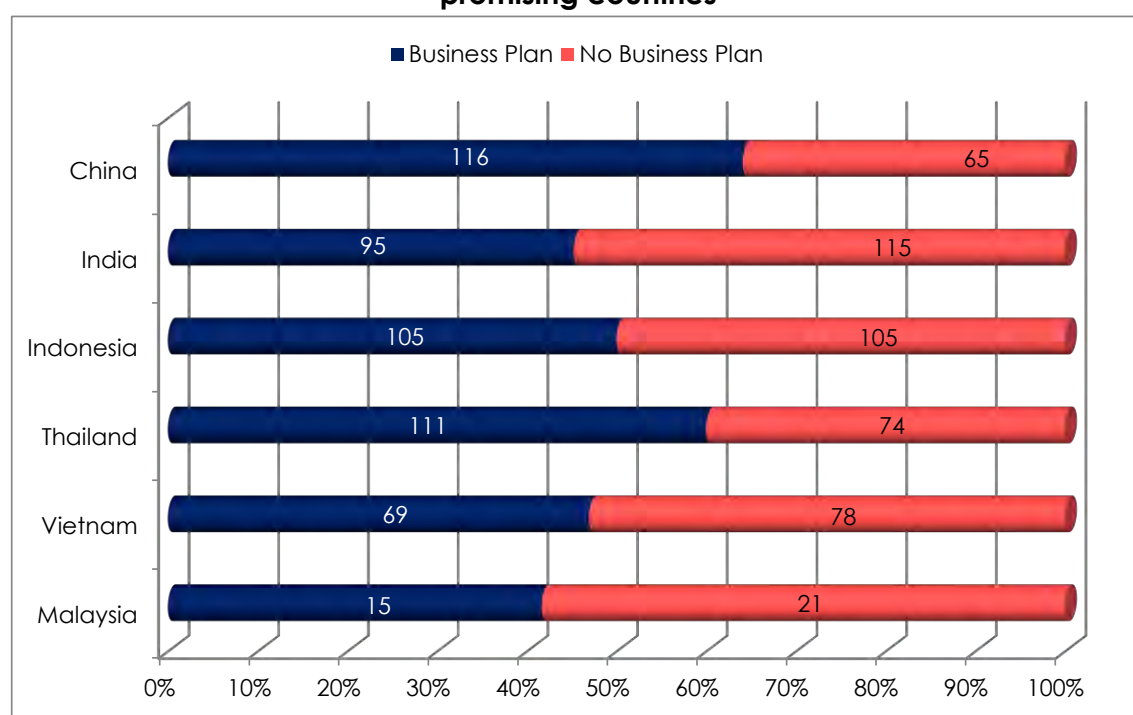
Figure 1-15 shows the proportion of Japanese FDI expecting to be profitable, hitting the breakeven point, and those experiencing a net loss in 2012. Estimated profit to be earned by Japanese FDI was lower in India at 41%. While estimated profit to be earned by Japanese FDI was higher in Indonesia at 74%, Thailand at 73%, Malaysia at 62%, Vietnam at 60%, and China at 57%.

On the other side, the estimated loss in Japanese FDI was higher in India at 38%, while the estimated loss in Japanese FDI was lower in Indonesia at 14%, Thailand at 17%, Malaysia at 15%, Vietnam at 20%, and China at 24%.

Low profitability is one of the factors preventing Japanese FDI from entering certain host countries due to the undesirable business circumstances found in those countries.

In addition, a few Japanese companies have a concrete business plan to invest in India (Figure 24). More Japanese companies have business plans focusing on China, Thailand and Indonesia.

Figure2-8: Existence of business plans of Japanese FDI in medium-term promising countries



(Source) Compiled from "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" JBIC (Report in Dec. 2013)

The reasons Japanese companies do not have concrete business plans for India revolve around the absence of business partners and lack of available information relating to investment in India. For Southeast Asia, monthly investment seminars are held through the ASEAN center, etc., but investment seminars of India are relatively few, and investment information collection in India has been limited.

(3) Analysis of performance of Japanese companies in India from the viewpoint of operating results

Table 2-4: Current business results in overseas markets

| Selected countries | Responded companies (number) | Better than originally planned (number) | Roughly the same as originally planned (number) | Ratio of good and the same plans |
|--------------------|------------------------------|---|---|----------------------------------|
| ASEAN | 66 | 6 | 36 | 64% |
| China | 69 | 7 | 18 | 36% |
| India | 34 | 0 | 12 | 35% |
| Latin America | 27 | 4 | 7 | 41% |
| Russia·CIS | 33 | 7 | 10 | 52% |
| Middle East | 23 | 0 | 10 | 43% |
| Africa | 17 | 0 | 6 | 35% |

(Source) Compiled by JICA Study Team based on "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" (November 2013:JBIC)

Table 2-5: Evaluation of degrees of satisfaction with sales and profits in comparison with India, 5 ASEAN countries, and China

| Sales in 2009 | | Sales in 2010 | | Sales in 2011 | | Sales in 2012 | |
|---------------|------|---------------|------|---------------|------|---------------|------|
| Indonesia | 2.90 | Indonesia | 3.19 | Indonesia | 2.95 | Thailand | 2.97 |
| China | 2.73 | Thailand | 3.17 | Singapore | 2.72 | Indonesia | 2.77 |
| Thailand | 2.73 | Singapore | 2.91 | Vietnam | 2.71 | Singapore | 2.70 |
| Malaysia | 2.67 | China | 2.90 | Thailand | 2.61 | Malaysia | 2.60 |
| Vietnam | 2.65 | Vietnam | 2.79 | China | 2.57 | Vietnam | 2.58 |
| Singapore | 2.55 | Malaysia | 2.69 | Malaysia | 2.51 | India | 2.35 |
| India | 2.53 | India | 2.50 | India | 2.40 | China | 2.26 |

| Profits in 2009 | | Profits in 2010 | | Profits in 2011 | | Profits in 2012 | |
|-----------------|------|-----------------|------|-----------------|------|-----------------|------|
| Indonesia | 2.85 | Thailand | 3.10 | Indonesia | 2.82 | Thailand | 2.87 |
| Vietnam | 2.76 | Indonesia | 2.96 | Singapore | 2.65 | Indonesia | 2.73 |
| China | 2.73 | Singapore | 2.91 | Vietnam | 2.63 | Singapore | 2.66 |
| Thailand | 2.71 | China | 2.79 | Thailand | 2.53 | Vietnam | 2.63 |
| Malaysia | 2.69 | Vietnam | 2.67 | Malaysia | 2.48 | Malaysia | 2.60 |
| Singapore | 2.60 | Malaysia | 2.64 | China | 2.44 | India | 2.30 |
| India | 2.53 | India | 2.50 | India | 2.28 | China | 2.25 |

(Note) Full score is 5.

(Source) Compiled by JICA Study Team based on "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" (November 2013:JBIC)

With the increased competition with Western companies and local companies, satisfaction with the evaluation of sales and profits has been declining.

Table 2-6: Estimated operating profits of Japanese automobile, motorcycle and their parts manufacture in 2013 by country

| Selected countries | Responding companies (number) | Profit | Breakeven | Loss |
|--------------------|-------------------------------|--------|-----------|-------|
| Thailand | 105 | 87.6% | 9.5% | 2.9% |
| China | 91 | 72.5% | 9.9% | 17.6% |
| Indonesia | 38 | 63.2% | 13.2% | 23.7% |
| India | 59 | 40.7% | 10.2% | 49.2% |
| Average | 398 | 72.6% | 10.6% | 16.8% |

(Source) Compiled by JICA Study Team based on "Survey of Japanese-Affiliated Companies in Asia and Oceania" (December 2013: JETRO)

(4) Analysis of Japanese manufacturers' product competitiveness in the Indian market

Table 2-7: Product competitiveness in India by country

| All invested manufactures | JBIC survey in 2013 |
|---------------------------------|---------------------|
| Chinese manufacturers | 2.52 |
| Korean manufacturers | 2.82 |
| Indian manufacturers | 2.68 |
| European/American manufacturers | 3.14 |

(Note) Score 3 is the same as Japanese

(Source) Compiled by JICA Study Team based on "Survey Report on Overseas Business Operations by Japanese Manufacturing Companies" (November 2013: JBIC)

In India, if its infrastructure can be improved and its industrial parks are developed to the levels now prevalent among the ASEAN nations, problems now facing Japan's ODA policy for India will gradually be solved.

In terms of corporate strategy, top management will not choose to invest in India now unless the problem of low profitability in its domestic market can be solved.

Table 2-4 shows that although Japanese businesses have come to India, lured by its huge market, their profit performances have been below planned levels. Table 2-5 shows that their level of satisfaction in sales and profits has trended downward. Table 2-6 shows that in the automobile and motorcycle industries, the ratio of businesses losing money is much higher in India than in any other country with which it was compared.

It should be added that part suppliers in such industries as automobiles and motorcycles have no other choice but to follow the assemblers to India, because the migration of their customers means that they no longer have business in the Japanese market. A majority of Japanese businesses now moving into India are seen as subcontractors/parts suppliers to the automobile and motorcycle assemblers which have started operations in this country. Sales by these assemblers have increased thanks to the large size of the Indian market, although their profitability is low. However, their subcontractors and secondary subcontractors are facing the

problems of low profitability and loss-making operations because the absolute amounts of their sales are small.

Moreover, in the home appliances and business machine industries, the companies making low-priced products are operating with extremely low profit margins despite the large volume of sales realized in the vast market, because of enormous physical distribution costs, costs of labor manning their sales offices and the cost of maintenance work for their products.

The second issue discussed in setting corporate strategy is the relative competitiveness in India vis-à-vis businesses of other countries operating in the country. As Table 2-7 indicates, the competitiveness of Japanese manufactures is higher than that of Indian and Chinese manufacturers, but South Korean manufacturers are very close behind, while the Japanese manufacturers admit that they are not as competitive as U.S. or European companies. Under these circumstances, one of the fundamental tasks for the Japanese manufacturers now operating in India is how to strengthen their competitiveness.

(5) Measures to accelerate investment of Japanese manufacturers into India

The following proposals are made with respect to the Japanese companies' strategies as to how to improve low levels of satisfaction in sales and profits in India and how to strengthen the competitiveness of Japanese businesses in that country.

A. With respect to corporate strategies, the recommendations are as follows:

(1) Many Japanese companies have more than 10 key sales positions per one production position to cover customers scattered across an enormous land. These companies are consistently facing low profitability because of high distribution costs, costs of labor occupying sales positions and the costs of maintenance work for their products. Many of them are forced to choose between reducing the number of key sales positions to focus on the areas with the most important demand (customers) and increasing the number of production positions.

(2) Because the "high volume zone" in the Indian market is in the relatively low price range, efforts must be made to modify product specifications to match the needs of customers or reduce the number of parts used in products. They need to offer lower prices. At the same time, they must keep working for higher product quality and functions. They must also enhance their maintenance and other after-sale services as well as offer a full and diverse line of products.

(3) In addition, discovering and nurturing local supporting manufactures are an important issue. Japanese assemblers maintain close, interdependent relations with their Japanese suppliers/subcontractors which offer products of consistently high quality. However, maintaining this cozy relationship hampers the reduction of parts and materials costs. Hence, it

is important to build new relationships with local supporting manufacturers through technology transfers and provision of equipment.

2.3. Progress in manufacturing sector development, investment climate and foreign investment promotion policy of India

1) The investment promotion policies of the Central Government

The Government of India has announced that it is necessary to consider the fact the growth of manufacturing sector has been limited, and the contribution of the manufacturing sector to employment and GDP is lower than that of other countries. In order to re-vitalize the manufacturing industry in terms of job creation and the acceleration of economic growth, the Government of India has announced a new National Manufacturing Policy (NMP) in November 2011.

Goals

- Increase manufacturing sector growth to 12-14% over the medium term;
- Enable manufacturing to contribute at least 25% to the National GDP by 2022;
- Create 100 million additional jobs in manufacturing by 2022;
- Create appropriate skill sets among rural migrants and urban poor to make growth inclusive;
- Increase domestic value added and technological depth in manufacturing;
- Ensure sustainability of growth, particularly with regard to the environment including energy efficiency, optimal utilization of natural resources and restoration of damaged/ degraded eco-systems;

Policy Principles

- ① Rationalization of regulatory procedures;
- ② Policy measures to facilitate the expeditious redeployment of assets belonging to non-viable units, while giving full protection to the interests of the employees;
- ③ Supporting adoption of green technologies and resource conservation practices through financial and legal schemes;
- ④ Industrial training & skill upgrade measures;
- ⑤ Incentives to small & medium enterprises;
- ⑥ Special focus sectors;
- ⑦ Leveraging infrastructure deficits and government procurement;
- ⑧ Cluster and aggregation: national investment and manufacturing zones (NIMZs);
- ⑨ Trade policy

Special focus sectors in NMP

| Industry | Items |
|---|--|
| Employment intensive industries | textiles and garments; leather and footwear; gems and jewelry; and food processing |
| Capital goods | machine tools; heavy electronic equipment; heavy transport, earth moving and mining equipment; high technology equipment - like telecom, power, ICT, and electronic hardware |
| Strategic industries | aerospace; shipping; IT and electronic hardware; renewable energy; solar, wind etc.; defense equipment |
| Manufacturing for energy security | technologies used to produce energy from the sun, wind, geothermal and other renewable resources; clean coal technology; creation and management of carbon sinks |
| Industries where India enjoys a competitive advantage | automobiles; pharmaceuticals; and medical equipment |

| | |
|------------------------------|---|
| Small and Medium Enterprises | Small and Medium Enterprises in general |
|------------------------------|---|

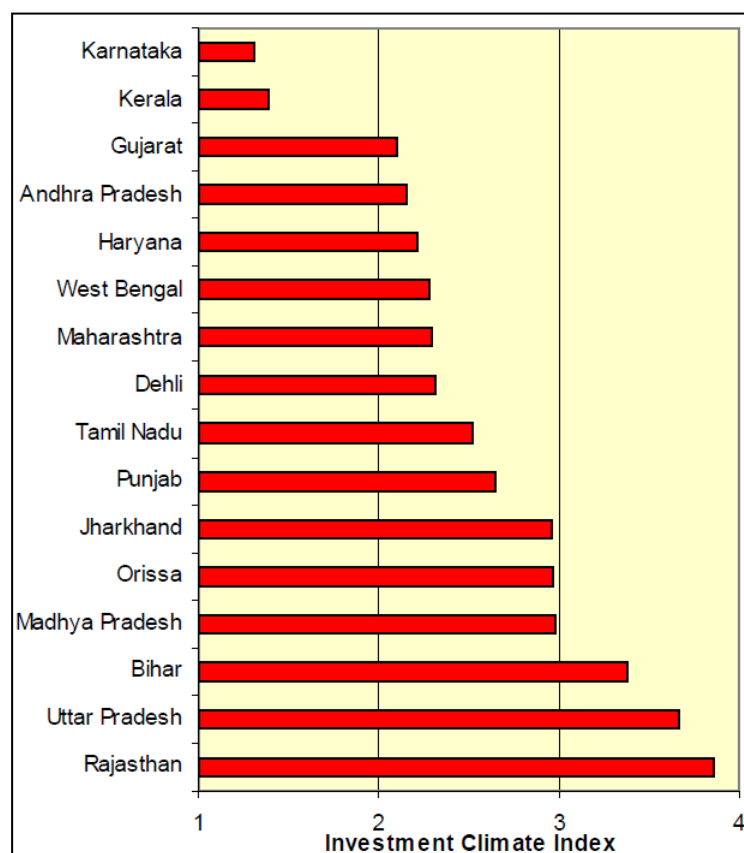
In addition, in 2012, the Government of India announced three specific policies to promote the electrical, electronic, and communications equipment industry. The National Electronics Mission as a center organization, (1) National Telecom Policy 2012, (2) National Policy on Information Technology 2012 and (3) National Policy on Electronics 2012 were each established to start specific activities. The Government of India has allocated funds of about 10 trillion yen during the period 2014 to 2020 to promote the electrical, electronic, and communications equipment industry. As a part of the policy, it is planned to attract domestic and international investment by developing industrial parks for those industries.

In response to the policy of the government, IESA (the India Electronics & Semiconductor Association) is planning to construct an industrial park for the electricity, electronics, and information communications equipment industry in the Bangalore area, the largest agglomeration of IT software companies in that industry in India. The government is planning to provide a subsidy of 20% to tenants in an industrial park, and, 25% to companies outside an industrial park.

2) The investment policies of the State Governments

According to the World Bank “The Investment Climate in 16 Indian States” released in 2009, 1. Karnataka, 2. Kerala, 3. Gujarat, 4. Andhra Pradesh, and 5. Haryana have been ranked as the most favorable investment climate states among 16 states in India (Figure). This investment climate index measured the cost and perception of “infrastructure”, “inputs” and “institutions”. The index is composed of 46 variables including hours of power outages, hours of telephone outages and logistics cost in “infrastructure”, labor market, cost of finance and access to raw materials in “inputs” and days to obtain a construction permits, share of firms reporting gifts requested to obtain a permit, and manager time spent with officials to deal with regulations in “institutions”.

Figure2-9: Ranking of Business Climate in Indian States



(Source) The Investment Climate in 16 Indian States, World Bank, 2009

The foreign investment policy, manufacturing policy and investment climate development in the five states that the Japanese companies have operation bases and expects more companies to invest in the future are highlighted as follows. The Study Team has focused on Gujarat, Maharashtra, Tamil Nadu, Karnataka and Andhra Pradesh.

Table 2-8: Investment Promotion Policy in the Selected Five States

| | Gujarat | Maharashtra | Tamil Nadu | Karnataka | Andhra Pradesh |
|--|--|--|--|---|--|
| Industrial Policy | Gujarat Industrial Policy 2009 | Maharashtra Industrial Policy 2013 | Tamil Nadu Industrial Policy - 2007 | Karnataka Industrial Policy 2009-14 | Andhra Pradesh- Industrial Investment Promotion Policy (IIPP) 2010-2015 |
| Target Industry | Apparel, Gem, Agriculture, IT/Knowledge, Renewable Energy, Petrochemical, Automobile, Machinery | Petrochemical, Pharmaceutical, Automobile, Machinery, Agriculture, Finance, IT, Apparel | Automobile, Machinery, Semiconductor, Leather, Apparel, Petrochemical, Cement, Agro-processing | Aerospace, Automobile, Biotechnology, Pharmaceutical, Petrochemical, IT, Machinery, Apparel | Food-processing, Apparel, Biotechnology, Renewable Energy |
| Incentives for Manufacturing Companies | <ul style="list-style-type: none"> Subsidies for capital expenditures Stamp duty exemption for IT Park/IT SEZ developers and tenants | <ul style="list-style-type: none"> Subsidies for mega projects and SMEs Stamp duty exemption for acquiring land and term loan purposes Electricity duty exemption | <ul style="list-style-type: none"> Subsidies for capital expenditures, electricity duty exemption | <ul style="list-style-type: none"> Subsidies for SMEs Stamp duty exemption for acquiring land and term loan purposes Concessional registration charges exemption for industrial land lease contract Waiver of conversion fee for land use Exemption of Entry Tax on plant, machinery and capital goods Anchor unit subsidy for the first two manufacturing companies in certain zones | <ul style="list-style-type: none"> Subsidies for SMEs Stamp duty exemption for acquiring land Subsidies for industrial land lease fee Subsidies for conversion fee of land use Subsidies for capital expenditure Exemption of VAT/Central Sales Tax (CST) Subsidies for vocational training |
| One-stop service | <ul style="list-style-type: none"> One-stop service for Special Investment Region (SIR) development | <ul style="list-style-type: none"> MIDC has set up "Single Window Clearance" and provide investors with electronic | <ul style="list-style-type: none"> GUIDANCE Bureau, on application, will provide single window clearance as a fee based service | <ul style="list-style-type: none"> Karnataka Udyog Mitra (KUM) provides one-stop service to investors The platform "e-Udyami" has been developed for | <ul style="list-style-type: none"> Chaired by Chief Minister, one-stop service is provided to investors based on "A.P. Single Window Act 2002" |

| Gujarat | Maharashtra | Tamil Nadu | Karnataka | Andhra Pradesh |
|--|--|--|--|---|
| | application platform | | applying applications online | <ul style="list-style-type: none"> Online application platform is under development |
| Policy for Industrial Park/SEZ <ul style="list-style-type: none"> Subsidies for capital expenditures and stamp duty exemption for industrial park developers Deduction of stamp duty for tenants Promotion of SIR development based on "SIR Act 2009" | <ul style="list-style-type: none"> VAT and stamp duty exemption for SEZ developers and tenants The lands under the de-notified / withdrawn SEZs will be eligible for use and development as "Integrated Industrial Area" | <ul style="list-style-type: none"> Subsidies for capital expenditures and stamp duty exemption for industrial park tenants Subsidies for tenants setting up effluent treatment plant | "State Policy for Special Economic Zones – 2009" <ul style="list-style-type: none"> One-stop service to SEZ developers and tenants Stamp duty and electricity duty exemption Exemption of State Tax, Sales Tax, VAT and Central Sales Tax (CST) | <ul style="list-style-type: none"> One-stop service to industrial park/SEZ developers and tenants Exemption of stamp duty Subsidies for industrial park development cost |

(Source) Compiled by Study Team with reference to Industrial Departments in selected stat

2.4. Law, Policy and Institutional Framework of Foreign Investment Promotion Policy and Industrial Zone Development in India and Southeast Asia

The law, policy and institutional framework about foreign investment promotion policy and industrial zone development in India and Southeast Asia are shown in the table below. Each government set up investment laws and investment promotion organizations, apply tax incentives to actively attract foreign investment. In developing industrial zones, development corporations under the government develop and manage industrial zones to provide tax incentives and services to investors located in zones.

1) Framework on Investment Promotion

Table 2-9: Country Comparison of Investment Promotion Policy

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|--|--|--|--|---|---|
| Investment Related Laws | Overall FDI Policy set by DIIPP | 1977 Investment Promotion Law (Revised in 1992) | 1986 Investment Promotion Law | 1967 Foreign Investment Law | 2006 Law on Investment, Law on Enterprises |
| Investment Promotion Organization | FIPB (The Foreign Investment Promotion Board), RBI (Reserve Bank of India), FIIA (Foreign Investment Implementation Authority), Investment Committee | Board of Investment (BOI) | Manufacturing: Malaysia Investment Development Agency (MIDA) Non-Manufacturing: Foreign Investment Committee (FIC) | Badan Koordinasi Penanaman Modal (BKPM) | Ministry of Planning and Investment (MPI), Foreign Investment Agency (FIA) |
| Restrictions on Foreign Investment in the Manufacturing Sector | 100% foreign capital entry is possible except the items in the negative lists such as products reserved for SMEs | 100% foreign capital entry is possible in principle | 100% foreign capital entry is possible except the automobile industry | 100% foreign capital entry is possible except the items in the negative lists such as manufacturing alcohol and repairing bikes | 100% foreign capital entry is possible in principle |
| Land Ownership | Land ownership of foreigner/foreign corporation is possible | Land ownership of foreigner/foreign corporation is not possible, but the BOI approved companies are possible | Land ownership of foreigner/foreign corporation is possible | Land ownership of foreigner/foreign corporation is not possible. Foreigners use lands by leasing agreement. | Land ownership of foreigner/foreign corporation is not possible. Foreigners use lands by leasing agreement. |

(Source) Compiled by JICA Study Team based on JBIC/JETRO reports

For investment-related laws and investment promotion agencies, the Board of Investment in each country is responsible for attracting FDI based on the investment promotion laws.

In India, investment-related laws and investment promotion agencies are placed in the state government as well as the central government to cultivate investors.

For restrictions on foreign investment in the manufacturing sector, 100% foreign capital is accepted in principle, but exceptions are made for some industries in some countries. In Malaysia, to protect the domestic automobile industry, there are restrictions on foreign investment in the automotive industry.

In addition, India has more restrictions on its retail sector compared to other countries. A multi-brand retail business dealing with multiple item brands, such as for supermarkets, is not allowed. For a “single-brand retail” entity dealing with a single brand product, 100% foreign capital was approved in January 2012, but severe individual procurement conditions of handling items or individual approval of the Government related to regulations remains in effect.

For land acquisition by a foreign corporation or a foreign individual, Malaysia and India are the only countries among the selected countries where the ownership of land is legally permitted. In Malaysia, real estate purchases of less than 500,000 ringgit as the total sales price is not allowed, but the land ownership is possible by the approval of the state government. In India, if the subsidiary is established in accordance with the Companies Act of India, acquisition of land for business purposes is permitted. But if a company wants to set up a factory in an industrial park run by a state government, there is a difference in land-acquisition regulations state-by-state, such as: 99 years lease agreement, purchase option after 10 years of lease holding, and purchase after building-to-land ratio reaches more than 45%.

In Thailand, land ownership by foreigners or foreign companies is not allowed, but the BOI and IEAT certified companies can own land. Land ownership by foreigners or foreign companies is also not allowed in Vietnam and Indonesia, where foreigners use the land to get the “land use rights”.

2) Tax

Table 2-10: Country Comparison of Tax Policy

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|--|--|--|---|---|--|
| Corporate Tax (Effective Tax Rate) | 42.024% | 23% | 25% | 25% | 25% |
| Income Tax | 30.9% | 37% | 26% | 30% | 35% |
| Domestic Sales Tax (VAT) | 12.5% | 7.0% | 10.0% (sales tax) | 10.0% | 10.0% |
| Average Tax Rate | 10.1% | 8.0% | 7.6% | 6.6% | 8.7% |
| Import Tax Other Than Tax (Collected at Customs Clearance) | Additional Tax Special Additional Tax | VAT | Sales Tax | VAT | VAT |
| Withholding Tax Rates on Dividends to Japan | 16.2% | 10% | 0% | 10% | 0% |
| Tax Incentives | Tax incentives to investment in infrastructure development, power development, renewable energy, chemical research & development, and etc. | Corporate income tax exemption of 3-8 years based on the approval of BOI. Import tax exemption of goods and equipment depending on the project | 70% corporate income tax exemption for 5 years for pioneer status companies. Tax exemption for dividends distributed from the tax-exempted income | 30% of the investment exemption to fixed asset investment in certain industry, area and investment volume | Corporate income tax exemption for 4 years and 50% exemption for 9 years after the taxable income start for investment in special investment area, high tech park and national infrastructure. |
| Funding of Companies Operating | Working capital raising prohibition by loan from HQ, funding from capital raising is also common | Foreign currency funding by loan from HQ, baht-denominated funding by loan from local banks | Loan from HQ and local banks | Loan from HQ | Loan from HQ and local banks |

(Source) Compiled by JICA Study Team based on JBIC/JETRO reports

The effective corporate tax rate ranges from a low of 23% in Thailand to a high of 42.024% in India. India also has a higher personal income tax, national sales tax, customs duties, and withholding tax to Japan on dividends. Also, in addition to domestic sales tax, companies suffer the imposition of a 2% central sales tax (CST) on the buying and selling of products across the state, therefore, tax-related costs have become higher for many companies doing business in India.

In addition, selected companies have applied the preferential taxation of income taxes to specific industries and export-oriented industries to attract FDI.

Particularly in Thailand and Malaysia, the preferential taxation has been widely utilized for a long time; the corporate tax that the Japanese companies actually pay becomes significantly

lower than the effective tax rate. On the other hand, in India, the application of the preferential tax system is limited to some specific industries and tenants in special economic zones (SEZ) that has not been successfully operational, the manufacturing companies in general are not benefitting from the preferential tax system.

2.5. Comparative analysis of the investment climate in India and Southeast Asia

1) The comparative analysis in operational/investment environment of the legal system

A significant investment framework cannot be found in country comparison; however, implementation conditions in operating investment policy can be compared between each country. The “Doing Business Ranking 2013” can be used as a performance measure comparing the business environment of each country and region with various items conducted by the World Bank every year. Table 9 shows the rankings of 11 business topics out of 185 economies.

Table 2-11: Doing Business Ranking

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|-----------------------------------|-------|----------|----------|-----------|---------|
| Ease of doing business | 132 | 18 | 12 | 128 | 99 |
| Starting a business | 173 | 85 | 54 | 166 | 108 |
| Dealing with construction permits | 182 | 16 | 96 | 75 | 28 |
| Getting electricity | 105 | 10 | 28 | 147 | 155 |
| Registering property | 94 | 26 | 33 | 98 | 48 |
| Getting credit | 23 | 70 | 1 | 129 | 40 |
| Protecting investors | 49 | 13 | 4 | 49 | 169 |
| Paying taxes | 152 | 96 | 15 | 131 | 138 |
| Trading across borders | 127 | 20 | 11 | 37 | 74 |
| Enforcing contracts | 184 | 23 | 33 | 144 | 44 |
| Resolving insolvency | 116 | 58 | 49 | 148 | 149 |

(Source)Doing Business 2013

According to the above table, the ranking of India is lower than Southeast Asia in terms of the ease of doing business, starting a business, dealing with construction permits, paying taxes, trading across borders and enforcing contracts. Challenges in business operations cannot be found in comparison of institutional framework; therefore, verifying the impediments to business operations shall be done by field study.

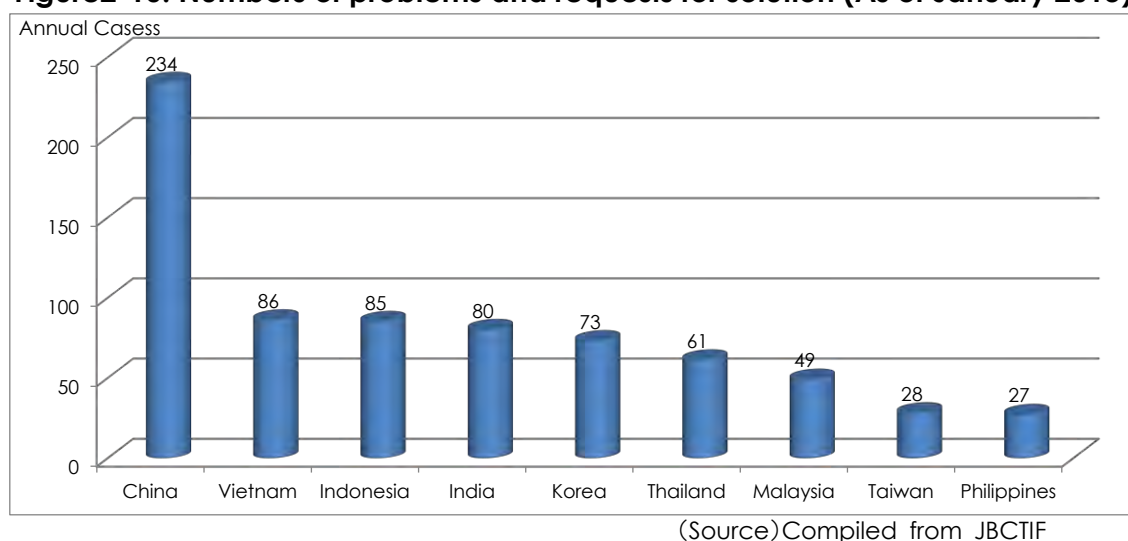
2) Challenges of trade and investment system in India

The Japanese Machinery Center for Trade and Investment is a non-profit organization permitted by the Ministry of Economy, Trade and Industry. It has the Japan Business Council for Trade and Investment Facilitation (JBCTIF) as an internal research section, regularly conducting questionnaire surveys annually to examine problems Japanese companies face in international trade and foreign direct investment. It has been submitting recommendations to the

Japanese Government and foreign governments regarding institutional improvements for addressing those problems. The latest survey summed up in January 2013 showed the following tendency.³

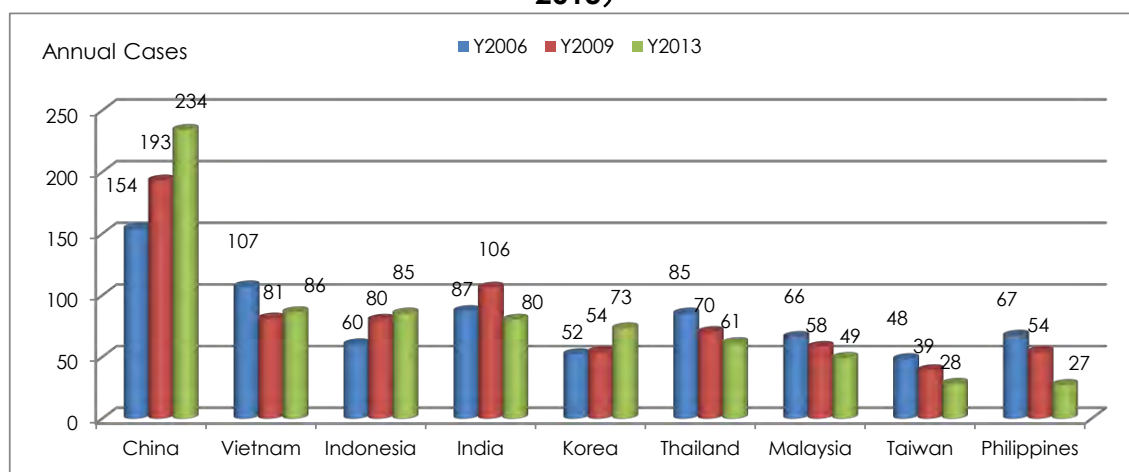
- (1) The numbers of problems that have been pointed out by Japanese companies invested in Asian countries in the region by country are: in order, China followed by Vietnam, Indonesia, India, Korea, Thailand, Malaysia, Taiwan, Bangladesh, the Philippines, etc. (Figure25).

Figure2-10: Numbers of problems and requests for solution (As of January 2013)



- (2) In comparison with the survey results in 2006, 2009, and 2013, the number of problems has been increasing in China, Indonesia, and Korea. Contrarily, the number of problems has been decreasing in Vietnam, India, Thailand, Malaysia, Taiwan, and the Philippines. Especially, the trend from 2009 to 2013 indicates that the number of problems increased very much in China and Korea in those years. On the other side, it decreases considerably in India and the Philippines.

Figure2-11: Trend of numbers of problems and requests for solutions(2006, 2009, 2013)



(Source) Compiled from JBCTIF

- (3) Through questionnaire surveys, JBCTIF has compiled individual problems and requests for solutions in detail as of January 2013. The JICA Study Team has identified and confirmed such issues through the survey in India. The Team extracts common parts of issues to Japanese manufacturing investment based on JBCTIF and the Team survey as follows.

Table 2-12: Problems and requests impeding Japanese manufacturing investment into India (as examples)

| Category | Issue | Issue Details | Requests |
|--|--|---|---|
| Problem of state investment authorities | Additional payment request of land price for the plant at industrial parks | In September 2012, HSIIDC (The Haryana State Industrial and Infrastructure Development Corporation) requested an additional payment of land price for the plant at Bawal industrial park, again. This issue has been discussed in conjunction with RCCI (Japanese Rewari Chambers of Commerce and Industry) in the past, but it could not be resolved. So, each company now considers that it has responded to the current request. As a result, each company disburses an additional payment in order to avoid the risks of returning land and interest charges. | Improvement of management capability of HSIIDC |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | High Import Tariffs | For example, tariffs on clocks and watches are 10% on finished products and 5% on watch movements, while pursuant to the Japan-India EPA ratified and becoming effective in 2011, tariffs on clocks and watches originating from Japan will be eliminated in 10-years. On the other hand, the GOI continues to levy substantially high tariffs including a Countervailing Tariff, and Education CESS on top of the Basic Tariff. | It is requested that GOI reduces or repeals the tariffs on clocks and watches. |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Calculation Method for import Tariff is Complex | The taxation system is difficult to comprehend as plural taxation systems intertwine with each other in a complex fashion, resulting in relatively high tax rates in the end. Tariffs in India comprise of (1) Basic Tariff, (2) Additional (Countervailing) Duty, and (3) Special Additional Duty, provided, however, that, the calculation method is quite complex and difficult to grasp: An Example showing the Tariff Calculation Method: The Current Tariff Rates CIF India ; 100.00 (a) Deemed Landing Cost 1.0%; 1.00 (b) = (a) × 1% | It is requested that the GOI either streamlines or repeals the complex taxation system. |

| Category | Issue | Issue Details | Requests |
|--|--|--|---|
| | | Subtotal (1) ; 101.00 (c)=(a)+(b) Basic Duty 7.5%; 7.58 (d)=(c)×7.5% Subtotal (2) ; 108.58 (e)=(c)+(d) Offset Tax 14.0%; 15.20 (f)=(e)×14% Education CESS I 3.0%; 0.46 (g)=(f)×3% Subtotal (3); 124.23 (h)=(e)+(f)+(g) Education CESS II 3.0%; 0.70 (i)=[(d)+(f)+(g)]×3% Subtotal (4) ; 124.93 (j)=(h)+(i) Special Additional Duty 4.0%; 5.00 (k)=(j)×4% Total ; 129.93 (l)=(j)+(k) Total Tax Amount ; 28.93 (l) – (a) – (b) | |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Arbitrary Implementation of Tariff Classification | Applicable HS Code for a given product is determined by the Customs personnel at the window and may change by who the person in charge is at the time. (No third party institute, etc. is available for determination of HS Code.) | Unification, removal of Arbitrary Implementation |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Import Customs Clearance Procedure is Complex and Delayed | For various reasons, customs clearance takes many days, sometimes, even 20 days. GOI requires the original customs clearance documents (Invoice, Packing List, Insurance Policy, Certificate of Origin, etc.). Customs Clearance within the Container Yard is treated as Container Freight Service Customs Clearance. It always necessitates a shipper's assumption of additional delivery cost. | It is requested that GOI: -streamlines / expedites the Customs examination, -stabilizes the system, and repeals the requirement for attaching Retail Price Labels |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Customs Procedures are different in each State | Various systems and procedures are employed in customs clearance procedures without stipulation of any clear-cut interpretations. It varies state to state. Its interpretation is nebulous. | It is requested that GOI harmonize the interstate rules and procedures that should apply uniformly nationwide. |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Complexity /Difficulty of Declaring /Marking MRP upon Import Customs Clearance | GOI mandates the marking of MRP (Maximum Retail Price) on Each Package Of Imported Goods. It is quite burdensome for distributing importers and exporters to keep themselves updated with price information on all imported goods, requiring substantial person-hours and expenses. As regards certain categories of goods, MRP is used for calculating Countervailing Duty (CVD), with the resulting complication in the calculation of import duties. | It is requested that GOI accepts the attachment of an MRP label after import customs clearance. Or, It is requested that GOI repeals the MRP system. |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Excessively Rigorous Cargo Inspection | Air cargoes are subjected to customs inspection at the ratio exceeding 80%. This prolongs the lead-time for cargo delivery and frequently damages the cargo. | Simplification |
| Restrictive Export/Import Trade, Duty, and Customs Clearance | Hand carried foods prohibited from Japan after the Great East Japan Earthquake | Since the Great East Japan Earthquake, GOI has prohibited hand carried foods, etc. from Japan. As a result, new expatriates to India are unable to bring in foods, etc. from Japan and their daily lives are affected due to the differences in the dietary life, etc. In addition, hand carried foods are severely restricted in peace time, hampering expatriates' lives in India. | It is requested that GOI: -deregulates restrictions it has taken as measures against the Great Earthquakes, and -deregulates restrictions on regular carried in food stuffs from Japan. |
| Restrictive Export/Import Trade, Duty, and Customs | Correction of criteria on certificate of origin | In the substantial change criteria set forth in the article 29, clause 1 on the issuance agreement of specified certificate of origin and annex 2 (product category rule) based on the Comprehensive Economic Partnership Agreement between | Both criteria are permitted only in India. At the next occasion, the |

| Category | Issue | Issue Details | Requests |
|------------------|---|--|---|
| Clearance | | Japan and the Republic of India, a product of origin should not be certified unless fulfilling both criteria - the tariff number change criteria (CTC6 digits revision) and the value added criteria (QVC35% or more). If a product fulfills the criteria on CTC, but does not meet the criteria on QVC, a specified certificate of origin should not be the subject of an application. So, a product has to be imported at the general tax rate, it pushes the material cost up, resulting in a decrease in the price competitiveness. | Japanese authorities should negotiate with India for one criterion to be certified. |
| Exchange Control | Restrictions on Remittance Abroad | Control on foreign exchange remittance is excessively severe. A huge amount of evidence and documents must be signed and submitted to the authority after going through complicated procedures. | It is requested that RBI expands the scope of the applicable items for remittance abroad. |
| Exchange Control | Extraordinarily Complex Procedures for Receiving Remittance from Abroad | RBI controls remittance from abroad, for example, by requiring complex procedures such as submission of individual contracts. | It is requested that RBI streamline the procedures. |
| Exchange Control | Capital Borrowing from Overseas is Restricted | A Japanese enterprise in Japan desires to extend a loan to its sales subsidiary in India to increase its operating fund either by itself or through other related enterprises outside India. However, it is unable to do so as the allowable utility of fund is restricted to investment into machineries and equipment and special infrastructure. | It is requested that RBI deregulates or repeals restrictions on utility of foreign exchange funds borrowed from abroad. |
| Exchange Control | Inefficiency in the Domestic Rs. Settlement System | Payment by check is the main stream of the domestic settlement of accounts in Rs. which takes a long time before the settlement is completed in the vast India. | Early proliferation of electronic payment is eagerly awaited. |
| Taxation Systems | High Indirect Tax Rates | High rates of indirect taxes (Excise Duty) are imposed such as Sales Tax of 12.5%~20%, Retail Price 2%, Service Tax 12%, Education CESS of 2%, and Import Tax as stated above. | It is requested that GOI reduce the tax rates. |
| Taxation Systems | Complex Taxation System | Indian Indirect Taxes are complex and diversified in their levy method and variety of taxes, forcing enterprises into much difficulty to take proper actions in response. While the central government is empowered to collect central taxes (Customs Duty, Excise Duty, Central Sales Tax, Service Tax, etc.), State Governments are empowered to collect State Taxes (State VAT, Stamp Duty, State Entry Tax, etc.). Deliberation and preparation are now underway to consolidate all indirect taxes into a single Goods and Services Tax. However, its introduction originally due in 2010 was postponed into 2011, and as the matter now stands, the 2011 introduction appears to be further extended in 2012, as the central/state governmental alignment consumes much time. | It is requested that GOI unifies the taxation system into a simpler form as soon as possible. |
| Taxation Systems | Unjustified Collection and Additional Tax | In the course of carrying out the Transfer Pricing Investigation (TPI) on the locally incorporated subsidiary (MFS) of each Trading Firm (Member Firm), GOI has imposed huge amounts of additional tax on each firm based on the arbitrary | TPI has been the major barrier for entry into and expansion of |

| Category | Issue | Issue Details | Requests |
|--|--|--|---|
| | Imposition on Trade Firm Activities under the Transfer Price Taxation System | contention that the commission earned on the Triangular Trade, which is the main business of the investigated firm, should not be less than the profit rate gained in the Normal Sales and Purchase Transactions. Show Cause Notice has reached several general trade firms, demanding the levy of an additional tax on the ground that a profit rate of more or less 1% is unduly low as compared to the average profit rates of Indian trade firms. The taxation authority simply turned deaf ears to the official explanation given about the trade firms' fields of operation and profit structure. | business in India. It is requested that GOJ (taxation authority/Ministry of Economy, Trade and Industry) will move for the subsequent improvement of this issue. |
| Taxation Systems | Imposition of dividend distribution tax | GOI imposes DDT (Dividend Distribution Tax) 16.995% upon the payer of Dividends, resulting in a lowering of investment efficiency. | It is requested that GOI changes the payer of DDT to the recipient of dividends. |
| Employment | Difficulty in Dismissal of Workers | Generally the notion of labor protection prevails. Restructuring the workforce requires approvals and permits of the competent authorities. | It is requested that GOI restructures so that labor issues are resolved through bargaining between employers and unions (or employee's representatives). |
| Employment | Labor Standards vary by each State | While in general terms Labor Standards and Rules vary by state, there are scarcely few tools available to grasp the contents. It makes labor management difficult. | It is requested that GOI publish a book on Industrial Relationships in India or discloses the requisite information on its website. |
| Restrictions on Land Ownership | Unestablished Land Ownership Administration | The history of land ownership transfer has not been maintained so that plural Sales and Purchase Agreements exist for a single property. Building registration in the strict sense does not exist so that ownership alone passes from one party to another without identifying the building. | It is requested that the GOI structures the administrative system for ownership of land and buildings. |
| Restrictions on Land Ownership | Unestablished Land Ownership Administration | That land rights is unclear in many cases, In local plant construction, the opposite of the landlord interrupts factory construction as planned. | It is requested that the GOI structures the administrative system for ownership of land and buildings. |
| Environmental Pollution and Waste Disposal | Implementati on of the environmental control is insufficient | Governmental Administration is insufficient for control of environment and waste disposal. | It is requested that the GOI administers the control pursuant to the proper rules and procedures. |
| Environmental Pollution and Waste Disposal | Nebulous and Delayed Procedures for Acquisition of Environmental Clearance | Upon factory construction in India, Grant of Prior Environmental Clearance (EC) is the prerequisite condition for issuance of building licenses, etc. and other licenses and approvals, despite the fact that EC by right is a separate legal system with no link to factory construction. Pending acquisition of EC, all applications are suspended for licenses and approvals in regard to the factory construction. In July 2011, after replacement of the Minister of Ministry of Environment & Forests (MEF), the Regulatory Authority, there was a delay for more than 5-months in issuance of licenses on more than 100 projects, including an application filed by one of the Member | It is requested that MEF - abridges the lead-time for initiation of the construction work, by allowing separate application procedures for licenses and approvals |

| Category | Issue | Issue Details | Requests |
|--|--|---|---|
| | | Firms. It resulted in the total rescheduling, materially affecting the Member Firm's project. MEF Notification S.O.1533 under "Article 8. Grant or Rejection of Prior Environmental Clearance (EC) in paragraph (iii)" provides: "In the event that the decision of the regulatory authority is not communicated to the applicant [within 45-days], the applicant may proceed as if the environment clearance sought for has been granted or denied by the regulatory authority in terms of the final recommendations of the Expert Appraisal Committee or State Level Expert Appraisal Committee concerned." However, in anticipation of the forthcoming long-term relationship with MEF endowed with the most powerful practical authority, presiding agencies would not advance the procedures, effectively voiding the "deemed EC" provision. | individually, -advances steadfastly the routine procedures for licenses and approvals under EC unaffected by the replacement, etc. of the Minister, and makes the "deemed EC provision of the Notification" effective so that the projects may advance, regardless of any delays in the EC procedures. |
| Inefficient Administrative Procedures, Regimes and Practices | Legal System, Procedure and Interpretation are all different in Each State | In regard to the legal or procedural issues, the systems and the views vary in each State, while the authority makes an improper/nebulous interpretation. | It is requested that GOI harmonize the rules and procedures and establishes interstate rules. |
| Inefficient Administrative Procedures, Regimes and Practices | Extraordinarily Complex and Delayed CFE/CFO on Factory Establishment | Upon factory establishment, it takes much time to obtain two-types of requisite licenses, namely, the Consent for Establishment (CFE) and Consent for Operation (CFO). The laws concerning operational licenses cover so much detail that substantive negotiation is required on all minute details (shower rooms, canteen seat numbers, etc., which are unrealistic, requiring a lengthy negotiation with the regulatory authority). | It is requested that GOI facilitates and expedites issuance of the licenses. It is requested that the GOI improves the business licensing system and its process. |
| Infrastructure | Infrastructure of Logistics Require Overhaul | Concerning the overland transport, especially during the rainy seasons, the traffic gets congested, due to the incomplete overhaul of the road network. Due to its poor quality, the asphalt pavement is washed away with the deluge of rain during the rainy season and returns to being a bumpy road. - On rainwater and sewerage, one-hour of heavy rain deluge turns the road into a river, with the resulting civic hygiene problems, as well. - While modernization of international airports has made fair progress accompanied by increasing numbers of international flights and an overhaul of the infrastructure in the immediate vicinity, the operational capacity lags behind particularly in handling international flights, etc. Despite the total volume increase of import volume, expansion lags behind as regards infrastructure at ports, and cargo railway stations (hardly catching up with the increased cargo volume). Port congestion regularly occurs, materially disrupting the sales and distribution. - Overhaul work lags behind on the access road from factories in the vicinity of Chennai to Ennore Port. | It is requested that GOI: -takes drastic measures to overhaul the overpass system and the road network, and -ensures that the public observes traffic rules and procedures. It is requested that GOI overhauls the access road to Ennore Port, Chennai. |
| | Shortage of Power Supply | Temporary power supply shortages frequently occur (both for industrial and home users), negatively impacting businesses especially in the summer season. It is incumbent upon the Public Company to give advance notice about the hiatus in power supply, with precise schedule as to when it is unable to supply the needed power. | It is requested that Power Company gives a clear-cut guideline and precise schedule of blackouts. |

| Category | Issue | Issue Details | Requests |
|----------|-------|---|--|
| | | <p>Chronic power shortages prevail. There are hardly any areas where the quality and quantity of power supply is fit for factory operation. Underlying structural problems seem to exist, i.e., politically pre-determined electricity bills, subsidies, less profitable power generation company, increase in volume of power supply to the power company, ineffective incentives, (while foreign capital is withdrawn). Unless something is done in these vicious cycles, sweeping reform is impossible.</p> <ul style="list-style-type: none"> - It is requested that the power supply company improves the quality of its power supply. - Fluctuations in power supply voltage are unusually high, damaging a number of electric appliances. - It is requested that the power supply company improves the quality of its power supply. | <p>It is requested that the power supply company improves the quality of its power supply.</p> |

(Source) JBCTIF, JICA Study Team

Chapter III

Industrial Park Development and Management in India - In Comparison with Cases in Southeast Asia

3. Industrial Park Development and Management in India - In Comparison with Cases in Southeast Asia

3.1. Law, Policy and Institutional Framework about Industrial Park Development

Table 3-1: Country Comparison of Industrial Parks

| | India | Thailand | Malaysia | Indonesia | Vietnam |
|---|---|--|--|---|--|
| Industrial Park Related Law | 2006 SEZ Law | 1972 Law on Industrial Estate Authority of Thailand | N.A. | 2009 SEZ Law | 2006 Decree under Law on Investment |
| Industrial Park Management † Organization | State government development corporation | Industrial Estate Authority of Thailand (IEAT) | No specific organization for industrial zone management, MIDA is in charge | SEZ is in a process of legislation, BKMP is in charge | Industrial Zone Management Committee |
| Tax Incentives | Corporate tax exemption for 5 years and 50% exemption for 5 years for companies in SEZs | Corporate tax exemption for 3-8 years and import tax exemption of 75% for maximum 5 years depending on the location for IEAT approved corporations | Iskandar development zone: income tax exemption for 10 years in 6 specific sectors | Batam Island: designated as a free trade zone, exemption for import duties or value-added tax for export industry | Corporate income tax exemption for 4 years and 50% exemption for 9 years after the taxable income start for investment in high tech park |
| Land Ownership | Purchase land through the state government corporation | Land ownership is possible for IEAT approved corporations | Land ownership of foreigner/foreign corporation is possible | Lease from the industrial zone management company | Lease from the industrial zone management company |

(Source) Compiled by JICA Study Team based on JBIC/JETRO reports

The laws relating to industrial park development and institutional framework will be described in detail later, but in selected countries, industrial parks have been developed based on an Industrial Corporation Act or Special Economic Zone Act, and tax incentives have been applied. Except for the special economic zones certified by the Ministry of Commerce and Industry, there are industrial parks in India developed by the State Industrial Corporation. However, incentives do not exist. In addition, as described later, unlike the industrial parks that Japanese companies develop in Southeast Asia, infrastructure in industrial parks in India is deficient, and each company has to arrange ground leveling, generator installation, and the securing of industrial water and wastewater treatment by their own cost for their own plot of land in the park.

3.2. Business model / structure of industrial park development in India

In general, industrial park projects in India have been conducted by state government and private business entities. So far state government has developed and managed general industrial zones as well as special economic zones, and the special economic zone is the only development form which the private sector can become a participant in the industrial park business. In this section, we shall consider the common business model and structure of industrial park development and management between government and private entities, and then try to understand the development scheme of industrial parks as well as the government's position in preventing the entry of private entities into the general industrial park business in India. It should be noted that while the industrial park business in India can be generalized to some extent, due to the fact that there are differences in obtaining operating licenses as well as the institutional framework from state to state, the common business system needs reform, and the actual development and management of industrial parks should be carefully studied state by state.

Framework of development license and land acquisition

Industrial park projects are carried out by the State Industrial Development Corporation enacted by the state law. The State Industrial Development Corporation is the executive body mandated to develop land and sell industrial plots under the guidance of formal industrial development policy, and department of industry, along with the industrial commission, supervises the activities in accordance with the guidance of the infrastructure development committee.

Table 3-2: The state development body of for industrial parks

For industrial activities to be developed in Gujarat, the GIDC is the body which develops land, distribution lines, water pipelines, access roads, and sewage treatment facilities.

In the state of MP, based on the policy stipulated by the Department Of Commerce & Industry, MPSIDC plays the role of nodal agency to coordinate all related infrastructure development along with the planning of industrial park development. Actual development and management of industrial areas is conducted by AKVN, established in seven different regions of the state.

The role of APIIC in AP is to develop industrial land and associated infrastructure. Upon acquisition of land, the Revenue Department of the State carries out the duty, and in the case of converting agricultural land into non-agricultural land, the Revenue Dept. is also supposed to perform the conversion. APIIC shall acquire Non-agricultural land from the Revenue Department. Therefore, it is not APIIC that performs the direct land acquisition.

MIDC of Maharashtra has been functioning as a government agency like other state industrial development corporations, responsible for the development of land, sales, and related infrastructure. The District Collector is the entity that conducts land acquisition, then transfers the

land title to MIDC based on the fund arranged by MIDC (the name of the land becomes the MIDC and not a lease to MIDC from the District Collector). Therefore no Stamp Duty is imposed.

In Karnataka, KUM plays a role as apex body which receives application for development of industrial park and actual development shall be carried out by KIADB. Once an application is received, KUM organizes the coordination meeting among related departments responsible for licensing. The head of KUM is the Commissioner for Industries. There are cases in which KIADB performs land acquisitions directly; otherwise the District Collector shall conduct land acquisition on behalf of the government. The responsibility of KSIIDC covers relatively large infrastructure projects like airports, gas pipelines, and irrigation facilities. The NIMZ project is also under KSIIDC. For other industrial infrastructure like power, transmission lines, and roads, KPC, KPTCL and the Public Works Department are in charge of their respective domains. There are few cases where KIADB jointly develops industrial parks with the private sector to date. The case of a JV between Singapore/Ascendas and TATA for ITPC (Information Technology Park Center) is one of the early cases developed back in 1994. Since then, it has been only the state government working for land development of industrial areas in the state.

In the state of Tamil Nadu, SIPCOT has worked on industrial park development solely with state government entities. However, for the joint industrial park development projects with private companies, TIDCO is deemed to be the better partner for those projects from the government's viewpoint.

The mandate of the state industrial development corporation is to perform industrial land development, related infrastructure development and sales/lease of the land. The role of the industrial development corporation is stipulated by state law, but in most cases, utility service delivery at the industrial area is carried out by other government or state corporations. In other words, as far as infrastructure development in industrial areas is concerned, the State Industrial Development Corporation can only develop infrastructure utilities such as street lighting, power lines, drainage pipes, access roads, and, sometimes, sewage treatment plants. However, the actual operation of critical utility services, like power distribution and effluent treatment, is performed by separate state corporations. State power generation/distribution companies provide power, and the Department of Public Health conducts fresh water generation and sometimes supplies water, then state pollution control board supervises the regulatory framework of sewerage and effluent treatment as a separate jurisdiction from that of the State Industrial Development Corporation.

Table 3-3: The List of the responsible State Industrial Development Corporations responsible for industrial park development and management

| State | Industrial development corporation |
|-----------|--|
| Haryana | Haryana State Industrial and Infrastructure Development Corporation Ltd. (HSIIDC) |
| UP | The Uttar Pradesh Industrial Development Corporation Ltd (UPSIDC), Greater Noida Industrial Development Authority (GNIDA) etc. |
| Rajasthan | Rajasthan State Industrial Development & Investment Corporation Ltd (RIICO) |
| AP | Andhra Pradesh Industrial Infrastructure Corporation Ltd (APIIC) |
| MP | Madhya Pradesh State Industrial Development Corporation (MPSIDC), AKVN |

| | |
|-------------|---|
| | (Indore), AKVN (Ujjain) etc. |
| Gujarat | Gujarat Industrial Development Corporation (GIDC) |
| Maharashtra | Maharashtra Industrial Development Corporation (MIDC) |
| Karnataka | Karnataka Industrial Area Development Board (KIADB) |
| Tamil Nadu | State Industries Promotion Corporation of Tamil Nadu Ltd. (SIPCOT), Tamil Nadu Industrial Development Corporation (TIDCO) |

(Source) JICA study team

The State Industrial Development Corporation itself is not responsible in land acquisition for industrial area development. Land acquisition is often carried out by the state government through the Revenue Dept. /District Collector with the funding of either industrial department or the Industrial Development Corporation. When a project site is categorized as agricultural land, the Revenue Dept. performs conversion to non-agricultural land, which is then transferred to either the industrial department or Industrial Development Corporation (land title is transferred to either the industry department or the State Industrial Development Corporation). Thus, the Industrial Development Corporation often does not conduct direct land acquisition and can obtain the land without paying the Income Tax and Stamp Duty.

Land acquisition for the purpose of industrial park development was carried out in accord with the old Land Acquisition Act under which government can acquire land for public use and the process could be expedited in urgent circumstances. In contrast, in the new Land Acquisition Act, from the fact as described below, new elements are added for re-consideration of the land which is going to be acquired for the industrial park development. Under such circumstances, there are many views and responses from the different states on the new Land Acquisition Act, and each state has a different view as to how to interpret and carry out land acquisition under the new paradigm¹⁰.

Provisions of the new Land Acquisition Act

- In addition to the land acquisition by public empowerment, it would have been applied to infrastructure development, such as industrial corridors and land acquisition over a certain size of the private sector.
- In the case of PPP projects or private business, 80% or more land owner's agreement is required
- If the acquired land was not used for the original purpose within five years, that land shall be returned, and 40% of the profits obtained from the resale of the undeveloped land is transferred to the original landowners.
- Social Impact Assessment is required in every case except irrigation projects and the projects that are urgently needed.
- The market value of the land was defined and the price of land together with compensation, including junk fees, losses, and damage is supposed to be paid to the landowners - an amount up to 4 times the market price of land in rural areas and 2 times that in urban areas.
- The market price of land is defined as whichever is higher of the average price of 1/2 of the most recent land transactions number in the area or price which has been specified in the Indian Stamp Act 1899)

¹⁰ According to MIDC, the method of land acquisition so far that have been made in accordance with state law, are not much influenced by the new Land Acquisition Act.

As a way to solve these issues that stem from the new Land Acquisition Act, based on the SIP ACT, the zoning concept of SIR (Special Investment Region) has been used in advance in Gujarat. The SIR is pursued in 8-10 locations in Gujarat, and in each place a new industrial town development plan is planned by the specialized agencies that are assigned to each regional business of SIR such as in Dholera and Dahej. That is, in Dholera, Dholera Special Investment Regional Development Authority (DSIRDA) takes the responsibility, and GIDC (Gujarat Industrial Development Corporation) formulates the SIR zoning / development plan in Dahej, as Petroleum, Chemicals and Petrochemicals Investment Region and (PCPIR), and proceed with its development. The Dholera SIR has been recognized as a DMIC project, and the execution of the project is supposed to be carried out by Gujarat Industrial Corridor Cooperation (GICC) within GIDB (Gujarat Infrastructure Development Board).

Table 3-4: Land acquisition scheme of major state in India

| Land acquisition scheme | Land readjustment / allotment method based on state law, such as SIR Act | Conventional method of monetary or alternate site exchange |
|-------------------------|--|--|
| State | Gujarat, MP etc. | Haryana, Rajasthan, AP, Karnataka etc. |

(Source) JICA study team

In response to the new Land Acquisition Act, some measures are taken such as the announcement in July by the State of MP that the MP Investment Region Development & Management Act 2013 was aimed to carry out land development projects, under the new Land Acquisition Act by employing the concept of land reallocation like the practice of the State of Gujarat¹¹. The land development scheme is performed by first land pooling in a wide range of required land in the project site, then reallocation of the land of existing landowners after a grand master planning of the project site, then the design of a township plan without carrying out land acquisition. The method of such industrial township development is a so-called land readjustment/township redevelopment scheme based on a land pooling policy. The responsible organization for land pooling and development planning of Industrial Townships remained in government bodies like AKVN in case of MP state and, sometime, SPV or DSIRDA in case of

¹¹ DSIRDA has a mandate to develop a zoning plan of a Special Investment Region (SIR) in Dholera district, along with conducting activities to build a consensus of the development plan with the residents, to obtain EIA clearance, and, after finalizing the zoning, to serve as an authority to give permissions pertaining to the SIR land use business. The process of zoning development is to begin with creation of a Master Development Plan, and then followed by carrying out three subsequent public hearings. The procedure was set forth in 1976 as the Town Plan Scheme, and activities are performed on the basis of the state law enacted.

Each authority of SIR is primarily assigned as an organization involved in zoning plan of SIR, thus actual land development business shall be carried out by different entities in conformity with the applications of land use / business plan. In case of the industrial park, land acquisition is going to be carried out by GIDC or private business entities, and it is necessary to carry out negotiations with the land owner. In other words, the SIR Authority is the body to carry out land pooling, then re-constitute/re-allocate the land.

Gujarat. But the actual work of planning is sometime outsourced to a third party together with DPR. As the result of DPR, each project is considered to be carried out either through an EPC contract or PPP¹². The difference between the state of MP and Gujarat is that MP state accepts the private sector investment in SPV. In other words, suppose the private sector was brought in to take part in the process of urban planning, the outcome would be remarkably different from the practice of other states.

Development approval and Environmental Impact Assessment (EIA) system

As described above, for the development of the industrial park, the State Industrial Development Corporations of each state are identically mandated to carry out development activities on land, transmission lines, drainage pipelines, and access roads. Power supply development, water resource development, and wastewater treatment facility management are outside the mandate of the State Industrial Development Corporation, and the different competent authorities of public corporations or state governments are in charge. As the jurisdiction of the central government, licensing related customs duties and the national road access are observed, and licensing related to the environment at large is given either from the jurisdiction of the central or state government bodies.

With regard to the procedure of Environmental Impact Assessment (EIA) clearance, there is a difference between the general industrial area and Special Economic Zones (SEZ). For the case of a Special Economic Zone, the procedure of EIA clearance begins with the acquisition of an SEZ clearance letter¹³, and then it follows by preparation of a pre-feasibility Report and requires an EIA application form (Form 1) documentation. These application documents are submitted to the Environmental Appraisal Commission (Infrastructure) consisting of 15-16 experts either from state or central government (MoEF). Application documents are considered by EAC (Infrastructure), and then TOR is issued normally after Q&A sessions are pursued.

After a TOR is issued, operators will be required to carry out the Baseline Study of one season on the basis of that TOR. It is necessary to be careful with the term of one season in that one season is meant to be the net three seasons except for the period of the monsoon season (normally July-October, but it differs from state to state). In this Baseline Study, analysis such as Air Modelling, Water Modelling, and Marine Discharge Modelling, if the project site located adjacent on the coast line, is required. Investigation based on the TOR, would then be summarized in the form of an EIA Report. The report is supposed to be submitted for evaluation of the EIA clearance.

¹² In infrastructure projects, jurisdictions of agencies of the government as the counterpart of an EPC contractor agreement or PPP scheme are divided into separate responsible field by infrastructure development business fields. In the case of an industrial park project, in Gujarat, GIDC is the government agency in charge as a counterpart of a private business entity.

¹³ It takes a long time to get this SEZ Clearance (it takes 6-7 months to get the EIA by employing experts, but it is common to take a year at present to get SEZ Clearance).

Upon industrial park development, zone developers (Owning Agency) are required to apply for the prior environmental clearance in accordance with an EIA Notification 2006 (issued on September 25, 2006). The EIA application is going to be evaluated in reference to the nature of the business in two difference schemes, which are Category A and B. Category A is applied to the cases where proposed industrial park projects have features such as that 500 ha or more area is proposed for development, industries falling in Category A are proposed to be accommodated or residential area is included in the land use plan. While the central government, the Ministry of Environment and Forests (MoEF), shall evaluate the project under Category A, in the case of Category B, the Environment Appraisal Committees to be installed in state government (SEAC) shall undertake the responsibility of evaluation. It should be noted that the State Pollution Control Board does not participate as a member in this Committee. The role of the State Pollution Control Board is, based on Water Act 1974 and Air Act 1981, to perform the issuance of Non Objection Certificates and Consents to Establish¹⁴.

In reference to the results of prior EIA evaluation, a TOR is issued. The owning Agency is expected to perform a TOR and to create a comprehensive EIA Report incorporating the results of the TOR. The report will be finally evaluated by the EAC (Infrastructure), and then when the evaluation is passed along with a positive judgment of EoEF, an environment clearance letter shall be issued. In the contents of the TOR, a public hearing (Category A and B-1 are required, but B-2 is not required), which is the practice conducted by the state pollution control board with notification of 45 days prior to the event, would be organized as a requirement of the EIA process, but the activity is the most time-consuming practice in the current system. It should be also noted that, at the time of the EIA application, it is necessary for a company to show treatment measures of sewage discharge from industrial sites (for domestic wastewater and industrial wastewater), and, whether or not the company has a plan for dealing with industrial waste and hazardous waste. Further, the company that wishes to start commercial operation of the factory needs to apply for Consent to Operate from the State Pollution Control Board, in addition to the EIA clearance, so that, drainage and flue gas from the plant meets the criteria set forth by the government. SPCB shall irregularly conduct inspection and monitoring thereafter.

In order to undertake EIA clearance, both general industrial areas and SEZ development projects are supposed to apply for advance consideration of what kind of industries are widely going to come into the industrial site. Setting up a new EIA clearance is necessary when the industry not included in the EIA sent an application. Also the infrastructure and facilities in the industrial zone are defined as evaluation criteria in addition to the kind of target industries; hence the EIA application should include the business proposal as to whether environmental facilities like incinerators, common sewage/effluent treatment plant and landfill facilities¹⁵ are

¹⁴ The tenants of SEZ can only commence land development and factory construction after Non Objection Certificate and Consent to establish from State Pollution Control Board.

¹⁵ In case such incineration disposal sites are included, they become the jurisdiction of the central government.

going to be installed on the site in the future. It is to be noted that the jurisdiction of government bodies in environmental service facilities (landfill and CETP) in the industrial zone remains in the State Pollution Control Board, while the State Electricity Dept. takes care of power and water as managed by the Groundwater Board. When industrial zone project operation was started, environmental services facilities are inspected in compliance with Environment Audit as by State Pollution Control Board at a frequency of approximately once every 6 months.

Special Economic Zone/SEZ system

The private sector's involvement in the business of industrial park development in India was newly introduced by the adaption of the SEZ Act in 2006, in addition to the previously prevailing industrial zone development model that had been undertaken by the public sector. Initially, the SEZ was aimed at materialization of the industrial park with full-fledged infrastructure up to international standard. Tax incentives were also considered to be given to private zone developers, but, according to the general views of industrial society, the concept of SEZs has been gradually diluted and undermined with the imposition of the Minimum Alternative Tax and similar taxes. It is also a fact that the net positive foreign earning that is required for companies operating in the SEZ keeps other companies wanting to move to India to take advantage of its market. There is also a current trend that many companies are observing India as having an attractive domestic market, rather than considering as an export base in their business plan.

Tax incentives of SEZs in India

Tax incentives in SEZ Act, 2005

(SEZ unit)

- Exemption of import duties on raw materials for export products
- Exemption of corporate tax on profits generated from exports for the first 5 years, and subsequently 50% reduction for upcoming 5 year increments of time. Further the amount of reinvestment from the profit of export can be also exempted for 5 years.
- Minimum Alternate Tax (MAT) exemption
- Exemption of fees to be imposed on borrowing from overseas up to \$500 million for an indefinite period of time
- Exemption of service tax and central sales tax
- Local tax exemption

(SEZ developer)

- Exemption of excise duty and customs
- Income tax exemption for export earnings of 10 years out of 15-year
- Exemption of Minimum Alternate Tax (MAT)
- Exemption of Dividend Distribution Tax (DDT)
- Exemption of Service tax and central sales tax

Repeal of exemption measures on and Minimum Alternate Tax (MAT) and Dividend Distribution Tax (DDT)

By the Finance Act, 2011, exemption measures on MAT, which was applied to both SEZ units and developers, and DDT, which was applied to SEZ developers - both have been discontinued.

As a result, 18.5% MAT is imposed on the accounting profit, and 16.22% DDT is imposed on dividend payments of developers.

Introduction of Direct Tax Code

With the introduction of a new Direct Tax Code, SEZ developers and units became a subject to be imposed tax even if they do not generate profit on their income statements.

For SEZ developers, which began operating after March 2013, and SEZ units, which began production after March 2014, a tax will be imposed on the amount of the given investment rather than profit.

Downturn in the SEZ

Through the removal of tax incentives of the above two points, SEZ was sluggish, especially since 2011.

- Application of SEZ: 364 SEZs were approved in 2009, but the number of applications was gradually decreased to 16, 9, and 5 in the respective fiscal years 2010, 2011, and 2012.
- SEZs starting operation: 111 SEZs started operations in 2009, but the number was decreased to 22, 20, and 3 in the respective fiscal years 2010, 2011, and 2012.
- The number of additional units in SEZs was: 2,850 companies newly started operating in SEZs in 2009, gradually decreasing to 440, 110, 189, and 67 in respective fiscal years 2010, 2011, 2012, and 2013.
- Withdrawal of SEZs: the number of withdrawals of SEZ titles has increased; 46 SEZs left in the past three years out of 58 in total.

National Investment and Manufacturing Zones (NIMZs) and

In response to National Manufacturing Policy (NMP), the National Investment for Manufacturing Zone (NIMZ) is promoted as the implementation plan for a progressive brown field project. The current scheme of the NIMZ project developed is supposed to proceed by the provision of land from the state government, and all required licenses and approvals obtained as a package for inviting private competitive bidders for the development¹⁶. Based on the proposed scheme, the project site was planned in seven sites in various states, and it is planned to devote 45% of the land to be used for industrial purposes.

In the view of the DIPP, the difference between an SEZ and an NMIZ is that the state government is supposed to take the initiative in the case of an NMIZ, while the central government is to take the initiative in the case of an SEZ. In the discourse, it would become important how state government will be involved with mounting the willingness for development and promotion of NIMZ project. At the same time, the challenge for the realization of an NIMZ project in India, would lie in vertically divided jurisdictions among ministries - it was in the view that such division of jurisdiction jeopardizes the concept of SEZ, and the issue needs to be addressed in light of the case of SEZs with a measure of transferring power to implementation agency.

¹⁶ Based on the interviews with DIPP officials

Table 3-5: Differences in institution of NIMZ and SEZ

| | SEZ | NIMZs |
|--|---|--|
| Minimum land area | 10 to 1,000 hectares depending upon the sector (higher for multi-sector SEZ, lower for niche sectors such as gems and jewelry, IT, etc. | 5,000 hectares. Processing area may include one or more SEZs. |
| Maximum area | 5,000 hectares for multi-product. | Not specified |
| Special Purpose Vehicle mandatory | No | Yes. The CEO of the SPV will be a senior central or state government official. |
| Can land be mortgaged by SPV? | Not specified | The state government needs to ensure that land can be mortgaged by the prospective participants. |
| Responsibility for Environmental Impact Assessment (EIA) | Developer | State government |
| Minimum processing area | 50% | 30% |
| Cost of master-planning | Not specified | Central government |
| Renewable energy or depending on green technology | No mandate or incentive for renewable energy or green technology. | Mandatory to get a certain percentage of its electricity mix from renewable sources. Low interest loans and investment subsidies. |
| Special preference by government | Not specified | In government purchases preference will be given to units located in the NIMZs. |
| Interest subsidy for working capital requirement | Not specified | In government purchases preference Subvention of interest on working capital by 4%. |
| Applicability of Viability Gap Funding (VGF) | Not specified | Yes |
| Incentives to promote innovation | Not specified | Nearly 50% of the expenditure incurred in filing international patents will be shared by the government. Tax exemption on expenditures incurred in taking national, international process or product certification (E.g., ISO). |
| Single window clearance | Yes | Yes |
| Tax incentives / concession to SEZ vis-a-vis NIMZ | Presently, supplies to SEZ is exempt from indirect taxes subject to fulfilment of export obligations and other conditions | NMP proposes to provide various tax exemptions / concessions to unit establishments in NIMZ. |

(Source) PwC "Point of view National Manufacturing Policy" (2012)

As the similar scheme of project development, the formulation of an SPV is proposed in the development scheme of an NIMZ. However, there is still an intention that government should play the central role for the development and management of an NIMZ, while the participation of the private sector is very much limited, even though participation is proposed by a mentor from the private sector.

Industrial park development as public-private or private business and their incentives

The division of roles between the public and private sectors for ordinary industrial park development is not specified in regulations or laws at the central government level. It is rather stipulated in the case by case practice base in each state by employing *mutatis mutandis*, to encourage industrial park development by private operators in some states. Otherwise, there are no state laws and regulations which are directly related to the industrial park project. In other words, there is no legally prescribed industrial park development rules and regulation by the private sector until recent years.

For instance, in Rajasthan, there is a provision of the Development of Industrial Area in Revenue Law for interpreting the administration of the industrial park business on the base of *mutatis mutandis* to the law. In Maharashtra, there is no industrial park development by MIDC in association with private companies. It is the recent practice for MIDC to carry out joint business with private business, after the SEZ Act of 2006 was applied in the project of the Khed City development, which is the first of this kind in association with the private sector. In the Tamil Nadu, TIDCO was founded as an organization in charge of a large industrial infrastructure development project (industrial park development including) in a joint investment (JV) with private business entities. The scheme is supposed to be different from the PPP, and so far SEZ is the project under the scheme. SIPCOT has promoted the industrial park development project solely owned by the government sector.

Elsewhere, the states of Gujarat, MP, and Karnataka have a set of policies to encourage industrial park development by the private sector. In each state, the implementing regulations are defined for private zone developers, even with the provision of incentives. Within the legal framework, instead of the special economic zone development by the private sector, states have been preparing the system to encourage private entities to come into the ordinary industrial park development projects in the state.

In the case that the private sector was to develop the industrial park in Gujarat, the provision of subsidies (Rs. 20 crore) on link infrastructure can be used for the industrial zone development projects with more than 100 acres of land. Moreover Gujarat Industrial Park Policy promulgated in 2003 and revised in 2011, stipulates the exemption from the Stamp Duty at the time of land

purchase from landowners, then provision of a 50% exemption at the time of lease contracts to companies to be operating in the private industrial park. In addition the aid scheme referred to as the Critical Infrastructure Scheme can be also applied to industrial park development projects. In the State of MP, as an advisory body for investment in the state government, the Cabinet Committee on Investment Proposals was formed, and it is chaired by the Chief Minister, and it is deemed to provide preferential treatment for special projects, such as private industrial park development projects. As for link infrastructure development by private entities, Rs. 5 crore is to be given as a subsidy from state government to the private entities in MP State. While there are no stipulated measures like the exemption from the Stamp Duty during land acquisition of private development companies, according to the state government officials, there is room to offer special treatment, depending on the decision of the Cabinet Committee on Investment Proposal. Consequently, some encouraging measures are observed for private business entities to take part in the industrial park development project with the provision of government supportive measures in some of the state in recent years.

Institutional business entry barriers for the private sector

However, as the business expected to be profitable enough from the point of private business entity, the industrial park development project in India is still unfortunately not functioning to lure the great interest of private players into the field. The involvement of private zone developers has been confined to a special economic zone project and there is almost no private entity participating in the ordinary industrial park development and management project so far in India.

Some observations are given as possible reasons for preventing private players from becoming involved in the industrial park development projects. That is an existence of preventing measures built up by public sector with various entry barriers for the entry of private business entities into industrial park projects. The first point is the presence of the Land Ceiling Act. According to the official announcement, the Act is repealed now, but in the interview with concerned parties, which included private and public sectors, it was revealed that the Act is regarded as being still effective and the concept of land ceiling is deep-rooted in the mind set of many people to prevent industrial park development by the private sector. In the interpretation of practitioners, the land ceiling act stipulates the limit of land possession up to only 50 acres for individuals and individual companies. If the private sector wishes to conduct land development at a certain scale, for instance, for the industrial park, a land purchase of more than 1,000 acres needs to be acknowledged and specially permitted by the Revenue Department. In reality, there is no option except private entity approach government for the use of government land, otherwise a few dozen of people appointed by a company are going to purchase the land in the concerned area with a maximum allowance of land within the ceiling, then once the land was summed-up, private entity goes to government for its acknowledgement. But the technique is a method to use a so-called loophole, and it could present the possibility of containing defects

on the land, which could develop into a lawsuit in the future.

In addition, a sense of unfairness is observed in the licensing scheme of industrial park development projects between public and private sectors, in that, conditions necessary for approval of the projects differ. For example, in Tamil Nadu, industrial park development by private developers requires the permission from the Directorate of Town & Country Planning, though it is possible for SIPCOT to proceed with the same industrial park development project without having the permission from the directorate. Moreover the industrial park becomes attractive to manufacturing companies only after the utility services are provided. In this line, the development link to infrastructure becomes a very important element of the successful development of the industrial park. In this installation and connection process of that linked infrastructure, there are many different government departments and state corporations to be involved. For obtaining the approval of each utility linked to the industrial park, enormous effort and time is often required in India. For the case of state industrial development corporation to make coordination with concerned departments, such necessary coordination can be made through upper bureaucratic protocol like through industrial departments or the industrial commissioner's office. However, the case for private zone developers is quite different. In addition, the taxing on the industrial development scheme also differed from the case of public sector and private sector in that neither Income Tax nor Stamp Duty are imposed on the public sector projects, whereas Stamp Duty is usually imposed on private land purchases.

The fact that industrial park development by the private sector has not proceeded well in India may be a reflection of its reasons in its poorly expected profitability as a long term investment in the land as a stock to sell to prospective customers. Together with incurring financial costs from high interest rates in India, the project would even worsen its profitability. Hence the private land claimed to be developed as an industrial park at its origin is often sold for the use of commercial buildings in the end. Changing the purpose of the land has led to a lack of supply volume of industrial land and the land price hike. Therefore as it is practiced in Southeast Asia, some restrictions may be required for the subject of re-sell and sub-lease of industrial land at origin in that the industrial land can be only resale / sublease as industrial use. However, even in the provision of the private industrial park land, discussions are still needed as to whether a certain time framework is composed for land and factory development within a specified period. Since an industrial park project is affected by the global economy and market trends, and it is often difficult to predict constant sales of land in a long period of time, and private zone developer should endure the long project life of the business. Furthermore, as seen in the matter of State Service/Support Agreement, the responsibility of the state government and the private sector can be sometimes ambiguous, and what causes problems cannot be clearly discovered and, penalties cannot be easily determined. The industrial park development project is a highly complex business and, based on well-coordinated public-private cooperation, it is expected that the private sector will prepare a long term vision and business plan.

3.3. Activities of industrial park development, obstacles and challenges

Land acquisition

It is clear that the industrial park business, whether or not the development can be successful, will be affected by the acquisition of land. Activities for industrial park development are started by discussion and negotiation with landowners for the acquisition of land selected as an ideal site for park development at an economical cost. In the procedures for the acquisition, discussion with state government's revenue department having jurisdiction over the land use classification, and pollution control board that has jurisdiction over the EIA, must proceed with well-planned coordination.

In the course of land acquisition in India, the price of land acquisition and land use classification often generate issues, which lead to a defect of the industrial park development project. This defect is supposed to affect on not only industrial park development projects, but also on units to establish factories in the parks.

The case of compensation claimed to be paid to land owners of the Haryana Manesar factory of Suzuki Motors is a prime example in that land owners demanded that Suzuki pay an additional cost for the land owners who settled with HSIIDC on the land compensation price at the time of land acquisition with the state government. The cause of this case is supposed to lie in the terms of the agreement entered into between the two parties in that a situation where a land related issue happened, the owner is supposed to resolve the issue. At present, a judgment has been made in a lower court for Suzuki Motors to pay the compensation. There is no such provision that the present land owner is supposed to settle the amount of the compensation, which was settled with the purchaser of the land being already sold to the third party (present land owner) in other states. But this becomes a concern in industrial society that it can be applied to other cases in some ways.

Depending on the state, the way of land acquisition differs. For instance, in Rajasthan, the land acquisition techniques on a monetary base is established with setting the allotment price in accordance with interviews with residents, referencing of past land sales documents in the district, and opinions from a committee where a land pricing officer is a member. Together with the monetary base, land to land exchange methods for land acquisition is also available in that land owners can select either of two kinds of compensation method. Upon provision of an alternate site, in the case of the industrial land development projects, including industrial parks, 75% of the entire land is going to be used for the proposed project and the remaining 25% shall be provided for the land owners as recharge site. For housing land development scheme, 80% is going to be used for the project, and then the remaining 20% is defined to be exchange site for the land owners. Similarly 5% shall be given for the case of commercial land projects.

Even in the different project scheme of Special Economic Zone development, the land to be purchased at the outset is undeveloped land. There is no special treatment or scheme applied. Therefore at the time of a land purchase deal, the stamp duty shall be imposed on the land in the transaction. And yet, at the time of a lease agreement, when units have entered into an SEZ, there is an incentive for the Stamp Duty not to be applied in the lease contract with the companies operating in the SEZ. In addition, sales of SEZ land is not permitted, hence an SEZ developer freely sets the lease period in between 5 and 99 years.

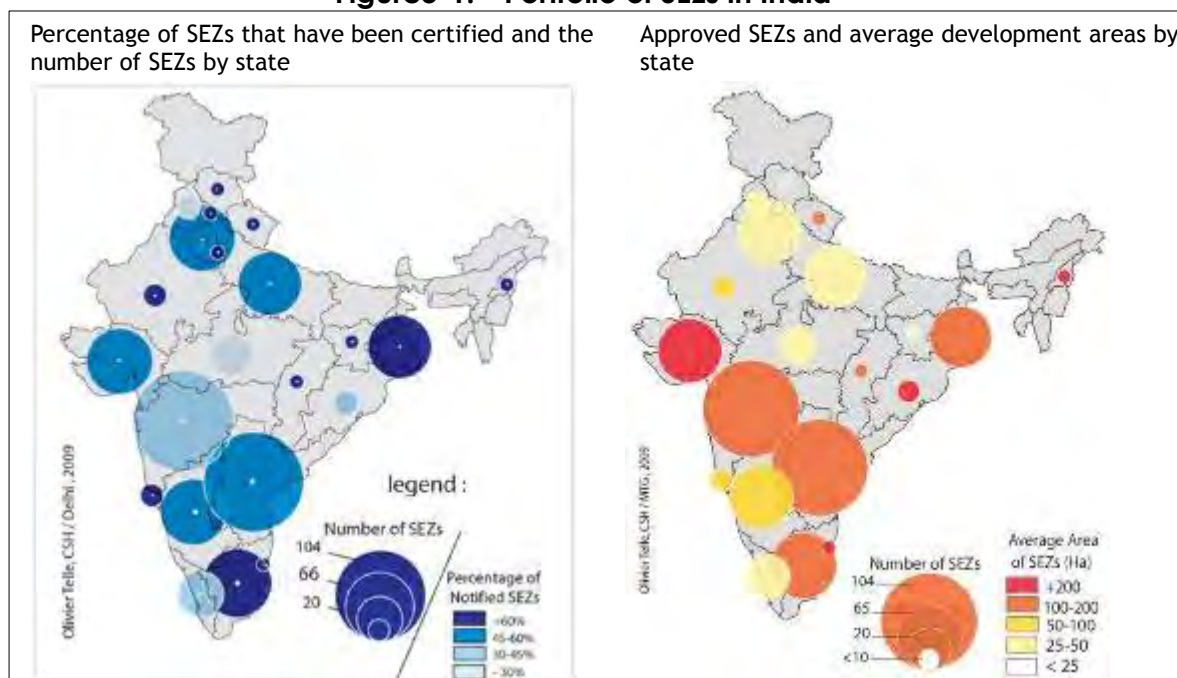
A good example of the special economic zone development projects that have been promoted as private-public partnerships, Mahindra World City (MWC) that is promoted by the Mahindra group is the remarkable case. In their SEZ development scheme in Jaipur, Rajasthan, the Jaipur Development Authority (JDA) is the one which assisted the land acquisition for the entire MWC project site. JDA also played a vital role in conversion of land from agricultural land to non-agricultural land. At present, the land title remains with JDA, and the lease with RICCO. The role of this JDA played in a significant way in that land conversion takes a lot of time and effort, and it is considered that without assistance from JDA, the project of MWC would not have happened in the manner it did.

Location and geographical access factors

A set of selection criterion of land for industrial areas is formed in general by the State Industrial Development Corporation. These criteria are linkage, market access, availability to utilities with avoidance of multi-crop land, and preferably un-productive land, like waste land. Now under the new Land Acquisition Act (2013), acquisition of irrigated multi-cropped land is restricted, in practice, the development of industrial parks cannot be done on agricultural land in India. In this line, a trend of industrial zone development was shifted to regions like Rajasthan and Gujarat where relatively large areas of waste land are available.

However, the location of an industrial park should comply with the demand of the investor, who may require good accessibility to a port and stable power for instance, in addition to being non-agricultural land. Consequently, there is a limitation to offer cozy industrial parks in India which can supply enough support in terms of the interest of investors like infrastructure and an attractive geographical location.

Figure3-1: Portfolio of SEZs in India



(Source) Ministry of Commerce & Industry, Government of India

Restrictions on foreign investment

For the entry into the industrial park business as a foreign company, the Consolidated FDI Policy 2012 established by the DIPP allows 100% owned foreign capital companies to invest in the industrial park development business with automatic approval if the following conditions are met: (1) the project should develop land on which at least 10 companies will be able to operate, and one of those companies will not occupy more than 50% of the salable compartments; and, (2) out of the salable land, industrial land should account for 66% or more in use. In addition, for the development project of 10 hectares or more of service residence business or if a construction project has 50,000 m² of land as minimum land area, wholly owned foreign capital is allowed, but a minimum capital of \$10 million must be put in equity. Furthermore it is prescribed that the investment fund cannot be repatriated until three years after the date that the minimum investment capital was made.

However, in practice, the permission for 100% foreign capital to conduct industrial park business in a foreign country is not that attractive an incentive from the point of investors. Most of the industrial park development has proceeded in corporation with local partners, in particular, in the phase of land acquisition and development, discrete business effort is devoted mostly in the acquisition activities of the vast land. Even in light of the case of Southeast Asia, this land acquisition has also become the prime role of local business partners. Thus industrial park development, produced with 100% foreign capital, nearly does not exist in Southeast Asia due to the standard practice of creating a JV Company for this purpose (in the case of Thailand, it is usually with a public corporation of IEAT). Also there is no system of defining the minimum

development size of industrial parks in Southeast Asian countries other than the case in Cambodia (defined as 50ha or more), as it is often assumed that such restriction interferes with the need for flexibility in an industrial park development project, and prevents private participation from developing attractive projects.

Linked infrastructure

As discussed above, the development of linked infrastructure becomes a very important requirement for making a connection with the surrounding infrastructure/utilities and industrial parks. Since the development works of linked infrastructure mostly remain a public sector responsibility, from the point of private-use zone developers, the way to ensure timely installment of linked infrastructure becomes one of the keys for success of the project. Hence the private sector usually intends to enter into an MoU which is sometimes called a State Service Agreement between the state government for ensuring the validation and construction licensing of installation and development of linked infrastructure (water, power, and road).

Even with the State Service Agreement to fulfill smooth delivery of various licensing and development of linked infrastructure, it does not have any legal binding on the content itself. The guarantee for implementation or penalty provision due to failure is not described in the agreement. In fact it is not something that takes effect on its own.

Consequently, as a measure to enhance the commitment from the state government; the establishment of the JV with involvement of the capital investment of the state government has been a realistic measure. The establishment of the JV has been the only scheme with which the majority of private projects practically using for the development and management of the private special economic zone business. Through this scheme, the priority of state government can be increased with the interest of government to improve measures when it comes to installation of the linked infrastructure.

On-site infrastructure development

Looking over the industrial park projects in India, on-site infrastructure and facilities which are not performing as expected from the point of investors are primarily power generation facilities and industrial wastewater treatment facilities.

For power plants, there are very few industrial zones in India that have captive power plants by which power is supplied to the unit in the zone. The reasons behind the scene will be described in detail later, though, the situation is that the industrial development corporation, having a mandate to develop an industrial zone, is not given the authority to develop and distribute power within that industrial zone. Also the private sector is not seeing the power generation project in the industrial zone profitable due to not being able to enjoy economies of

scale with the installation capacity of the power plant and the degree of power purchase agreements with the state power distribution company. As has been observed in Southeast Asia, a special set of mechanisms is required so that private industrial zone developers can install and start captive power plant projects, even in the circumstance where the surplus power needs to be sold to outside industrial parks due to inadequate demand of power in the zone in the beginning. That is the mechanism whereby flexible power purchasing agreements with local governments or state-owned power distribution companies are applied in the early stages of industrial zone development. However, in India, the state power authority is usually reluctant to enter into a flexible PPA. The high costs of power distribution will be imposed by using the transmission lines of the state power companies and a great deal of time and effort to get the EIA put burden for the development of power plant at industrial park. Consequently captive power plants in the industrial zones in India are not a common practice as is the normal practice in Southeast Asia.

For the installation of common wastewater treatment plants in the industrial parks, the new concept of a treatment system needs to be introduced in India for accepting wastewater which is the mixture of generated industrial wastewater from unspecified industries. According to several SPCB officers, the concept is welcomed if the setting of inlet standard of wastewater is in compliance with the standard of the state government. The most current common effluent treatment plant is developed by the subsidy scheme which can be received from central and state government in that 50% of the total cost can be subsidized from Central Government (MoEF) and state government would provide 25% (State industrial development corporation: 20%, SPCB/5%), and the rest needs to be arranged either through self-finance or industry associations. The operation of CETP is done by industrial association or outsourced to the environment management company. Even for the private CETP project, such subsidy scheme can be used. Normally in order to apply to the subsidy scheme, the operator is deemed to have a Memorandum of Association from the companies which receive services in advance, but it is not the necessary condition for application. In other words, it is possible for CETP to be developed in an industrial park, with an application for the subsidy, with conditions that proponents ensure self-financing, and securing the support from state government for 25% of subsidies. Then a request to the central government can be made. However, for the support and acknowledgement of the portion of the subsidy from state government, there must be some uncertainty involved, so each project needs to be developed in close discussion with the concerned parties.

In practice, on the other hand, the present industrial wastewater treatment system is established on the basis that each individual company is supposed to have captive treatment facilities at their premise in compliance with the required norm of treatment by industries set forth by the government. In this respect, common industrial wastewater treatment facilities dedicated to industrial parks is not so common in the context of India. In other words, for the introduction of common industrial wastewater treatment plant at the industrial park, demand forecasting as to whether adequate industrial wastewater supply can be obtained needs to be

carefully studied. Furthermore in some states the state governments regulate the way of discharging water out of the factory in that discharge of treated water cannot often be discharged into the river or the ocean. Hence for the development of a common wastewater treatment facility, careful evaluation and coordination with a government authority is required.

As for the final disposal form of industrial solid waste, the ways of treatment with incineration and the landfill are common, but, according to the policy makers, the preferred form of treatment is proposed to supply waste to the cement plant in India. For the development of CTSDf, a scheme similar to CETP cannot be used, hence the formation of a different development scheme where three parties, namely state government, the industries association, and a private environmental management company take part in the development and operations scheme of the project.

3.4. Activities in the operational aspects of the industrial park, obstacles and challenges

One-stop service

As operational activities of industrial parks, not only hard infrastructure services, such as utilities services, the software service of business support facility is the other service provision expected from tenants. The service is facilitation functions related to licensing support, and the practices are often called one-stop service which is regarded as a very important operation of industrial park management companies. In India, within the investment promotion activities, one-stop service provision, sometimes called single window service, for investment companies have started their promotion with emphasis in the particular state on carrying out superior implementation to other states. The government agencies which have separate jurisdictions are deemed to assign single agencies to accept different applications from investors for the necessary approvals. Upon plant operations, for example, to compete in certain states, if an investor submits the applicant to a single agency, that agency oversees the whole process of application transactions, and it is often happening that the one-stop service office provides advice upon various approvals, procedures and related investment information.

In India, however, the same meaning of one-stop service, as it is practiced in Southeast Asia, is not so far established due to constitutional and also institutional formalities in that different jurisdictions between central and state government rests in each other and a separate set of authorities to provide licensing and approval in relation to business investment prevents the provision of one-stop service provision. For the terms of central government provision, it is necessary to receive the approval from the central government for industrial license in customs, EIA and incorporation of companies at large. In fact there is jurisdiction even in the state government which needs special approval beyond the scope of one-stop service in that the following three subjects need separate approval from another agency at present; pollution

control, power, and labor relations.

The establishment basis of a one-stop service office for each state has variation, and the quality of service as a one-stop office is quite different from that available in Southeast Asia. In fact, some intellectuals representing the views of industry are saying that the one-stop service which is provided in Neemrana in Rajasthan is the only functional one as far as its efficiency and quality of service delivered. Accordingly to an expert of JETRO, the discrimination factor from other case of Neemrana, as success factors lies in employing a Senior official, who works as full-time, and such personnel is trained for understanding the mind of the private sector through overseas training, for instance, in Japan.

Taking an example, Greater NOIDA / NOIDA has a representative office with regulatory authority at sites, but their initiatives to operate a one-stop service office at sites are not well taken with enough cooperation from the state government. For the EIA of the category B, the business entity needs to submit an application form to the competent authority located in the state capital of Lucknow, instead of the station office at NOIDA.

In Rajasthan, based on the Rajasthan Enterprises Single Window Enabling and Clearance Act, 2011, applications for business administration licenses are accepted by BIP, if the investment amount was over Rs. 10 Crore, otherwise Industrial Dept. of each district would accept other applications. Currently, BIP is handling 86 Clearances of 11 Departments, and processing and monitoring of applications are undertaken at the office as a One Stop Window. BIP is also preparing an electronic system where a mechanism of monitoring and notification of approval can be offered within the certain days of consideration framework of applications. In the process of examining applications, objections from applicants can be recognized once, and appealing to the Committee that is chaired by Chief Secretary can be organized, if required. Also the determination of the Committee can overwrite the decisions made in the ordinary transaction. Applicants can also monitor the progress by electronic media. But the domain of BIP as a one-stop clearance system still has a limit that business licensing like land, industrial construction and power can be covered, but the domain of pollution control and environmental regulations and water is out of the institutional framework of its jurisdiction. BIP has jurisdiction over labor relations.

The administrative one-stop service in AP State is somewhat progressive. One-stop service based on the Andhra Pradesh Industrial Single Window Clearance Act, 2002 is not only to accept applications at a single window and provide a certain time framework on application processing, but also implementation of the licensing provision itself will begin as a State Single Window Clearance Committee acts like a singular clearance authority on behalf of other institutions with licensing authority. The State Investment Promotion Board, which is established as the upper level institution of the Empowered Committee are starting to provide initiative investment services. As the institutional backup, a system to delegate power from

respective government institutes is established with the support of the Chief Secretary, and the Chief Minister will serve as the head of the top regulatory agencies of the state government. The one-stop service agency is supposed to be served by the Industrial Commissioner's office.

The Industrial Commissioner's office of AP State has been developing a system that allows the clearance of business licenses required from 18 departments of the State Government within the current institutional setup. The reception desk is called a Single Window Cell, and the time-bound clearance is going to be applied with the monitoring system of the process of applications. The senior post of Secretary is appointed as the officer of the monitoring. AP State is now preparing to open up an electronic application platform of one-stop service (built by Infosys) with reference to the system applied in Singapore - the start-up is expected in December 2013.

Under this system, with respect to a large investment project, a committee representing the state level (chaired by Commissioner of industry) will monitor the application of business licensing, and, a separate committee chaired by the District Collector will take the responsibility at the local district level. It should also be noted that in the case it happens that the application was delayed as the process of application was not following a specific time framework and was beyond the schedule, a Deemed Provision will be issued to the person in charge of the delay. Even as such delay continues, the State Investment Promotion Committee / Empowered Committee which is chaired by the Chief Secretary will be organized to settle the issue through a meeting of directors of each department. In the end, some cases where the State Investment Promotion Committee / Empowered Committee cannot solve the issue, the State Investment Promotion Board / State Board (with participation of ministers of each department), which is chaired by Chief Minister would address the issue and provide the final answer to the case.

Similarly, on the basis of the Investment Facilitation Act 2008, the state of MP assigns MPTRAIFAC as a body to provide one-stop service, through which business support is provided in that introduction of industrial land, acceptance of various application forms, follow-up of applications and consideration of incentives and refunds of VAT as well as financing are varieties of support. A system of action for processing of applications is employed to carry out evaluations in a given period, and MPTRAIFAC is given an authority to approve 13 items of business licenses. At the local level, District Trade and Industry Center (DTIC) plays the role as one stop service office.

Business licensing which MPTRAIFAC can accept are land allotment, electric power, water, EIA, factory licenses, labor, boiler, building permission, building plan approval, construction permit, and entrepreneur memorandum 1 and 2. In order to accept an application viewed online system, MPTRAIFAC is now working on the system design of an online application service with the assistance of the TATA consulting service, and the system can be operational around

February next year. Further, within the state government reinforcement measures of authoritative role of MPTRAIFAC into an organization which can issue a Deemed Approval is under consideration with the amendment of state laws so that the function of a one stop clearance service can be established.

In Tamil Nadu, the Tamil Nadu Industrial Guidance & Export Promotion Bureau serves as a one-stop service office of projects of Rs.10 Crore or more investment. The Bureau is chaired by the Single Window Committee and the committee meeting is held at a frequency of at least once every week in response to the submission of the Single Application Form. The application form covers various business licensing relating to the following authorities; 1. Town & Country Planning Dept., 2. Fire Safety Dept., 3. Labor Safety Dept., 4. Electric Safety Dept. 5. PCB, 6. Boiler Safety Dept., 7. Utility company (Power Supply), and 8. SIPCOT of (land & water). The evaluation procedure of the application will be made with having a hearing from applicants by making a presentation to the concerned authorities/departments. After a question and answer session on the project, a consensus building was done through the Bureau. If the project was evaluated positively, the Composite Approval (close to NOC) can be granted to investment companies with having an effect of temporarily licensing for construction of plant to a certain extent.

The investment projects with the scale of Rs. 10 Crore or less shall be taken care of by the District Industry Centre (DIC) as the investment window. Hence DIC would function as receiving applications and coordinating with various government authorities. In the progress of monitoring the application, if a certain delay was observed, the stakeholders committee which will be chaired by the District Collector will be organized for solving any issue. It should be also noted that Composite Approval, which can be issued from the Bureau, cannot be issued from DIC.

This means that in accordance with the time bound and a predetermined period of time for the application evaluation, the Bureau is again to evaluate the application and monitor progress at the state level. Hence as it is practiced in MP and AP states, one organization (Board or Committee) to implement a centralized licensing service is not practically performed in the process.

In practice, although the organizational and institutional processes are made available for practicing a one-stop service in each state, there are many claims alluded to in the above mentioned Indian one-stop service from the business person in charge of the private projects that there is a big difference in the one-stop service in India in general. And, the level of service scope and quality is relatively poor in reference to the one available in Southeast Asia (Thailand, Indonesia, and Vietnam). Depending on the state, but one-stop services, as conducted by government, pose the difference between the actual status and expectations of the investment company - as was pointed out in interviews with various companies.

As a business administration support service provided by private industrial park operators, when tenants begin factory establishment and operation, private zone operator will assist tenants in receiving NOC from the Pollution Control Board. To build a factory of 200,000 sq.ft., or more, in size, the central government approval is required. Though the scale was less than that, the State Pollution Control Board can issue the NOC. Upon the request from tenants, the Mahindra World City will provide a designated staff for application and reception of NOC within their professional department, and it would take NOC approximately 2.5 to 3 months in the usual case.

As another service from private zone developers, environmental data in relation to obtaining an EIA clearance is also provided to assist the tenant's project development. In the regulatory term, an additional EIA is not required when the units come to SEZ where an EIA clearance was already obtained. But in the legal term, the responsibility of environmental management and pollution effects as a whole remains with the SEZ developers. It often happens that SEZ zone developers ask for a separate EIA for each unit to come to their SEZ. However, SEZ developers often provide a data set of one season monitoring the surrounding environment, which is to be required in the TOR for EIA clearance. With such data provision, tenants can shorten the period of monitoring through using the provided data that can be used as a reference for EIA clearance.

When we look at the one-stop service from a different perspective, the physical presence of a one-stop office at the site of each of the industrial park and SEZ in India is so far not observed. In the State of AP, instead of a one-stop service office, an escort officer is appointed for assisting the case of Isuzu Motor's investment project in Sri City, which is an SEZ/DTA business entity. Consequently, in order to achieve more proactively corresponding organizational setups in the future, the establishment of a one-stop service office at the place where enough demand, on business administrative clearance is expected may need to be promoted. In the discussion with the government officers in the states such as Rajasthan, AP, and Karnataka, the request for capacity development (human resource development and South-South cooperation with a support from JICA) was discussed, and there is room for possible OJT in the industrial park in Southeast Asia, as well as dispatching Japanese experts as implementation partners.

In India, the business of each government authority is stipulated in the Allocation of Business Rules 1961 and the Transaction of Business Rules 1961. Based on those rules, there comes an interpretation that the business domain of each authority cannot overlap and the jurisdiction of ministries and departments cannot go beyond the specified area of business. Hence there are concerns among a number of practitioners that the possibility of opposition from the court for attempting to establish the One Stop "Clearance" office may be encountered with the interpretation that such a clearance office would contradict the rules. At present, therefore, a one-stop clearance system has been delayed by facing a jurisdictional barrier for its implementation, and in practice, the relationship between the head of the department, which oversees the industrial activities and the Chief Minister has been the most critical factor for

making good coordination among other ministries, and a resolution capacity of the case can be dependent on such a relationship, which is well presented in Gujarat, AP and Karnataka states as the state investigates the implementation of a One Stop Facilitation Service.

Therefore, at the same time to boost the implementation of One Stop Facilitation Service, which is taken as the best course of action at the moment, in states such as MP and AP, assistant measures to realize a one-stop service within the scope of the state law, and development of guidelines for one-stop service operation at an industrial park, which is similarly practiced in Southeast Asia may be also required with organizational reform and legislation preparation. In addition, the human resources development would become an important element for realizing the one-stop service operation in real terms. In this course, an overseas training program, in collaboration with other one-stop service providers like IEAT, can be useful with the appointment of senior top officers for the post of the management of one-stop service office. In this line, technical assistance through JICA would be implemented in the form of a South-South cooperation program.

Table 3-6: One stop service in major states in India

| State | One stop service provider | Status and service contents |
|-----------|---|---|
| UP | State government committee | One-stop service provision system is not in place in industrial district like Noida. |
| Rajasthan | Bureau of Investment Promotion, Rajasthan | Exclusive agency is appointed by state law to conduct receipt of application forms, to carry out licensing process monitoring based on the time-bound scheme. The advance stage of introduction of the electronic application system. |
| AP | Commission of Industry, Industries, Commerce & Export Promotion | Based on state law, the provision of licensing process based on the due date is performed by State Investment Promotion Board or the Empowered Committee. Implementation of licensing provision itself is also carried out. Electronic application platform is in start-up stage. |
| MP | MP Trade and Investment Facilitation Corporation Limited | Acceptance of various application forms, follow-up, Incentive provision and financial support such as Refund of VAT are performed. Time-bound application review is applied. Online application service is in preparation. |
| Gujarat | indEXTb, Department of Industry and Mine | indEXTb is supposed to provide the service, but in reality Dept. of Industry and mine and/or GIDC are |

| | | |
|------------|--|---|
| | | functioning as a window for investors. |
| Tamil Nadu | Tamil Nadu Industrial Guidance & Export Promotion Bureau | Integrated Single Application Form is used to combine a variety of applications for authorization. A hearing which led to the decision in relation to the application is organized to provide Composite Approval as a provisional licensing for business. |

(Source) JICA study team

Management of special economic zones (SEZ)

As for the role of the central government and state government for the operation and management of special economic zones, taking an example of Sitapura/Jaipur SEZ in Rajasthan, RIICO oversees the provision of utility services through mediation with the utility company and the SEZ Office (central government/Ministry of Commerce and Industry/Development Commissioner) is performing tasks such as customs clearance and business administration. RIICO provides a space for an SEZ Office, but the salary of the SEZ office staff is paid from the central government. A service Charge from companies operating in the SEZ becomes a revenue source for RIICO.

The customs clearance of the SEZ is carried out in that the Ministry of Commerce and Industry appoints a Customs Office in each SEZ on behalf of the business of the Ministry of Finance/Revenue Department and a Specified Officer sent from the Ministry of Finance/Revenue Department supervises the customs business operations as a full-time post. Therefore the Customs Office is mainly subjected to report activities to the Ministry of Finance/Revenue Dept. through the Specified Officer.

In the management of problems raised in SEZ development and operation, the Development Commissioner, who was appointed by the Ministry of Commerce and Industry, is deemed to function as a one stop shop where every issue, except environmental and labor related issues, will be addressed. The Environment-related issues are left to the Pollution Control Board of MoEF, whereas the labor related issues will be handled by the state government. Consequently, centralized management by the Development Commissioner is undermined in practice.

The maintenance costs of the SEZ differed from state to state. In the state of AP, a property tax is collected annually from tenants in that the formula of calculation is applied with the base price (land price at present and plant construction costs) multiplied by 0.5%. The amount of payment shall be managed by the local authority called a Service Society, then 65% is allocated to the society and 35% is allocated to the APIIC Industrial Area Local Authority for the maintenance of the SEZ. APSEZ also collects their own lease rent of 2% of the amount paid as

upfront value, and then those funds are used to cover the maintenance costs of the zone.

The operation and management scheme of private SEZ developers such as MWC is performed in collaboration with state government in that operational problems, if they occur, a committee chaired by Additional Chief Secretary of RIICO which is the co-founder of the project from state government, will act as a facilitator to address and solve the problem instead of a Board meeting. For the provision of utilities, power is supplied through the state power company captive power generator, whereas industrial water is received from the public health department of the state. It should be noted that in term of these utility provisions, almost all privately developed SEZs, together with state government, have entered into a State Support Agreement and Service Level Agreement between the state governments for ensuring the responsibility of each other for continuous supply of utilities.

For sewage treatment, there is small number of SEZs which possess a centralized treatment facility in the industrial park site itself. In such SEZs, the tenants and industries which use a lot of industrial water are not often targeted at first. Even though the tenants build their own captive waste water treatment system at their own premise, approval of the Pollution Control Board of the state or the center needs to be obtained. Moreover, even though the actual performance is less as a whole, the provision of the build-to-suit model (close to the EPC contractor) and rental factory are offered in some SEZs to cater to the needs of the tenants as a marketing tool for the SEZ operators.

Utility services provision

Electric power

For utility services provision, a special economic zone development company (SEZ Developer) should have an approved license to provide utility services such as power supply and water supply within their compound. But for the ordinary industrial park in general, the power distribution business is not really practiced by the zone developers with a certain set of restrictive system design for the zone developers not being able to provide power distribution services, as that is often monopolistically managed by state power companies.

For the power generation and distribution business, the Deemed Distribution License granted for SEZ developers enables power sales to units in the SEZ, regardless of selling power to third parties for their own-use (Captive Consumer), as long as a tariff set by the State Electricity Regulatory Commission is observed. The power generation and distribution business outside SEZs, but in the industrial zone, can be defined either to sell to the tenants in the industrial park as Captive Users or to sell to third parties outside the industrial zone as an Open Access business. According to Electricity Rules 2005, Captive Power Plant is defined as the project which would consume 51% of the generated power with its own use or for the consortium

which is comprised of the companies whose share of the stock are 26% of the power generation companies in proportion to the power consumption. Consequently, in the Captive Power Plant the remaining 49% can be sold to any third parties (Open Access Consumer).

In addition, regulations that impose the following four types of charges are pointed out as factors to prohibit the private project of power generation and distribution business in the industrial park. 1) Transmission Charge when using the transmission lines of state power transmission companies, 2) Wheeling Charge, in the case of using the distribution lines of state power distribution companies, 3) Line Loss by power loss and 4) Cross Subsidy Surcharge to be imposed in case of non-Captive Use. As for 1) and 2), State Electricity Regulatory Commission sets the fixed price, and 4) is the tax set on the commercial and industrial power charge and it is to be used for subsidies for power charges of low-income residents. Therefore, the private power supplier must have the investment of the members companies if it is proposed to be a Captive Use, and even in the case of IPP, private operators must incur an extra cost by paying an expensive Cross Subsidy Surcharge of Rs. 1 per kwh to the state power distribution company, rendering private power generation and distribution project in the industrial park not viable.

For the power supply situation in Haryana, the Adani Group, which has a mega power plant in Gujarat, started the power transmission business utilizing its own DC (Direct Current) transmission line (as it is transformed into 400kw once it enters into Haryana state). Since then, Haryana has dramatically improved the environment for power supply. Adani Power is supplying 1,424 MW of power to Haryana, and it accounts for one third of the total amount of power supply in Haryana state. The electricity price which Adani Power and HPGCL are supplying to the Electricity Authority of the state would be different - 4.5 rupees/kwh. The decision for HPGCL as to whether they would build a power plant in an industrial zone can be made at the discretion of the state government.

Some of the private industrial park development companies are considering a bulk supply arrangement - a scheme whereby a development company purchases a large volume of power from the state power distribution company, then distributes that power to the tenants located in their industrial park. But, upon this realization, the decision of the State Electricity Regulatory Commission is required. From the point of tenants, it could be an attractive offer from zone developers so that industrial park operators take responsibility for a supply of stable power and ensure the quality of services. It is also to be noted that the common utility facilities in industrial parks need to have a system to integrate and synchronize with the existing self-generator system having been introduced in advance in the individual companies. There is also a scheme for what to do with any surplus power. At the initial stage of industrial park development, surplus power would be supplied to the grid under a reasonable sale and purchase agreement required for a private industrial park operator to implement a power development project at the site.

Industrial water

The water supply service provision at industrial zones in India is mostly conducted by the State Industrial Development Corporation. In addition, it should be noted that some states like Rajasthan restrict the consumption of industrial water from groundwater sources - (200t / day or less in Rajasthan). Thus in such states, industries which need a large volume of industrial water are not allowed to invest in such states. Consequently, recycling of industrial water is an urgent issue demanding attention. In this line, attention can be given to the use of JICA funds for installation of recycling facilities or a gap-fund for the similar purpose. When introducing technology, as long as there is a concern in terms of profitability, the private sector may face financial challenges, hence financial assistance, such as in the form of JICA low-interest loans as well as gap funds from the central government can be an interesting option for accelerating the installation of environmental facilities in industrial parks.

Industrial wastewater treatment

Depending on the industrial district or state, a system of wastewater treatment is designed to force individual units/factories containing captive treatment facilities at the individual factory premises by a regulation to restrict the discharge of treated water outside the premises in India. Installation of a common industrial wastewater treatment facility which is often called a Common Effluent Treatment Plant (CETP) is, in fact, developing in India. But the system design of CETP is made only applicable to Small Scale Industry (SSI). Normally an industrial association or Industrial Development Corporation operates CETP, and medium/large scale industries are supposed to install their own treatment facilities at the premises. In basic policy of inlet effluent standard, there is background logic that SSI would not have technical capabilities together with a certain constraint in capital strength to treat wastewater at first. And so, the parameter for setting up a CETP for inlet effluent standard does not include BOD and COD standards. For acceptance of industrial effluent in CETP wastewater is basically assumed to be taken without primary treatment, because SSI cannot control these parameters at their origin.

The effluent inlet parameter specified in CETP as above is only applied to the member companies of CETP, whereas other medium and large scale industries are supposed to comply with the effluent treatment standard, which is defined by each industry by a Central Pollution Control Board. Consequently, in order to promote a new common wastewater treatment plant in the industrial parks, there is a challenge for the operator as to where effluent can be collected in the area where such companies have their own sewage/effluent treatment facility in the individual companies' premises. In the case many companies are using their own system; CETP would be no longer making any sense to the prospective customers. So the question arises as to profitability of the newly installed CETP. In India, there is a prevailing concept that after a certain level of industrialization has occurred, environmental treatment like

CETP will be considered. But in practice to prevent adverse effects from wastewater, advanced consideration and planning are most important to install CETP when developing an industrial park. With such a provision, environmental management can be collective and efficiently conducted, thus a policy is needed that mandates the installation of wastewater treatment facilities in each industrial park at the time of providing development licenses to zone developers.

It should be also noted that as a means of promoting efficient operation of the CETP, a set of tax incentives, based on the Water and (Prevention & Control of Pollution) Cess Act 1977, is also given from the state government to SSI for them to meet the requirement of effluent inlet standards. The mechanism is that if the effluent inlet standards from a company met with the specified standard continuously for one month, a certain Cess is rebated from state government to the company. However, in practice, the inspection standard is severe and rebates do not often happen.

Revaluation of land

For the re-evaluation system of land in the industrial zones in India, there is basically no difference between the industrial land either developed by state industrial development corporation or a private zone developer in that the value of the land shall be put in the Balance Sheet as a book value with the purchase price of the land. In India, at present, it is presumed that the net value between the purchase price and revalued land price, as appraised by a Chartered Engineer Land appraiser, cannot be used as the base/collateral for borrowing from commercial banks. The purpose of the re-evaluation is often exclusively intended to be for an investor to consider the valuation and for the sale of used machinery. Thus upon borrowing from the bank, zone developers are supposed to be considered its asset as the basis of investment value on infrastructure, and even though the value of land was raised due to its surrounding infrastructure development, the collateral cannot be based on the raised portion of land value in principle. Hence the business model of development of the infrastructure cannot be made along with the financing of loans to be received from the banks, which is based on the land value to be increased in the future. In addition, it is a general perception in India that borrowing based on land should be made by the tenants rather than by zone developers.

Aftercare service

Aftercare service is another important service provision of the zone operator. Private industrial park development operators are actively providing such a service taking advantage of the project partnership with the government in India, and intending to enhance the stronger business relationship with the tenant companies, but industrial zones managed by the state industrial development corporation alone are rather left behind in the service scope and quality of service provision as a whole, thus the tendency is undeniable that aftercare service at a public

industrial zone has become perfunctory.

For instance, Mahindra World City at Chennai, Tamil Nadu is organizing a board meeting with the presence of TIDCO about once every three months, and even providing aftercare services on a diurnal basis, the management company is also functioning as a counterpart of the state government, representing the tenants of the industrial park to negotiate trouble-shooting of the occurred issues. Also in the Sri City of AP State, Assistant Development Commissioner is sent from the central government/MoCI to conduct day-to-day operations at the site. The persons in charge of various approvals are assigned in Sri City and the management company shall coordinate with responsible government departments for catering to the needs of tenants. In this course, tenants are given an opportunity to present a request for approval or licensing with the presence of relevant ministries and agencies.

Sales style

Sales style of the industrial zone taken by the public sector is principally a bidding basis in that for about 80% of the industrial plots of the whole is sold in that manner, and then for the portion that is beyond the available number of plots, the selection is made by lot. When there is not enough number of requests for the industrial plots, allotment is performed on a First-Come-First-Served basis. Consequently, when 80% of the plots were sold in the prescribed style, the remaining portion of 20% would be sold in the auction method.

When allotment of the plot was finalized and it came to the lease agreement, both a tenant and state industrial development corporation would enter into a contract, called a Lease cum Sales agreement. For the tenants, in the contract, sometimes the operation of a factory is expected to start within about 10 years from the contract in general (in case of SEZ, the time framework is either one or three years, depending on the project). On the other hand, such provision of land development with a certain time framework is not so far made between the state industrial development corporation and private zone developer on the industrial zone land (it is different in the case of an SEZ).

For the payment methods of land leases, some differences are found between the SEZ projects of the private sector and ordinary industrial zone development projects of the public sector in that the private sector special economic zones would request the payment of 20% to 25% at the time of signing an MOU, and then the balance payment of 75% to 80% would be requested when the lease deal is made, after the successful acceptance of Temporary Possession/Provision Letter of Allotment to the Development Commissioner, and following a Lease Deal Agreement, within the ordinary time framework of 15 days after obtaining the Letter Of Approval from the commissioner. From the signing of an MoU until the final payment, it is normally taking a month in case of a private SEZ project. For the case of the industrial zone developed and operated by the public sector like RIICO, at present, the first payment of 25% +

1% (for security) is expected to be made at the time of submitting the Application for Land, and then the payment of the remaining 74% is supposed to be made within 120 days after issuance of the Lease Deal Agreement/Allotment Letter, which is normally issued within 120 days after the initial payment.

In the case of a privately developed SEZ, the tenants are supposed to undertake development of the land within 30-40 days after the payment of 100%, but the exception to postpone until 60 days can be offered in case there is any legitimate reason for such delay. Otherwise the contract was cancelled and the refund, after charging some fees, will be made to the tenant. Furthermore, a term to set a priority recruitment measure for local villagers with a certain employment percentage is often included in the contract.

Land sale formalities are different from state to state in that there are some states which recognize land ownership by private companies, whereas some states only allow leases of land. Moreover, the difference can be found in special economic zones and general industrial zones on sales style, and in the case of a special economic zone developed and operated by the private sector, the lease form is the only available option for the land use by the tenants. In terms of a year, some private SEZ is developed on the basis of leasing from state government, hence in such a project, the tenants are supposed to sub-lease the land, thus the lease period should be carefully noted with the remaining amount of time from the original lease period from state government to the zone developers.

For the resale of land, in the case of the industrial park property developed by the State Industrial Development Corporation, the resale of the land itself is possible only if the land is going to be sold back to the State Corporation with the prices at the time of purchase, and in the procedures stringent regulation is going to be applied. On the other hand, in case of SEZ and DTA developed and operated by the private sector, essentially, resale of the industrial park property can be possible after a certain period of time like two years for tenants being in the industrial park with an intention to develop the land and a factory. In the term of resale in the contract, the first negotiator of the deal is often defined as the zone developer. And the resale price of the property is considered as the market price in the region. In the case of resale to a third party, 5% to 15% of profit will be charged by the zone developers, and when a group companies is the party of a resale contract, the terms of the charge around 15% on the profit can be exempted.

The table below shows a summary of the issues which state government and private zone developers are facing in terms of industrial zone development and management in India.

Figure3-2: Summary of the main challenges that the State Industrial Development Corporation as well as private zone developers are facing in industrial park development and management in India

| | <u>State Govt.</u> | <u>Private Sector</u> |
|---------------------------------------|---|--|
| • Master Planning | ✓ No single mandated authority to supervise industrial park development | ✓ Private sector participation in infrastructure designing is not permitted |
| • Land Acquisition | ✓ Conversion of land into non-agricultural land is impractical and challenging | ✓ Acquiring new land is difficult for private developers under the present land policy |
| • Licensing | ✓ No mandated agencies to authorize all-inclusive required infrastructure development | ✓ Overly complicated licensing system |
| • Infrastructure /Utility Development | ✓ Development of infrastructure / utility by different legal jurisdiction | ✓ Private sector participation in infrastructure / utility development is limited |
| • Operation | ✓ No uniform standards of utility services are provided | ✓ Private sector participation in operation is limited such as sub-leasing |
| • Marketing | ✓ Individual marketing / promotion from state to state ✓ Inefficient one-stop services | ✓ Problems in coordination among government agencies |
| • After Services | ✓ State Industrial Dev. Corp. not responsible for companies' operation | |

(Source) JICA study team

3.5.Guidelines and the development status of NIMZ

National Manufacturing Policy (NMP), which was announced in 2011 by the government of India, sets a policy goal to achieve an increase in the share of the manufacturing sector's contribution to GDP from its current 16% to 25% by 2022, by fostering the international competitiveness of domestic manufacturing industries. To achieve this policy goal, the annual growth rate of the manufacturing sector needs to reach 9%, after which it can gradually increase to 12% to 14% sequentially. Also the policy cites the creation of 100 million jobs, and for this purpose, in particular, the creation of a capacity building program targeting youth in rural areas is highlighted.

As means of accomplishing the goals stated in the NMP, the National Investment and Manufacturing Zone (NIMZ) is proposed as a major implementation vehicle. As already mentioned above, NIMZ will be developed as a green field business in a vast land for large, medium-sized and even small scale enterprises as they are designed to enhance a mutual association / value chain between companies. In addition, a flexible administrative system is purported to be applied, with the promotion of the manufacturing industry as the focus of its

development concept.

Already, the Indian government is working on corridor development, such as DMIC and CBIC connecting the inter-cities, and the corridor development connecting Delhi and Kolkata is also being planned. In parallel to the NIMZ project, these corridor development projects have a focus on the manufacturing industry along with industrial township development. Moreover vocational training facilities such as tool room are given attention for facilitation means of the development of small and medium-sized enterprises in the projects. Although PPP schemes, utilizing the strength of the private sector in India, have achieved a modicum of success, their applicability to the industrial park development project has not been well practiced. Given the lessons learned from the SEZ business, the Indian government is concerned about practicality of private initiatives in producing attractive and internationally competitive industrial park projects, similar to those in Southeast Asia. With recognition of the need to consider the method of adapting industrial park development by the private sector, this study addresses the question about the future direction of industrial park development policy, hoping to conclude with policy recommendations that would enable India to adopt the best practices of the Southeast Asia model that could be successful in India.

As shown below, the development situation of NIMZ is different in the degree of effort by each state. Also in general, the proposed location of each NIMZ is situated in the place where linkage with any nearby sea port is weak, and land acquisition also seems to take in inordinate amount of time – 4-5 years. The progress of the projects is varied in extent.

Table 3-7: Development status of NIMZ

| State | Location | Status | Industrial Development Corporation |
|-----------|--|---|------------------------------------|
| Haryana | In the section between Manesar and Bawal, the location is specified as MBIR (Investment Region), | The policy of the central government on assistance measures for development NIMZ is regarded as unclear, what kind of system to be applied to NIMZ is still pending. | HSI IDC |
| UP | Dadri Noida Gazabad Investment Region | Greater Noida Authority is supposed to carry out land acquisition together with arrangement of all required licenses and approvals for NIMZ development. The project development and operation is considered as a PPP scheme with the setting up of an SPV. | Greater Noida Authority |
| Rajasthan | - | In the step of waiting for the development strategy of the central and state governments, there is no significant movement observed yet. | - |
| MP | Pithanpur | Acquisition of the vast land like 5000ha is regarded not possible in the area of | AKVN Indore |

| | | | |
|-------------|--------------------|---|--------|
| | | Pithanpur / Indore, hence there are no proposed plans at present. | |
| Gujarat | Dholera | Dholera has been promoted as DMIC project by State government and the development is supported to be carried out in this line rather than focusing on the NIMZ. | GIDB |
| Maharashtra | Nagpur | The procedures for land acquisition are in progress. Industrial urban development projects in the area of Dighi port hinterland becomes DMIC projects, thus the project is not regarded as an NIMZ project by MIDC. | MIDC |
| Karnataka | Vasanthanarasapura | Of the total land available for development of 5,000ha, land acquisition of 3,000ha was completed on the project site. (The remaining 2,000ha is in processing). Pre-F / S is being prepared by IL & FS, with the report application for NIMZ title to be sent to DIPP. The establishment of the SPV and EIA application shall be followed. | KSIIDC |
| AP | Medak | Drawing / plot development of land was completed and the EIA application is being prepared. | APIIC |
| Tamil Nadu | - | Due to difficulties for taking control of the 5000ha of land, the selection of candidate projects in Tamil Nadu is pending. | - |

(Source) JICA study team, based on interview survey

Some of the state government personnel have a harsh opinion on NIMZ that NIMZ is a reflection of an idea that a certain department would like to show off its initiative against others within the inter-ministerial competition of policy makers. It is also sometime observed that the NIMZ system itself believes that the central government tries to impose its influence on the project even though the actual project implementation like land acquisition or EIA clearance are supposed to be undertaken by the state government. Hence there are opinions such as unfairness is not to be accepted from the point of the state government. Also NIMZ is observed from industrial society to be no more than a real estate development scheme, since inadequate measures for promotion of manufacturing industries are incorporated having no provision of any new investment incentives or tax system.

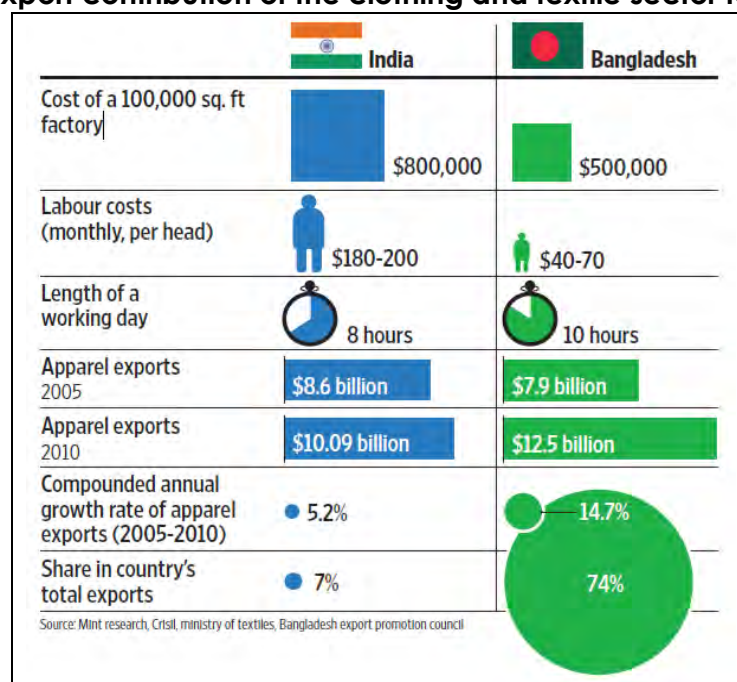
New manufacturing industry promotion policy should be piloted with a dramatic flair and focus on, for example, the automotive industry, like the concept driven in the special zones development in China¹⁷ and other countries. NIMZ is expected to function as a testing ground

¹⁷ In the port of Shanghai City, China, a "free trade test area" was opened in September 2013 to significantly mitigate the regulation of the service and finance industries, including foreign companies. In the area, even foreign companies which have subsidiaries in FTZ are allowed to issue bonds in Chinese Yuen and foreigners are allowed to buy and sell stocks and bonds of China directly without passing the current procedure.

to demonstrate the new system. It should be noted that the electrical and electronics industries are actively encouraged from the central government, but the electronic components of these high-value-added activities demands an even higher level of infrastructure service quality by the companies. In addition, the volume of the sales of such electronics and electric commodity production lineup will be a pre-requisite for those industries to come to the forefront in India, otherwise, corporate management simply maintain the status quo continuing to cater to a certain demand by imports from Southeast Asia. For the prospects for the development of the manufacturing industry in India, new policies with a focus on the promotion of the automotive industry and electrical and consumer electronics industry should be undertaken in the context of NIMZ. It can begin with demonstrative purpose, understanding, and collusion of both the central and state government.

In other words, an industrial policy to promote manufacturing sectors, specifically exportable products manufacturing industries, is vitally necessary from both the government perspective and that of industrial society. When focused on the automotive industry, the fact (pattern there to another individual country) will become exceedingly clear that export promotion measures have not yet been taken to do justice to the market potential ahead. From the point of the government's fiscal issue of facing a depreciating rupee, occurring due to problems of fiscal balance by the excess of imports, there is a need to set a policy of development of the export industry in India. Such a policy will go far to boost the export of products from the manufacturing industry in particular. Such recognition has not been practically in place as a system design commensurate with the concern. This means that even the strength of India - large population and labor supply - has not been advantageous in industrial development, as evidenced by the large scale importation of things like clothing and toys from China. Even compared with Bangladesh, analysis suggests the contribution of clothing and textile exports to the Bangladesh economy is far better than that of India.

Table 3-8: Export contribution of the clothing and textile sector to the country



(Source) Mint research, Crisil, ministry of textile,
Bangladesh export promotion council

When we analyze the NIMZ in terms of system design, an attempt for developing a new scheme of the next generation of industrial park development should be pursued at first by taking lessons observed in the other industrial zone development schemes so far used in India. There is a need to advance the NIMZ as a mechanism different from that of the DMIC project and SEZ program. This means that the lesson learned from DMICDC, which is supposed to take part in the NIMZ project as a Knowledge Partner will be also an important factor to make use of this knowledge in the NIMZ business.

According to DMICDC, the need for industrial park development in India is well taken, and upon the promotion of investment from the Japanese small and medium-sized enterprises, the fact that the rental factory has played an important role in Southeast Asia in particular is recognized. In the course of promotion of the DMIC project, persistent issues are recognized in the institutional structure of the Indian government (the business licenses are vertically divided among government departments and the procedure is time-consuming and complicated) so that a one-stop service is not yet realized, and the land acquisition scheme is also observed as another challenge.

Due to issues of land acquisition and land price, the development concept of DMIC projects is stressed to achieve efficiency of land use and maximization of value added per square meter. Vertical and horizontal integration of superstructure and infrastructure development would result in spatial efficiencies and vital resource conservation heretofore never achieved in industrial

park system design.

Risk associated with land acquisition and its use is relatively large in India. Together with that risk, associated costs piled up for the development of the surrounding infrastructure would even put behind the private sector's involvement in industrial township development project as the investment scale of the business escalates. Hence, according to DMICDC, associated risks can be minimized by taking steps to involve the public sector, then, preparing the groundwork for the private sector to enter into businesses in association with the government. Specifically, the candidate projects which are currently not possible so far by private sector businesses have been identified in the past few years, and with the condition that the concerned state government can acquire the project site, the project is supposed to be launched in a manner that an SPV being formed with equity shared 50:50 between the central government and state government (DMIC Project Implementation Revolving Fund) for the promotion of specific individual projects. For an SPV, all business licenses and approvals required for the project shall be granted with an initiative of state government, which is supposed to delegate power to an SPV to allow acquisition of the necessary license and project approval. For the operation of the project, at present, the form of BOT is considered as a possible scheme for private companies to conduct infrastructure development and operation after competitive bidding.

In accordance with the concept presented by DMICDC, the present DMIC projects are confined to a group of businesses, which are not practically implementable by the private sector alone at present. And some measures from public sectors must be applied to prepare the business environment on the base of greenfield projects. However, there are still a group of projects, only if a certain business backbone such as land acquisition and/or streamlined licensing policy through one-stop service was prepared with certain measures from the public sector, the project can be implemented alone by the private sectors immediately after such measures. Hence the opportunity cost in India of pursuing its potential of industrial park development is getting huge, despite the need for greater enforcement of laws and policy & organizational reform, through the immediate implementation of the NIMZ program to promote the manufacturing sector under a PPP scheme.

Recalling the lesson learned from the failure of project development schemes emphasizing the initiative of state government, then followed by the invitation of the private sector that did not go well in the DMIC's initial project development scheme, an alternative to this scheme became necessary. At present the guidelines of NIMZ is vested with a strong initiative of the public sector and the structural design of the industrial township development and operation is not practically incorporated the role of the private sector as the base that the private sector has unique advantages from what the public sector has been practicing in terms of industrial park development and management. For example, different from DMIC or the public SEZ projects, the SPV to be formed for the NIMZ project should have a room for the private sector to participate even at the initial stage of project designing and master planning. In this regard, even

under the present guidelines, for the formulation of NIMZ, the position of Mentor is the duty of the private sector, the mentor post of SPV is given only for two manufacturing companies, and the participation of the zone development company is not specifically mentioned so that the possible adjustment of the structural design of SPV may need to be considered.

3.6. Portfolio analysis of the industrial park in India

In the report, the following 59 industrial parks were studied and related data were collected through interview surveys.

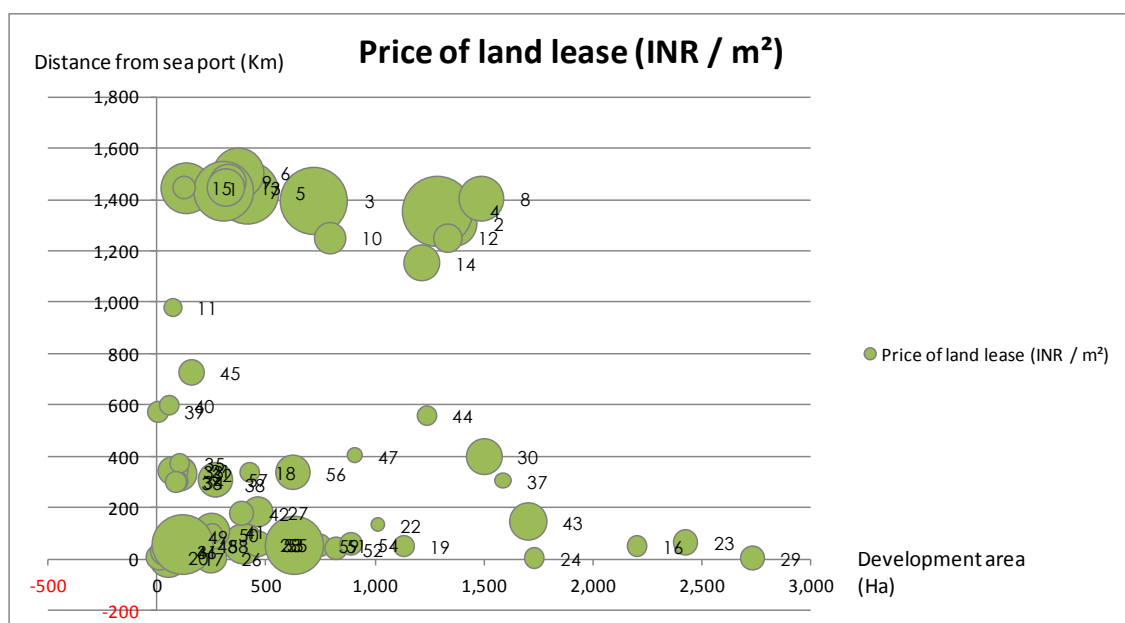
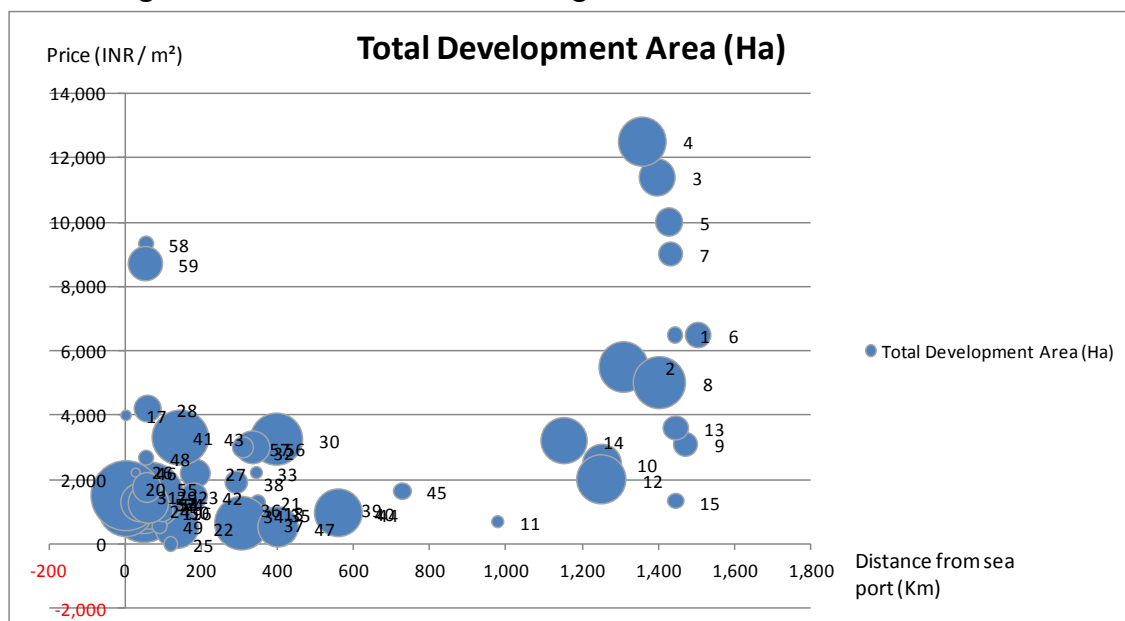
Table 3-9: List of India industrial park surveyed

| | | | | | |
|----|---|----|--|----|--|
| 1 | Industrial Estate, Barhi | 21 | Maheshwaram Electronic Manufacturing Cluster | 41 | Chakhan Industrial Area |
| 2 | Industrial Model Township (IMT) Bawal | 22 | SEZ Appic Naidu pet | 42 | Kesurdi SEZ |
| 3 | Industrial Model Township (IMT) Faridabad | 23 | Sri City Private Limited | 43 | Khed City |
| 4 | Industrial Model Township (IMT) Manesar | 24 | Dahej SEZ | 44 | MIHAN SEZ |
| 5 | Industrial Estate Kundli | 25 | Gujarat International Finance Tec- City SEZ | 45 | Five Star Industrial Area, Nandgaon Peth (SEZ) |
| 6 | Industrial Estate, Panipat | 26 | Hazira Industrial Estate | 46 | SEEPZ SEZ |
| 7 | Industrial Estate Rai | 27 | Halol Industrial Estate | 47 | Shendra SEZ |
| 8 | Industrial Model Township (IMT) Rohtak | 28 | Kandla SEZ | 48 | One Hub Chennai (Chennai Integrated Industrial Township) |
| 9 | Chopanki Industrial Area | 29 | Mundra Port SEZ | 49 | New Chennai Township Pvt Ltd, |
| 10 | Ghilothe Industrial Area | 30 | Sanand Industrial Estate | 50 | Cheyar Industrial Area |
| 11 | Jodhpur SEZ | 31 | Surat Apparel park SEZ | 51 | Irungattukottai Industrial Area |
| 12 | Neemrana Industrial Area | 32 | Bangalore Aerospace park | 52 | Oragadam Industrial Area |
| 13 | Tapukara Industrial Area | 33 | Doddaballapura Industrial Area | 53 | Pillaiakkam Industrial Area |
| 14 | Mahindra World City (Jaipur) Ltd. | 34 | Gowribidnur Industrial Area | 54 | Sriperumbudur Industrial Area |
| 15 | NOIDA - SEZ | 35 | Harohalli Industrial Area | 55 | Vallam Vadakal Industrial Area |
| 16 | A.P. Special Projects Zone | 36 | Malur Industrial Area | 56 | Hosur Industrial Area |
| 17 | Vishakhapatnam SEZ Madhurwada | 37 | Vasanthanarsapura Industrial Area | 57 | GMR Krishnagiri Special Investment Region |
| 18 | FAB City | 38 | Vemagal Industrial Area | 58 | Sojitz-Motherson Industrial Park(SMIP) |
| 19 | IFFCO Kisan SEZ | 39 | CRYSTAL -IT Park Indore | 59 | Mahindra World City Chennai |
| 20 | Kakinada IT/ ITES | 40 | Indore SEZ | | |

(Source): JICA study team

Based on the collected data, an analysis of the scatter diagram was attempted by observing the three parameters of sales prices per unit area, total development area (ha), and the distance from the main port, as the attribute to understand the characteristics of the industrial park in India.

Figure3-3: Parameter scatter diagram of industrial estate in India



(Source: JICA study team)

Based on the scatter diagram, it can be considered that the attributes of the industrial park group in India can be divided into two categories in general. A group of industrial zones is in close proximity to the port and the other is not in that category. And as the distance from the port gets further away, the sales price of the industrial zone gets higher¹⁸. Such a phenomenon

¹⁸ The given background may be created by those JV plants initially developed with state-owned enterprises locating near Delhi, with factory expansion gradually spreading into suburban areas such as Noida and Haryana. Consequently, the available industrial land in these regions has been getting smaller already, and the acquisition cost of the land in Haryana is high by taking consideration of the land use mostly for residential and commercial purposes.

cannot be found in Southeast Asia. On the other hand, even not a distinguishing feature, there is a trend observed that the industrial zones close to the port have relatively large total development areas.

As we analyze the portfolio features of industrial zones developed and operated either by the state industrial development corporation (public) or the private zone developers (private), in the parameter of the total development area, sales/lease price and the distance from major ports and cities, as shown in the figure below, the analysis indicates that the industrial zones developed by the private sector locate closer to the ports and the sales price of the industrial plots is cheaper than the ones developed by the public sector. On the other hand, when the distance from the major cities is viewed as a parameter, industrial zones of both public and private sectors are situated within almost 60km distance from major cities, and it was observed that there is not always a major city along with the major ports in the context of India.

Figure3-4: Industrial estate portfolio (scatter diagram) in India (Comparison between State corporation and the Private sector 1)
Y: Distance from major ports

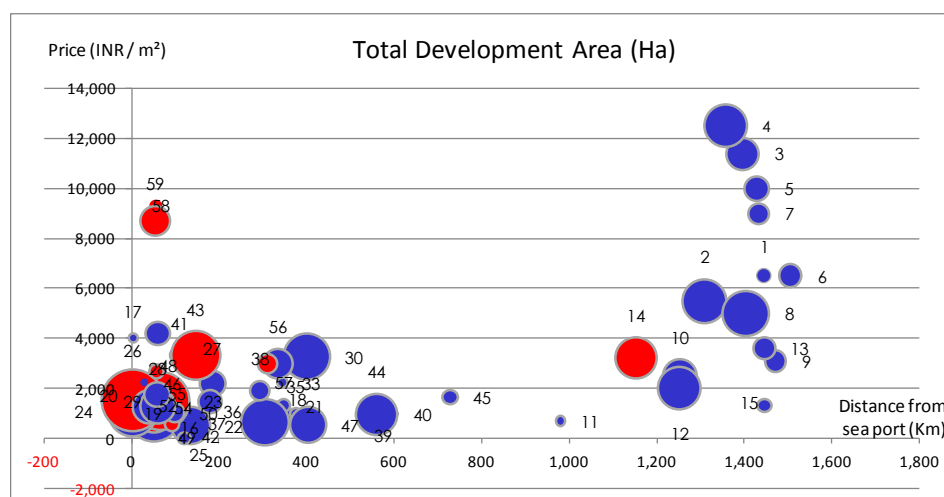


Figure3-5: Industrial estate portfolio (scatter diagram) in India (Comparison between State corporation and the Private sector 2)
Y: Distance from major cities

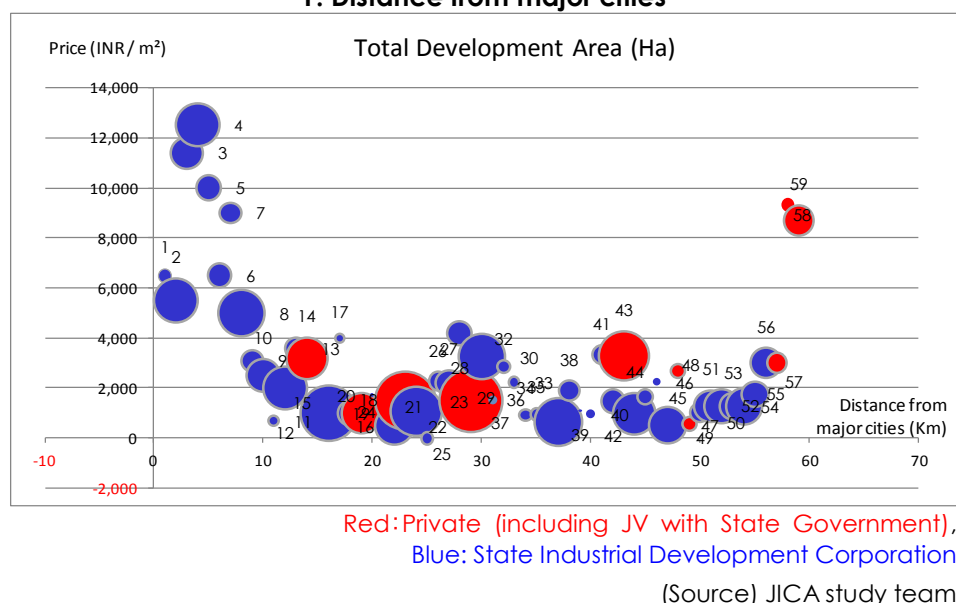
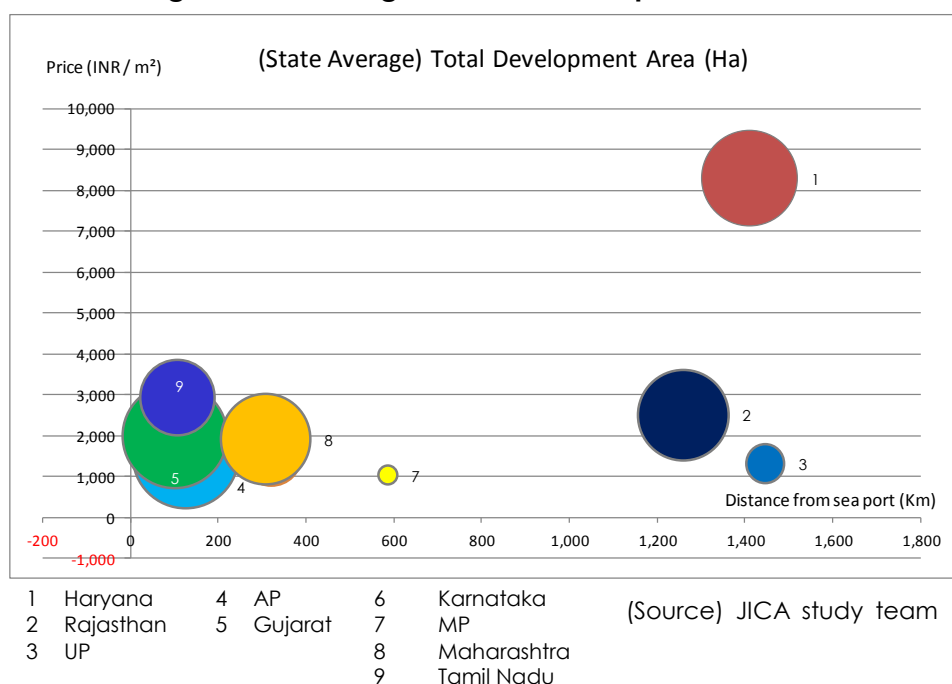


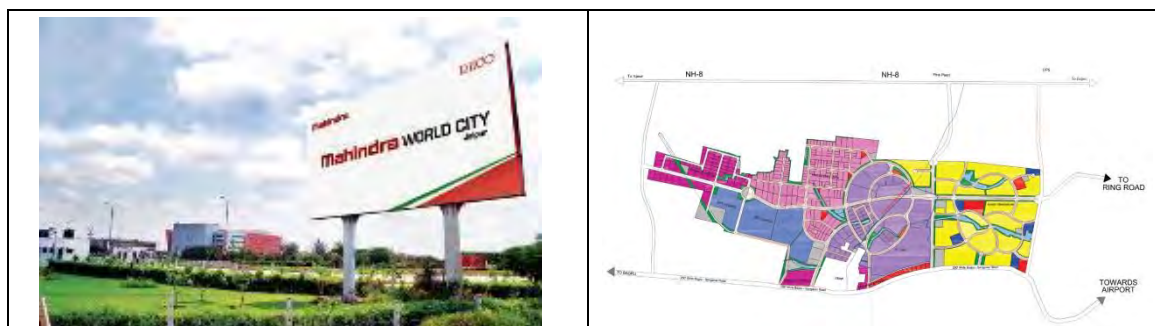
Figure3-6: Average distribution map of the state



As we look at the scatter diagram that depicts the average value of the industrial park on a state-by-state basis, it is highlighted that the selling price per unit in Haryana is significantly high in comparison with other states, and the unit price of industrial land is kept low in emerging industrial states like Gujarat and AP. It is found that the total size of the development area is larger in the states of Gujarat, AP, Maharashtra, Haryana, and Rajasthan, where industrial development has been progressively promoted.

3.7. Case study of industrial park projects in India

1) Mahindra World City, Jaipur



Business overview and background

Among the Mahindra group, MSDL in charge of its real estate development business undertook this SEZ development project in Rajasthan, after successful implementation of the same SEZ development business in Chennai. The project site began its lease term in 2008, and now 52 companies have signed the contract, and 15 companies of those have started commercial operations. Employment in the park has reached 6,200.

Mahindra World City (Jaipur) (MWCJ) is comprised of several industrial sections such as an SEZ, a DTA (Domestic Tariff Area) in place for the companies to address their products to the domestic market, and a residential area. The development master plan was designed by Jurong, a Singapore company. The total developed area reaches a scale of 3,000 acres. The breakdown of the industrial section, which has completed development, is as follows; IT / ITES area (750 acres), craft production area (250 acres), engineering (250 acres), DTA, and a jewel processing area.

In MWCJ, the management structure of the SPV is made with having an equity share of 26% from RIICO. But staff from RIICO is not stationed in the park, and the private staff of approximately 40 people, together with two Specified Officers from the central government is taking charge of daily operation of the World City.

Characteristics of the industrial park

As an advantage of Rajasthan, better situation of power supply system was first cited from the personnel in charge of the daily operation of the industrial park. In the survey conducted in October 2013 by MWCJ that measured power outages and their frequency, there was a power outage of only 89 hours per year (approximately 15 minutes per day). According to the sales management, a point was positively evaluated that the flexible correspondence and understanding of the state government on the private business made it possible to develop the

project rapidly. MWC person says that since the state of Rajasthan, regarded as a late comer for the competition for inviting investors and having a geographical disadvantage in terms of industrial park location, more proactive promotion for investment has been made.

In the DTA, JCB, a major construction equipment manufacturer, is building a factory destined to become Asia's largest scale of factory, and the industrial area is expected to become a place where subcontracting manufacturers clustering can take place.

Development and operation scheme

As a development scheme of the industrial park, the land conversion from agricultural land and practical land acquisition of the entire land were performed by the Jaipur Development Authority (JDA), and then leased to RIICO. In fact the land is owned by the government, then sublease to MWCJ further in 2006 for its development. The role which was played by JDA was significant and, according to the interviewee, without the assistance from JDA, considerable time and effort is required if individual private companies carry out the same land conversion and acquisition by themselves. The successful development of MWCJ owns much to the cooperation of the state government.

The management scheme of the industrial park is made that a daily general business is performed by MWCJ, and for the case of operational problems occurred, as a structural measure. The Board with the presence of the Additional Chief Secretary of RIICO shall be organized to settle these issues. As for the utility service provision, electric power is supplied with the two lines of power sources in that the national grid and JVVNL power are connected with the distribution line to the park. Industrial water is received from the Public Health and Engineering Dept. with a capacity of 62 million cubic meters per day. Upon these utility services, the park enters a Service Level Agreement and a State Support Agreement to ensure external service quality, and, on top of those agreements, the responsibility and penalty are supposed to be clarified in the contract. For sewage treatment, currently there is no provision of an on-site centralized processing facility in the industrial park, and the condition of entry restricts any company that releases a large amount of effluent. However, this restriction does not apply to companies willing and able to install adequate effluent treatment facilities on their own. Furthermore the approval of the Pollution Control Board is also required either from the state or the center level depending on the kind of industries.

In addition, there is no implementation track record yet, but another customer service provision of ready-made factory, known as a build-to-suit model, is offered as a marketing tool of the industrial park. The scheme of the Build-to suit model is close to the EPC contractor service which is referred to provide and to build a building according to the needs of tenant companies. So far, the installation of the gas pipeline is not made. On the other hand, a privately owned power backup system is installed in the site (5MW by Diesel), and it provides comfort mind to tenants, in particular for IT companies. In addition, MWCJ provides

a survey report of the land and a pollution assessment of the land, and these are easily available to prospective tenants, which are evaluating the location suitability.

As other business support facilities, there is a fire station dedicated on-site, and vocational training facilities, are available. One of which are funded by MWCJ and the other is planned to be constructed by a Swiss based NGO to offer vocational training facilities of Tool Room (Polytechnics such as plastics and engineering course) in the DTA. The compartment housing development of 1,000 acres is also planned.

Sales style

After an MoU is signed, the payment term of a land lease prescribed by MWCJ was 25% of the total due. Then it follows the submission of Temporary Possession & Provision Letter of Allotment to the Development Commissioner. And then, within 15 days after the receipt of the Letter of Approval, a Lease Deal Agreement shall be entered into with the payment of the remaining 75%. It should be also noted that in the provisions of the SEZ Act, the companies are requested to start commercial operation within a year or three years, depending on the projects from the time of the Approval, thus MWCJ also set a momentum of 12 months in SEZ area, and 18 months in the DTA for the timing of the operation of the plant. However, there is a provision that the period of the expected timing of the commercial operation can be extended with a good reason for one year in turn of two occasions, which in the end implies three years possible extension in total.

2) Mahindra World City, Chennai



Business overview and background

Mahindra World City (Chennai) (MWCC) is an SEZ project in India as the first project group of its kind and the development was undertaken as an initiative of the Mahindra group together with an investment of 11% from TIDCO as a representative of the Tamil Nadu state government. Mahindra World City (Chennai) advanced its development by arranging land by themselves from 1997. Out of the total of development area of 1,550 acres, 90% was arranged

by company-owned through the aggregators, whereas the remaining 10% was purchased from TIDCO. At that time of land arrangement, according to MWCC, there were no provisions of the Land Ceiling Act, thus the acquisition of vast land was relatively easier than today's situation. Direct employment has reached 35,000 people in the Mahindra World City at present.

Characteristics of the industrial park

Of the private SEZ business group in India, Mahindra World City (Chennai) (MWCC) can be claimed as the most advanced industrial park with a fully equipped business environment. The park also incorporates other commercial and residential facilities, which include hotels and schools on site as well as a common sewage treatment facility. In the initial stage of the project, the concept of developing an Industrial Township in India was unique at the time. There were many obstacles for the private sector to overcome before proceeding with the project in an environment where there were no guidelines or regulations on practical development activities of private zone developers as the pioneers of this kind of project.

The site is divided into three SEZ sections (IT, apparel, and auto parts production), DTA, and residential, and today in total, there are more than 45 companies of domestic and foreign origin operating in the park.

Development and operation scheme

The management of the industrial park is done by MWCC. Although there is room for expansion with the area of 600 acres currently, all industrial plots including the apparel area have been sold out. As for the operation of a sewage treatment facility, it mainly addresses the domestic wastewater rather than industrial wastewater as it has a restriction on stricter inlet standards. The reason for not installing in-house CETP, there is a situation that each individual company is supposed to install their own treatment plant at their premises. Even though there is an access to the railway, it is only used for passengers, thus improvement measures could be needed for cargoes to be loaded and handled directly from the park to the train.

Aftercare service is mainly provided by 'World City' and a board meeting is regularly organized once every three months with the presence of TIDCO. There is no resident staff of TIDCO at the site.

Sales style

The lease agreement for both SEZ / DTA was set at 99 years. Tenants are required in World City to commence the construction work within 12 months after the lease contract and commercial production activities are deemed to be carried out within 24 months. Resale of lease rights / factory of tenants can be possible on the basis of the market price, but World City will be a unique negotiation partner at first when the transaction is going to take place, and

monitoring of all land transaction is also made by World City. Also, when the transaction was made, a transfer charge of 5% shall be claimed by World City.

3) Sri City



Business overview and background

Sri City, as a private industrial park project with an SEZ and a DTA, was launched in 2008 based on a land lease of 99 years. In recent years, major assemblers such as Isuzu and Kobelco are entered their manufacturing base in the park.

Located in the south of the AP State with close proximity to the Tamil Nadu State, the companies that have explored industrial land in Tamil Nadu in the beginning were attracted to the project. The project has actually appealed to the companies which were seeking suitable industrial park land in Tamil Nadu at a price that was reasonably cheap and well-connected with a logistics hub and further infrastructure/utilities services provision are in relatively good standard. Currently the management is focused on the development of industrial area, but in the future, commercial and residential area development is thought of in collaboration with a business partner, in particular from Japan. In the industrial area, currently, industry belonging to Category A is the focus of attention. Thus industries like plastics, petrochemicals, and rubber are not of the priority for promotion.

Characteristics of the industrial park

While the majority of private SEZ projects are mainly targeting the industry of pharmaceuticals and IT with a relatively small size of the project site, Sri City has been developed with an intention to build an industrial township which includes a commercial and residential area, as the model was practically implemented in Mahindra World City. Thus the target industries are not confined to pharmaceutical and IT, but a wide range of industries can be accommodated to form an industrial complex.

Together with the policy of the state government to boost industrial park development by private operators and backups, the provision of utility services is sustained in the park at a certain level of performance with a stable supply of power and water.

Development and operation scheme

The management company of Sri City is a venture capital invested by a company called the People's Advisor, but the land acquisition itself was assisted by APIIC as the land was resold to Sri City. Power is not supplied from Tamil-Nadu State, but it is supplied from the AP State with a capacity of 40MW designated for the project, and the power distribution is made to the tenants through a substation which is owned by Sri City (contract is made between the AP Power Transmission Company and the tenants). In addition, in Krishnapatnam port of AP State, the new power generation projects are coming up with the capacity of 8,000MW in total in addition to the existing coal-fired power plant near the port. Sri City also has a plan to lay down a gas pipeline to the site to run a gas-fired power station at the site. The situation of power supply does not seem too bad, but rolling blackouts have been practiced.

In Sri City, the Assistant Development Commissioner sent from the central government / MoCI is stationed for conducting public administrative day-to-day operations. For the various approvals for the tenants to run their commercial business, there is a scheme introduced in that the staff of Sri City will coordinate with concerned departments of the government to organize a session where the companies are supposed to make presentations for acquiring the required approvals. The formality of the licensing procedure is relatively smoothly operated.

Sales style

In the lease agreement, the first payment of the cost of land of 20% is made at the time of signing the MOU. After Lease Deal was made within one month period after the MOU, the balance payment of 80% shall be made in the general payment schedule. After the payment of 100%, the tenants are expected to start land development within 30-40 days of time, but the time framework can be postponed until 60 days if there is any legitimate reason. If the tenants would start the construction of a factory even after such agreed time framework, the contract would be cancelled, and then refund of the land price is going to be made after deduction of certain fee from the price. Furthermore, in the lease contract, there is a term included to request the tenants employing certain percentage of local people on a high priority basis.

For the resale of land, tenant companies can resell the land lease right (both SEZ / DTA) to a third party after two years of its possession. But the first negotiators appeared to be in Sri City. In addition, the selling price should be defined as the market price. In the case that a resale deal was made between a third party, 15% of the revenue will be claimed by Sri City. In the case that a group of companies is the counterpart of the resale, 15 % of the payment amount will be exempted.

4) AP SEZ



Business overview and background

APSEZ is the only one SEZ that was developed by APIIC in the state of AP. The project advanced its development in 2007 as a certified SEZ. Currently, 20 companies signed the contract, and nine are in the commercial operation, and six are under construction. Further, Toyota Tsusho is operating a manufacturing plant for rare earth material, and its commercial operation was started in late 2013.

The land acquisition of the project site proceeded by the District Controller in reference to the request from APIIC. The total acquired area of 9,000 acres was then partly transferred to APIIC and 1,000 acres was allocated to Brandiz SEZ, which is operating next to APSEZ. Approximately 500 acres of land was assigned to the residential colony as an alternative place for landowners, and then 2,098 acres was transferred to Barba Atomic Research Centre (BARC). It should be also noted that, since the demand of tenants entry is not so far expected, about 700ha of the SEZ area is supposed to be de-notified from the status of SEZ certificate, and going to be developed as a DTA.

Characteristics of the industrial park

The project is based on a principle that profit making is not intended out of the industrial zone operation. Hence the upfront value of the land is set exceptionally to Rs.1,000/sq.m. In contrast, in the private SEZ businesses such as Ramky, which has been operating in the vicinity, the project cannot be continued without making profits, hence the price setting of the land is inevitably set to higher price than the one offer-able in APSEZ. In addition, the method of land acquisition is different between the public and private projects in that the public project can be driven with utilizing the authority of District Controller (appointed by the central government) as long as the deposit for the land acquisition was paid by the public sector. Furthermore, in the process of land arrangement, there is no imposition of taxes in the case that the land acquisition from the original landowners was made to the public zone

developer. And yet, at the time of the land purchase by the private sector, a stamp duty is supposed to be paid - the cash flow of the collaborative project between public and private sectors is not standing on an equal footing with each other.

Development and operation scheme

While APIIC performs development of on-site infrastructure facilities (road, street light and water pipe) and supplies industrial water within the SEZ, whereas power supply is conducted by APTransco. Off-site infrastructure, such as a substation or transmission line, was developed by the construction commission and APIIC made payment of the development cost to the contractors. Similarly, an off-site water pipe, as well as an access road, was developed in a manner that the construction commission was given to the contractor for their development. Gas is not supplied to the SEZ.

The daily operation of the SEZ is performed by the APIIC staff, and other customs clearance and related SEZ license matters are taken care of by officials sent from the central government. Understanding the division of roles, various approvals of the state government must be done in the state capital, far from the project site.

Sales style

The usage of the industrial land of an SEZ is only leasehold. In APSEZ, tenant companies are supposed to start plant operation within two (2) years of the signing of the lease agreement, otherwise the contract would be cancelled.

As the maintenance cost of SEZ, property tax is charged. The tax is collected annually from tenants according to the formula that 0.5% of the total calculated amount of the plant construction costs together with the current value of the land shall be imposed. The collected tax is going to be managed by Service Society of the area, and if 65% of the collected tax shall be allocated to the local community, then 35% was transferred to the APIIC Industrial Area Local Authority for the purpose of the maintenance of the zone. APSEZ also collects the lease rent as a different source of maintenance fee with an amount of 2% of the total upfront value.

In addition, for the consideration of the landowner (Project Displaced Family), the provision of alternate site is made available. Also in the lease agreements with tenants, a condition of hiring local people as an employee of the tenants on a priority basis is incorporated.

Table 3-10: Summary of case studies of industrial parks in India

| | Mahindra World City (Jaipur) | Mahindra World City (Chennai) | Sri City | AP SEZ |
|--|--|---|--|--|
| Management structure | JV between public and private entities | JV between public and private entities | Private entity | State Industrial Development Corporation |
| Method of Land acquisition | After acquisition by State government, lease to private | Mostly acquired by private | After acquisition by State government, lease to private | After acquisition by the District Collector, transferred to the State Government |
| Classification | SEZ + DTA | SEZ + DTA | SEZ + DTA | SEZ + DTA |
| Sales contract form | 99 year lease (SEZ) | 99 year lease (SEZ) | 99 year lease (SEZ) | 99 year lease (SEZ) |
| Utility service (power and water) | Agreement on utility provision is entered between the state government corporation | Secured by being a JV | Agreement on utility provision is entered between the state government corporation | No |
| Captive power plant | Backup only | Backup only | × | × |
| Sewage treatment plant | ○ | ○ | ○ | × |
| One-stop service | Private operating company takes the role of liaison with the government | Private operating company takes the role of liaison with the government | Private operating company takes the role of liaison with the government | No |
| Resale to third parties of industrial land | Possible (Developers, will be the first negotiators, at market price) | Possible (Developers, will be the first negotiators, at market price) | Possible (Developers, will be the first negotiator, at market price) | Not possible (the land will be returned to the developer at a price at the time of purchase) |

(Source: JICA study team)

3.8. Benchmark analysis in industrial parks in Southeast Asia and India

3.8.1. Benchmark analysis

The Study Team selected the five successful cases of industrial park development that Japanese developers are involved in Vietnam, Thailand, Indonesia, and Cambodia. Also, the Study Team selected the seven industrial parks in India that can expect to attract Japanese companies in the future. The benchmark analysis of the investment environment has been conducted with a comparative evaluation.

Successful cases of industrial park development in Southeast Asia

1) Thang Long Industrial Park I (Hanoi, Vietnam)

The developer is a joint venture between Sumitomo Corporation (58%) and a state-owned company under the Ministry of Construction in Vietnam (42%), located in the suburbs of Hanoi. The development was carried out as a result of an industrial park feasibility study, one of the components of a JICA development study - “Hanoi Regional Industrial Development Master Plan Study.” The joint venture has been responsible for development, sales, and operation of the industrial park, and a yen loan and overseas investment support scheme by the Japanese government was utilized in the off-site infrastructure development outside the industrial park, for roads, water supply facilities, sewage treatment plants, electrical substations, and transmission lines. ODA loans amounted to about 11.4 billion yen. This project has been positioned as a model case of public-private partnership by utilizing ODA loans under an overseas investment support scheme. Currently, 107 companies are located in the industrial park, including mainly Japanese companies such as Canon and Panasonic.

2) Vietnam-Singapore Industrial Park I (Ho Chi Minh City, Vietnam)

The developer is a joint venture between the Singapore side (51%) and Vietnamese side (49%), located in the suburb of Ho Chi Minh City. The Singapore side is composed of the Singapore government-linked company Sembcorp, and a subsidiary that Mitsubishi Corp. owns, and the Vietnamese side is funded by Becamex IDC owned by Binh Duong Province. The establishment was based on an agreement concluded by the two leaders meeting of both Singapore and Vietnam in 1994, and the industrial park began in 1996. Based on the inter-governmental agreement, the joint venture acquired the land at a special low price lower than the market value at the time, and it has developed a commercial area adjacent to the industrial park to become a complex township development. It provides one-stop services such as customs clearance and licensing inside the industrial park, and the Japanese marketing staff is stationed at the site.

3) Amata Nakorn Industrial Park (Thailand)

This industrial park has been jointly developed by ITOCHU Corporation and Amata Corporation. The development company is called AMATA Corporation Public Company Limited, and the industrial park is located in the suburb of Bangkok. Established in 1989, it was listed on the Stock Exchange of Thailand to (SET) in 1997. It is located in the Eastern Seaboard industrial zone that has been developed since the 1980s under the assistance of the Japanese government, and it has been successfully integrating the automobile and associated steel/plastic industry by developing a highway, a railway and a new port under an ODA loan. The industrial park has been expanding continuously and now has a total area of 3,020 ha.

4) MM2100 Industrial Park (Indonesia)

Established in 1990, the industrial park has been jointly developed by Marubeni Corporation (60%) and a local company (40%), the joint venture company is called Metropolitan Manunggal Industrial Development, located in the suburb of Jakarta. It is located in Bekasi Prefecture, and is an integrated industrial park area of over 4,000 ha, home to 171 companies, of which 117 are Japanese companies.

5) Phnom Penh Special Economic Zone (Cambodia)

The developer is a joint venture between Zephyr (22%) and a local company (78%), located in the suburbs of Phnom Penh. Founded in 2006, it became the catalyst for the investment in Cambodia. It is the only industrial park in which the Japanese company, Zephyr, is participating in Cambodia. It includes one-stop service in the SEZ office to conduct customs clearance and licensing. The number of Japanese companies is 28 out of 52 companies in total.

The industrial parks in India that can expect to attract Japanese companies in the future

The Study team has selected seven industrial parks in India that the Study Team recommends to actively attract Japanese companies during the forthcoming field survey. If applying the best practices in Southeast Asia, the location of the industrial park will have to be a reasonable commuting distance from big cities and an accumulation of Japanese companies has to take place.

1) Gilothe Industrial Park (Rajasthan)

This industrial park is under development by Rajasthan Industrial Investment Development Corporation (RIICO), located adjacent to Neemrana Industrial Park, the industrial park for Japanese companies. While the industrial areas near Delhi are insufficient, 45 Japanese companies are locating in Neemrana Industrial Park. Also in Gilothe Industrial Park, suppliers of the car manufacturers based in Rajasthan and Haryana are expected to invest.

2) Halol Industrial Park (Gujarat)

This industrial park is developed by Gujarat Industrial Development Corporation. Suzuki is building a third factory in Gujarat, and GM and Hero already have factories in Halol Industrial Park. The industrial clusters of automobile-related industries are expected to invest. Although industrial parks developed by State Industrial Corporations in other states have power supply problems, Halol Industrial Park does not have a power shortage problem, and the stable power supply situation there is outstanding for India.

3) Sri City (Andhra Pradesh)

Located in the suburb of Chennai, between the state border of Andhra Pradesh and Tamil Nadu, this industrial park is developed by a private company (Sri City Private Limited). It has an SEZ (Special Economic Zone) and DTA (Domestic Tariff Area). With the land price hike and a shortage of suitable industrial areas near Chennai, securing industrial land has become difficult near Chennai. Expansion of machinery and automotive industry to Sri City is expected. It has provided one-stop service and infrastructure such as electricity, water, and sewerage, which is different from industrial parks developed by the State Industrial Corporations.

4) Vasantha Narasapura Industrial Park (Karnataka)

This industrial park is under development by Karnataka Industrial Area Development Authority (KIADB), located in the suburb of Bangalore. The development of 780 acres has been in progress as Phase I, and it is planned to be developed as an NIMZ - 5,000 ha in total. The Karnataka government expects to develop this as an industrial park dedicated to Japanese companies, and the expansion of Japanese companies is expected.

5) Khed City (Maharashtra)

This industrial park has been jointly developed by Maharashtra Industrial Development Corporation (MIDC) and a conglomerate Karyani Group. This is the only industrial park in which private capital is involved in Maharashtra. It has an SEZ (Special Economic Zone) and a DTA (Domestic Tariff Area). Since it is located in Pune, the automotive industry is concentrated, and a joint venture of Japanese companies has decided to locate in the industrial park, expansion of Japanese companies is expected in the future.

6) Mahindra World City (Tamil Nadu)

The first private industrial park in India was established in 2002, developed by a joint venture of Mahindra Group and Tamil Nadu Industrial Development Corporation (TIDCO). The Master Plan was developed by Jurong International, Singapore. It has

an SEZ (Special Economic Zone) and a DTA (Domestic Tariff Area), and the SEZ area is divided into three categories: IT, apparel & fashion, and automotive parts. Other than its industrial area, it has commercial and housing facilities, providing the infrastructure equivalent to the industrial parks in Southeast Asia. However, the land lease price is on the rise. It has become US\$140 per square meter.

7) One Hub Chennai (Tamil Nadu)

Located in the suburb of Chennai, this industrial park is developed by a joint venture of Ascendas, a Singapore developer, Mizuho Corporate Bank, JGC Corporation and Tamil Nadu Industrial Development Corporation (TIDCO). It has introduced a township concept combining an industrial park, a commercial and residential area. The three Japanese companies have already decided to set up, and more companies are expected to set up in the industrial park since the Japanese companies are participating as a developer.

Investment environment comparison of industrial parks in Southeast Asia and India

As shown in the table below, the Study Team has compared the general information such as the distance from major cities, infrastructure, investment incentives, key industries, wages and urban infrastructure services.

Table 3-11: Investment climate comparison in major industrial parks in Southeast Asia and India

| Benchmark | Vietnam | Vietnam | Thailand | Indonesia | Cambodia | India | India | India | India | India | India | India |
|--|---|---|---|--|--|---|---|--|---|--|--|--|
| | Thang Long I Industrial Park | Vietnam Singapore Industrial Park I (VSIP I) | Amata Nakorn Industrial Park | MM2100 Industrial Park | Phnom Penh Special Economic Zone | Ghiloth Industrial Area (Rajasthan) | Halol Industrial Estate (Gujarat) | Sri City (AP) | Vasanthanarsapura Industrial Area (Karnataka) | Khed City (Maharashtra) | Mahindra World City (Chennai) | One Hub Chennai (Chennai) |
| General Information | | | | | | | | | | | | |
| Developer | THANG LONG INDUSTRIAL PARK CORPORATION (Sumitomo 58%, Donh Anh Mechanical Company 42%) | VSIP(SembCorp (Singapore) (Mitsubishi Corp.) 51%, BecamexIDC 49%) | Amata City Co., Ltd (Listed on Thailand Stock Exchange) | PT. Megalopolis Manunggal Industrial Development (Marubeni 60%, local 40%) | Phnom Penh SEZ Co., Ltd. (local 78%, Zephyr 22%) | Rajasthan Industrial Development and Investment Corporation (RIICO) | Gujarat Industrial Development Corporation (GIDC) | Sri City (P) Ltd. | Karnataka Industrial Area Development Board (KIADB) | Khed Economic Infrastructure Pvt Ltd. (Karyani Group 74%, MDC 26%) | Mahindra Group (89%) & TIDCO (11%) | APPRICOT, (Joint Venture Between ASCENDAS, IREO, MIZUHO & JGC) & TIDCO |
| Established year | 2000 | 1996 | 1989 | 1990 | 2006 | Under development | 1982 | 2005 | 2012 | 2007 | 2002 | 2013 |
| Distance from major cities (km) | 16km from Hanoi | 17km from HCMC | 57km from Bangkok | 30km from Jakarta | 10km from Phnom Penh | 96km from Delhi | 135km from Ahmedabad | 55km from Chennai | 70km from Bangalore | 50km from Pune | 48km from Chennai | 50km from Chennai |
| Distance from airport (km) | 14km from Noi Bai Int'l Airport | 35km from Tansonnhat Int'l Airport | 42km from Suvarnabhumi Int'l Airport | 55km from Sukarno Hatta Int'l Airport | 10km from Phnom Penh Int'l Airport | 96km from Delhi Airport | 135km from Ahmedabad Airport | 75km from Chennai Airport | 80km from Bangalore Airport | 42km from Pune Airport | 35km from Chennai Airport | 55km from Chennai Airport |
| Distance from port (km) | 130km from Haiphong Port | 20km from Saigon Port | 46km from Laem Chabang Port | 35km from Tanjung Priok Port | 212km from Sihanoukville Port | 1,300km from Mumbai Port | 400km from Mumbai Port | 65km from Chennai Port | 305km from Mangalore Port | 146km from Mumbai Port | 55km from Chennai Port | 57km from Chennai port |
| Size (ha) | 272.5ha | 500ha | 3,020ha | 805ha | 360ha | 1,961 acre | 600ha | 2,400ha | 316ha | 689ha | 628ha | 566ha |
| Number of companies | 107 (Sold out) | 216 (Sold out) | 514 (expanding) | 175 (Phase3 for sale) | 52 (Phase2 for sale) | Under development | 50 (for sale) | 92 (for sale) | 11 (for sale) | 92 (for sale) | 62 (for sale) | 3 (for sale) |
| Employment | 58,000 | 96,000 | 160,000 | 89,000 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Lease period | 50 years | 50 years | Sales | 30+20 years | 50 | 99 years | 99 years | 99 years | Sale after 10 years lease | 90 years | Industrial area: 99 year lease Commercial area: sales | Industrial area: 99 year lease, Business area: 3-9 year lease, Commercial area: sale |
| Land lease price | N/A | 55USD/m2 | 144USD/m2 | 200USD/m2 | 60USD/m2 | 40USD/m2 | 32USD/m2 | 25USD/m2 | 24USD/m2 | 53USD/m2 | USD140/m2 | USD130-145/m2 |
| Infrastructure | | | | | | | | | | | | |
| Power specification | 110/22KV | 119MW 22KV | 22KV /115KV | 646MW 20,000V/50Hz | 13MW | 132/220 KV substation 11/33 KV transmission line | 220 KV substation 220 KV transmission line | 200 KV substation under construction, 11/33/132 KV transmission line | 220 MVA substation 11 kv transmission line | 33/11 KV substation | 230 Kv substation | 110 kv substation 230 Kv substation under construction |
| Electricity tariff | 0.06USD/kWh | 0.06USD/kWh | 0.15USD/kWh | 0.07USD/kWh | 0.19USD/kWh | N/A | 0.06-0.07 USD/unit | 0.07-0.09 USD/unit | 0.12USD/unit | 0.09 USD/kWh | 0.11 USD/kWh | 0.1-0.12 USD/kWh |
| Back-up generator | Yes | Yes (85MW) | No | No | Yes (13MW) | No | No | No | No | No | No | No |
| Industrial water specification | 8,000m3/day | 40,000 m3/day | 14,000 m3/day | 72,000m3/day | 5,300m3/day | Planning | 20,000 m3/day | 3,000 m3/day | 30,000 m3/day | 130,000 m3/day | 18,160 m3/day | 56,000 m3/day |
| Industrial water tariff | 0.72USD/m3 | 0.46USD/m3 | 0.60USD/m3 | 1.26USD/m3 | 0.3USD/m3 | N/A | 0.46 USD /m3 | 0.48 USD /m3 | 1.12 USD/m3 | 0.56 USD/m3 | 0.80 USD/m3 | 1.28 USD/m3 |
| Wastewater specification | 3,000m3/day | 18,000 m3/day | 11,200 m3/day | 64,800m3/day | 4,500m3/day | Planning | 5,000 m3/day | 47,000 m3/day | 12,000 m3/day | Under planning | 2,000 m3/day | 2,000 m3/day |
| Wastewater tariff | 0.24USD/m3 | - | 0.18-0.24USD/m3 | - | 0.26USD/m3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Waste disposal | Outsourcing | Outsourcing | Outsourcing | Outsourcing | Outsourcing | No | No | No | No | No | No | Outsource to Ramky |
| Rental factory | Yes | No | Yes | No | Yes | No | No | No | No | No | No | Planning |
| Investment incentives | | | | | | | | | | | | |
| Investment incentive law | Common Investment Law | Common Investment Law | Investment Promotion Law | Foreign Investment Law | Special Economic Zone Decree | Investment Promotion Policy of Rajasthan | Industrial Policy of Gujarat | SEZ Act | Industrial Policy of Karnataka | SEZ Act | SEZ Act | Industrial Policy of Tamil Nadu |
| Corporate tax (%) | 25% | 25% | 23% | 25% | 20% | 42.024% | 42.024% | 42.024% | 42.024% | 42.024% | 42.024% | 42.024% |
| VAT (%) | 10% | 10% | 7% | 10% | 10% | 12.50% | 12.50% | 12.50% | 12.50% | 12.50% | 12.50% | 12.50% |
| Corporate tax exemption period | N/A | N/A | 3-7 years (application till 2014) | N/A | Maximum 9 years | N/A | N/A | 5 years | No | 5 years | 5 years | N/A |
| Tax incentives | No (Preferential tax exemption to tenants in industrial parks is abolished by the Coporate Tax Act, 2008) | No (Preferential tax exemption to tenants in industrial parks is abolished by the Coporate Tax Act, 2008) | Exemption of import duties of equipment and machinery (application till 2014) | •Import duty deduction of 5% for equipment and raw materials of two years production capacity •Exemption of tax and customs related to raw materials and parts for export | 1. export processing: exemption of raw materials, factory construction materials and import duty and VAT of production equipment 2. domestic: import duty exemption for plant construction materials and production equipment | No announcement | -subsidies up to 20% of capital expenditure or 10 million Rs. -50% of stamp duty | Corporate tax exemption for up to 5 years and 50% in the following 5 years for tenants in SEZs | -subsidies up to 20% of capital expenditure or 10 million Rs. -50% of stamp duty | Corporate tax exemption for up to 5 years and 50% in the following 5 years for tenants in SEZs | Corporate tax exemption for up to 5 years and 50% in the following 5 years for tenants in SEZs | N/A |
| Major industry and industry to attract | | | | | | | | | | | | |
| No.1 | Machinery industry | Light industry | Automobile | Automobile | Textile | N/A | Automobile | IT | | | IT | |
| No.2 | Electronics industry | Assembly industry | Steel / plastic | Electronics | Food processing | N/A | | Automobile | | | Auto parts | |
| No.3 | Precision industry | Export processing industry | Electronics | Plastic, chemical | Automobile parts | N/A | | Machinery | | | Textile | |
| No.4 | Light industry | | Consumer electronics | Steel, metal | | N/A | | Electrical and electronic | | | | |
| Wages | | | | | | | | | | | | |
| Manager | 787USD/month | 653USD/month | 1,574USD/month | 1,057USD/month | 563USD/month | | | | | 965 – 1,930 USD/month | | |
| Engineer | 342USD/month | 297USD/month | 698USD/month | 433USD/month | 298USD/month | 160USD/month | | | 106USD/month | | 128 - 160 USD/month | 106 - 141 USD/month |
| Semiskilled wage rates | 145USD/month | 148USD/month | 345USD/month | 239USD/month | 74USD/month | 128USD/month | 108USD/month | 96USD/month | | 241 – 321 USD/month | 80 - 100 USD/month | |
| Minimum wage | 112USD/month | 112USD/month | 9.85USD/day | 226USD/month | 80USD/month | 96USD/month | | 72USD/month | 70USD/month | 128 - 193 USD/month | | 70 - 106 USD/month |
| Urban infrastructure services | | | | | | | | | | | | |
| Financial institutions | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Planning | No | Planning |
| Customs office | No | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | No | Yes | No |
| Logistics | Yes | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | Planning | No | No |
| Delivery service | Yes | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | Planning | No | No |
| Communication | Yes | Yes | Yes | Yes | Yes | Planning | Yes | Yes | Yes | Yes | Yes | Yes |
| Bonded warehouse | Yes | Yes | Yes | No | Yes | Planning | Yes | Yes | No | No | No | No |
| Post office | No | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | No | Yes | No |
| Hospital, clinic | No | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | No | Yes | No |
| Police station | Yes | Yes | Yes | Yes | Yes | Planning | Yes | Yes | No | No | Yes | No |
| Fire station | No | Yes | Yes | Yes | Yes | No | Yes | Yes | No | No | Yes | No |
| University | No | No | No | No | No | No | No | No | No | No | Yes | No |
| Public bus | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes |
| Workers' dormitory | Yes | Yes | Yes | No | Yes | Planning | No | Yes | No | No | No | Planning |
| Vocational school | Yes | Yes | Yes | No | Planning | Planning | No | Yes | No | Yes | No | Planning |
| Staff agency | No | No | No | No | Yes | No | Yes | Yes | No | No | No | Yes |
| One-stop service | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes |
| Commercial facility | Japanese restaurant | Japanese restaurant, large shopping mall | Japanese restaurant, accommodation for managers and guests, golf course, sport club | Japanese restaurant, service apartment and golf course | Japanese restaurant | No planning | No | business center, under planning of commercial and residential facilities | No | Under planning of commercial and residential facilities | Commercial area (business hotel, shopping center) and residential area | Under planning of commercial and residential facilities |

Benchmark analysis of the industrial parks

Based on the data of major industrial parks in Southeast Asia and India, the Study Team has conducted the benchmark analysis to evaluate the competitiveness of each industrial park.

Selecting the indicators of 35 items from "general information," "infrastructure," "investment incentives," "wages," and "urban infrastructure," the benchmark score table was developed as below.

Each benchmark was evaluated with five levels, and converted with a specific gravity to evaluate at 1,000-point scale.

| Item | points | Number of items | Evaluation points | Calculation method |
|--------------------------|--------|-----------------|-------------------|--|
| (1) General information | 300 | 6 | 30 | $300 \times \text{evaluation points} / 30$ |
| (2) Infrastructure | 300 | 6 | 30 | $300 \times \text{evaluation points} / 30$ |
| (3) Tax incentives | 150 | 3 | 15 | $150 \times \text{evaluation points} / 15$ |
| (4) Wages | 150 | 3 | 15 | $150 \times \text{evaluation points} / 15$ |
| (5) Urban infrastructure | 100 | 17 | 85 | $100 \times \text{evaluation points} / 85$ |
| | 1,000 | 35 | | Total |

Table 3-12: Benchmark score table

| Benchmark | Evaluation Standard | | | | | | |
|---|---------------------|----|-----------|-------------------|-------------------|--------------------|------------|
| | Unit | 0 | 1 | 2 | 3 | 4 | 5 |
| General Information (300 points) | | | | | | | |
| Distance from major cities (km) | Distance (D) | - | 100km < D | 75km < D < 100km | 50km < D < 75km | 30km < D < 50km | D < 30km |
| Distance from airport (km) | Distance (D) | - | 100km < D | 75km < D < 100km | 50km < D < 75km | 30km < D < 50km | D < 30km |
| Distance from port (km) | Distance (D) | - | 200km < D | 100km < D < 200km | 50km < D < 100km | 30km < D < 50km | D < 30km |
| Size (ha) | Size (S) | - | S < 100ha | 100ha < S < 400ha | 400ha < S < 700ha | 700ha < S < 1000ha | 1000ha < S |
| Lease period | Year (Y) | - | Y < 25 | 25 < Y < 50 | 50 < Y < 75 | 75 < Y < 99 | 99 < Y |
| Land lease price | USD (\$) | - | 200 < \$ | 150 < \$ < 200 | 100 < \$ < 150 | 50 < \$ < 100 | \$ < 50 |
| Infrastructure (300 points) | | | | | | | |
| Electricity tariff | USD (\$) | - | 0.2 < \$ | 0.15 < \$ < 0.2 | 0.10 < \$ < 0.15 | 0.05 < \$ < 0.10 | \$ < 0.05 |
| Back-up generator | Yes/No | No | | | | | Yes |
| Industrial water specification | Volume (m3/day) | - | V < 1000 | 1000 < V < 2500 | 2500 < V < 5000 | 5000 < V < 7500 | 7500 < V |
| Industrial water tariff | USD (\$) | - | 1.2 < \$ | 0.9 < \$ < 1.2 | 0.6 < \$ < 0.9 | 0.3 < \$ < 0.6 | \$ < 0.3 |
| Wastewater specification | Volume (m3/day) | - | V < 800 | 800 < V < 2000 | 2000 < V < 4000 | 4000 < V < 6000 | 6000 < V |
| Rental factory | Yes/No | No | | | | | Yes |
| Investment Incentive (150 points) | | | | | | | |
| Corporate tax (%) | % | - | 40 < % | 35 < % < 40 | 30 < % < 35 | 25 < % < 30 | % < 25 |
| VAT (%) | % | - | 12 < % | 12 < % < 10.5 | 9.0 < % < 10.5 | 7.5 < % < 10.5 | % < 7.5 |
| Corporate tax exemption period | Year (Y) | NA | 1 < Y | 1 < Y < 3 | 3 < Y < 5 | 5 < Y < 7 | 9 < Y |
| Wages (150 points) | | | | | | | |
| Manager | USD (\$) | - | 1500 < \$ | 1200 < \$ < 1500 | 900 < \$ < 1200 | 600 < \$ < 900 | \$ < 600 |
| Engineer | USD (\$) | - | 700 < \$ | 600 < \$ < 700 | 500 < \$ < 600 | 400 < \$ < 500 | \$ < 400 |
| Semiskilled wage rates | USD (\$) | - | 350 < \$ | 300 < \$ < 350 | 250 < \$ < 300 | 200 < \$ < 250 | \$ < 200 |
| Urban infrastructure services (100 points) | | | | | | | |
| Financial institutions | Yes/No | No | | | | | Yes |
| Customs office | Yes/No | No | | | | | Yes |
| Logistics | Yes/No | No | | | | | Yes |
| Delivery service | Yes/No | No | | | | | Yes |
| Communication | Yes/No | No | | | Yes | | |
| Bonded warehouse | Yes/No | No | | | | | Yes |
| Post office | Yes/No | No | | | Yes | | |
| Hospital, clinic | Yes/No | No | | | | | Yes |
| Police station | Yes/No | No | | | | | Yes |
| Fire station | Yes/No | No | | | | | Yes |
| University | Yes/No | No | | | | | Yes |
| Public bus | Yes/No | No | | | Yes | | |
| Workers' dormitory | Yes/No | No | | | | | Yes |
| Vocational school | Yes/No | No | | | | | Yes |
| Staff agency | Yes/No | No | | | | | Yes |
| One-stop service | Yes/No | No | | | | | Yes |
| Commercial facility | Yes/No | No | | | | | Yes |

(Source) JICA Study Team

Table 3-13: Industrial park evaluation table

| Benchmark | Vietnam | Thailand | Thailand | Indonesia | Cambodia | India | India | India | India | India | India | India |
|---|--------------------------------------|-----------------------------|--------------------------------|------------------------|----------------------------------|------------------------------------|---------------------------------|---------------|--|-------------------------|----------------------------------|------------------------------|
| | Thang Long I Industrial Park Vietnam | Singapore Industrial Park I | Amata Nakorn Industrial Estate | MM2100 Industrial Town | Phnom Penh Special Economic Zone | Giloth Industrial Area (Rajasthan) | Halol Industrial Area (Gujarat) | Sri City (AP) | Vasanthanarasapura Industrial Area (Karnataka) | Khed City (Maharashtra) | Mahindra World City (Tamil Nadu) | One Hub Chennai (Tamil Nadu) |
| General Information (300 points) | | | | | | | | | | | | |
| Distance from major cities (km) | 5 | 5 | 3 | 5 | 5 | 2 | 1 | 3 | 3 | 4 | 4 | 3 |
| Distance from airport (km) | 5 | 4 | 4 | 3 | 5 | 2 | 1 | 3 | 2 | 4 | 4 | 3 |
| Distance from port (km) | 2 | 5 | 4 | 4 | 1 | 1 | 1 | 3 | 1 | 2 | 3 | 3 |
| Size (ha) | 2 | 3 | 5 | 4 | 2 | 4 | 3 | 5 | 2 | 3 | 3 | 3 |
| Lease period | 2 | 2 | 5 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Land lease price | 3 | 4 | 3 | 1 | 4 | 5 | 5 | 5 | 5 | 4 | 3 | 3 |
| Subtotal | 19 | 23 | 24 | 19 | 22 | 19 | 16 | 24 | 18 | 22 | 22 | 20 |
| Specific Calculation | 190 | 230 | 240 | 190 | 220 | 190 | 160 | 240 | 180 | 220 | 220 | 200 |
| Infrastructure (300 points) | | | | | | | | | | | | |
| Electricity tariff | 4 | 4 | 3 | 4 | 2 | 3 | 4 | 4 | 3 | 4 | 3 | 3 |
| Back-up generator | 5 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Industrial water specification | 5 | 5 | 5 | 5 | 4 | 0 | 5 | 3 | 5 | 5 | 5 | 5 |
| Industrial water tariff | 3 | 4 | 4 | 1 | 5 | 0 | 4 | 4 | 2 | 4 | 3 | 1 |
| Wastewater specification | 3 | 5 | 5 | 5 | 4 | 0 | 4 | 5 | 5 | 0 | 3 | 3 |
| Rental factory | 5 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 25 | 23 | 22 | 15 | 25 | 3 | 17 | 16 | 15 | 13 | 14 | 12 |
| Specific Calculation | 250 | 230 | 220 | 150 | 250 | 30 | 170 | 160 | 150 | 130 | 140 | 120 |
| Investment Incentive (150 points) | | | | | | | | | | | | |
| Corporate tax (%) | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| VAT (%) | 3 | 3 | 5 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Corporate tax exemption period | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 4 | 0 | 4 | 4 | 0 |
| Subtotal | 8 | 8 | 15 | 9 | 14 | 2 | 2 | 6 | 2 | 6 | 6 | 2 |
| Specific Calculation | 80 | 80 | 150 | 90 | 140 | 20 | 20 | 60 | 20 | 60 | 60 | 20 |
| Wages (150 points) | | | | | | | | | | | | |
| Manager | 4 | 4 | 1 | 3 | 5 | 2 | 1 | 2 | 1 | 1 | 2 | 1 |
| Engineer | 5 | 5 | 2 | 4 | 5 | 2 | 1 | 2 | 1 | 5 | 2 | 5 |
| Semiskilled wage rates | 5 | 5 | 2 | 4 | 5 | 3 | 5 | 5 | 1 | 5 | 2 | 5 |
| Subtotal | 14 | 14 | 5 | 11 | 15 | 7 | 7 | 9 | 3 | 11 | 6 | 11 |
| Specific Calculation | 140 | 140 | 50 | 110 | 150 | 70 | 70 | 90 | 30 | 110 | 60 | 110 |
| Urban infrastructure services (100 points) | | | | | | | | | | | | |
| Financial institutions | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 0 |
| Customs office | 0 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 0 | 5 | 0 |
| Logistics | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 0 | 5 | 0 |
| Delivery service | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 3 | 5 | 0 |
| Communication | 3 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 0 | 3 | 3 |
| Bonded warehouse | 5 | 5 | 5 | 0 | 5 | 0 | 5 | 5 | 0 | 0 | 0 | 0 |
| Post office | 0 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 0 | 0 | 3 | 0 |
| Hospital, clinic | 0 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 0 | 5 | 0 |
| Police station | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 0 | 5 | 0 |
| Fire station | 0 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 0 | 0 | 5 | 0 |
| University | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 |
| Public bus | 3 | 3 | 3 | 3 | 3 | 3 | 0 | 5 | 3 | 3 | 3 | 3 |
| Workers' dormitory | 5 | 5 | 5 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 0 |
| Vocational school | 5 | 5 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 5 | 0 |
| Staff agency | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 5 | 0 | 0 | 0 | 5 |
| One-stop service | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 | 5 | 5 | 5 |
| Commercial facility | 5 | 5 | 5 | 5 | 5 | 0 | 0 | 5 | 0 | 0 | 5 | 5 |
| Subtotal | 51 | 69 | 69 | 54 | 69 | 13 | 56 | 76 | 11 | 16 | 69 | 21 |
| Specific Calculation | 60 | 81 | 81 | 64 | 81 | 15 | 66 | 89 | 13 | 19 | 81 | 25 |
| Total | 720 | 761 | 741 | 604 | 841 | 325 | 486 | 639 | 393 | 539 | 561 | 475 |

The following analyses are found from the benchmark score table.

- The Phnom Penh Special Economic Zone of Cambodia ranks the highest in evaluation points among the major industrial parks in Southeast Asia and India, for the following reasons:
 - The wages and land lease costs of the industrial parks are rising in Vietnam, Indonesia and Thailand in recent years, but the wages and land lease cost in Cambodia has not been rising compared to those neighboring countries.
 - In recent years, there is a trend in Southeast Asia that the preferential tax exemption for tenants in industrial parks be phased out based on WHO policy. Under the Article 3 of the WTO “Agreement on Countervailing Measures and Subsidy,” export subsidies and export promotion investment incentives are prohibited. After Vietnam joined the WTO, incentives for tenants in industrial parks have been abolished by the Corporation Tax Act of 2008. Also in Thailand, companies will be exempt from paying corporate tax for 3-7 years and import duties of equipment and machinery if an application is submitted by 2014, but the preferential treatment will be discontinued after 2015. On the other hand, Cambodia introduces various tax incentives for foreign investment, such as a corporate tax exemption of up to nine years, an exemption of import duties on equipment and machinery, and a VAT exemption.
- The evaluation points are generally lower in industrial parks in India compared to Southeast Asia, for the following reasons:
 - Investment incentive is not attractive compared to Southeast Asia. The corporate tax is 42.024% and VAT is 12.5% in India, both are higher than anywhere in Southeast Asia. The corporate tax exemption has not been applied except to the tenants in SEZs.
 - Many industrial parks are distant from the major cities, airports, and ports compared to other countries in Southeast Asia. The farthest is 1,300km from Giloth Industrial Park to Mumbai Port.
 - None of the industrial parks have any rental factories.
 - Industrial parks in India are not competitive in wages; the wages of a manager class exceed US\$ 1,200 per month.
 - While private industrial parks such as Mahindra World City and Sri City is providing urban infrastructure services, industrial parks developed by the State Industrial Corporations provide few urban infrastructure services.
- Compared with Mahindra World City and Sri City, said to be the successful model of private industrial parks in India, the evaluation points of Sri City is higher, and the following reasons can be found:
 - The land lease cost is cheaper in Sri City (Sri City: US\$25; Mahindra World City: US\$ 130-145 per square meter), and in terms of securing labor and wages, Sri City is more competitive than Mahindra World City.

- Sri City is competitive in the size of the infrastructure with its vast land available.

Thus, comparing the industrial parks of Southeast Asia with India, industrial parks in Southeast Asia have higher evaluation points in distance from the port, in infrastructure, in investment incentives, in wage scales, and in urban infrastructure. In order to accelerate the investment in the industrial parks of India, providing value added services such as providing attractive investment incentives is required.

3.8.2. Comparison of industrial park development and management in Southeast Asia and India

This section presents comparative analysis of the industrial park business, from the different perspective of development, operation, and from the point of tenants, between the context of India and Southeast Asia for several key requirements.

From the perspective of industrial park development

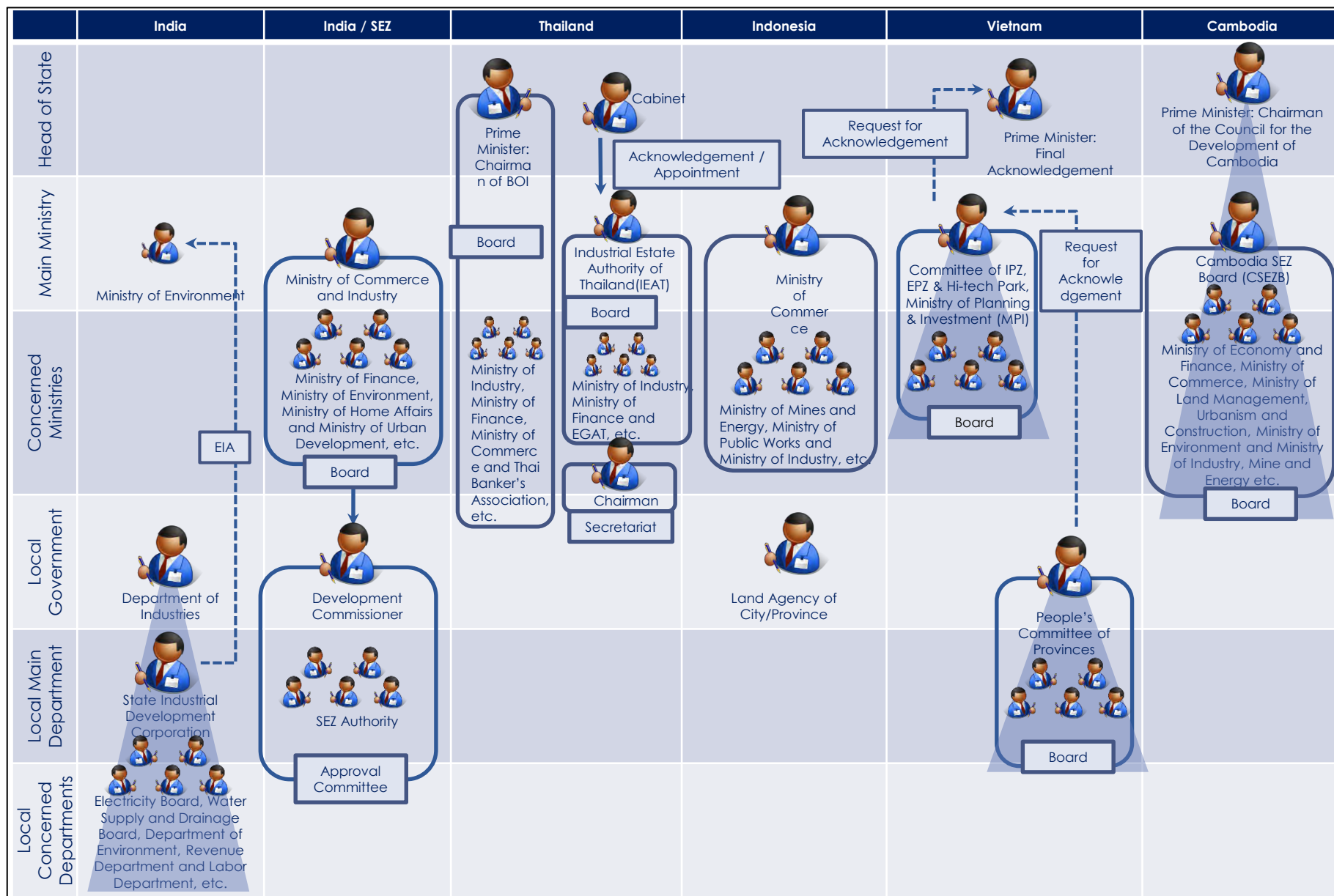
Laws and regulations

Infrastructure / service specification and regulatory standards of these provisions in industrial parks are necessary measures for ensuring a certain extent of quality of international standards for industrial parks and attracting investment of international companies. The required guideline is developed in Southeast Asia, and it is clear for zone developers to follow, while the guidelines are available in a special economic zone in India, but for the reference of infrastructure/service specification, there is no provision of rules or guideline from the central government in the general industrial zone/industrial park requirement rule.

Jurisdiction organization

The practice of assigning competent authorities on industrial park development and management is different from country to country. But in Southeast Asia, the delegation of power to a single mandated organization is clearly legally stated under the name of the head of state with respect to industrial park development and management, so that any dysfunction of industrial parks coming from friction between ministries due to different jurisdiction matters can be avoided.

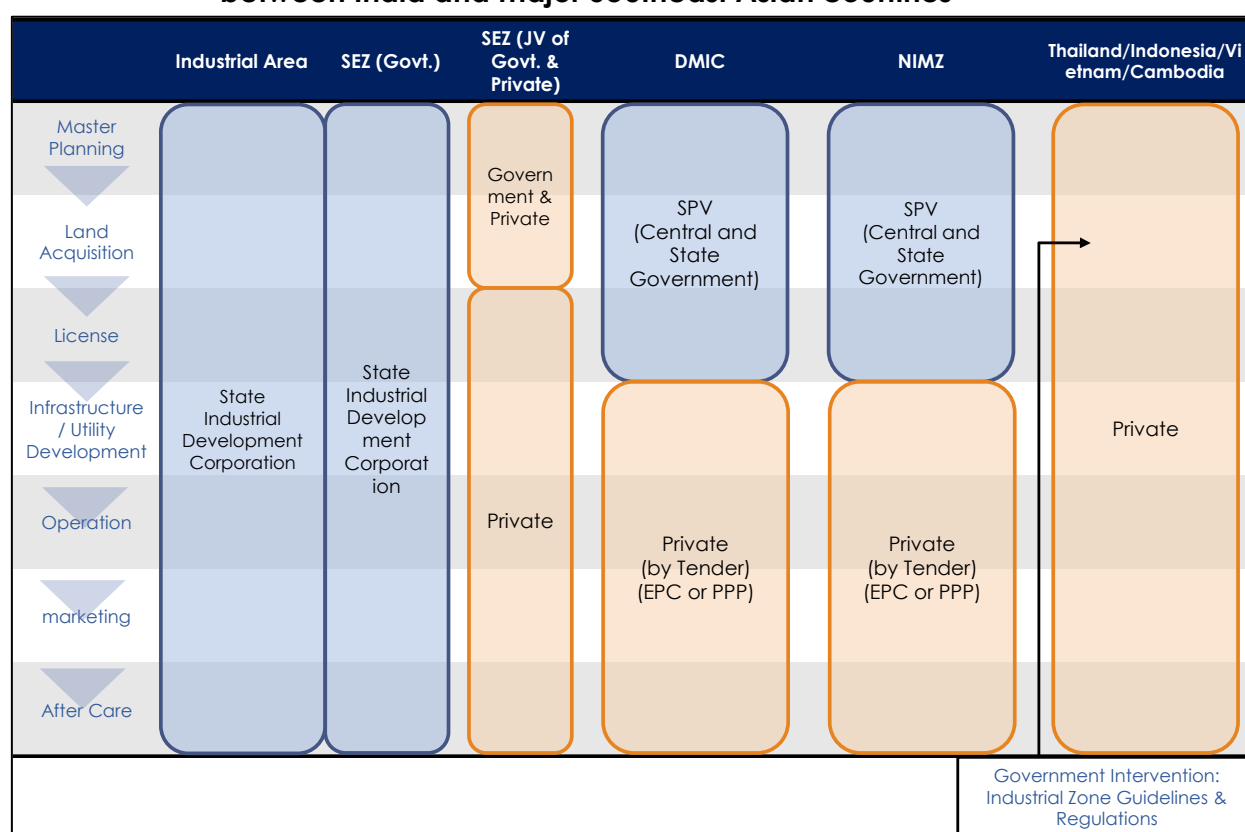
Figure 3-7: Comparison of jurisdiction organization of industrial parks between India and major Southeast Asian countries



Number of industrial parks

In Southeast Asia, industrial parks developed by the private sector accounted for the majority.

Figure3-8: Comparison of private sector's entry into the industrial park business between India and major Southeast Asian countries



(Source) JICA study team

Land acquisition

It is common in Southeast Asia for private companies to purchase land under the land ownership system of the private sector businesses, and the acquisition of land by the private sector is assumed as the basis of industrial park development. In India, institutional land acquisition by the state government has been a fundamental premise of the industrial park development; thus there is a difference between two cases in the acquisition method of development land and in the division of roles of the private and public sectors. Also in Southeast Asia, at the time of the land acquisition by the government, the central government attempted to create a fund for the purpose.

Zoning

Since the development by private companies is the majority, for the zoning plan maximizing profitability of land is the core philosophy from the private sector side, while planning for use of non-profit land is mostly the area of regulations under government zoning rules in Southeast Asia where the system to comply with the set-forth guidelines are provided. In India, there are no clear zoning rules for industrial parks. The State Industrial Development Corporation developed its own zoning plan standard for industrial parks.

Therefore given no authority to Industrial Development Corporation in developing power generation, substation facilities, wastewater treatment plant, and logistics centers, there is only planning as a future plan, but regarding public infrastructure services, there is a minimum content to appeal to private business customers, because the zoning is not made as the basis of the accumulation of knowledge about the marketing, and it is not connected to the improvement of the grade of the industrial park. Therefore, there is a need to create rules/guidelines for zoning.

Location

In Southeast Asia, there is a mechanism available for selection of the project site in the national industrial park development master plan, which was prepared through the use of ODA. Hence the location of the individual business projects is also allowed in the scope of the master plan. Some states have regional development master plans in India, but a national industrial park master plan has not been formulated.

Geographical access factor

Both in India and Southeast Asia, there is a common tendency that the industrial park development is concentrated in the large cities, but the number of industrial parks/special economic zones which have a good access to a seaport is limited in India. The industrial park business in Southeast Asia is rather expanded among existing industrial areas/estates, while the focus of industrial area development projects in India is on greenfield projects.

Development approval

In Southeast Asia, the structural reform is advanced, and the organization is specified as the authorized focal point of industrial park development. This is based on the rules, procedures, and conditions predetermined in relation to the required infrastructure/services that are necessary for an industrial park. These organizations are established as the empowered bodies to perform competent approval and licensing in charge of industrial park development and operation. The development approval of land in the industrial park for the purpose of investment

promotion and sales of land is facilitated in Thailand, Indonesia, Vietnam and Cambodia, through efficient licensing systems focused on how speedy/how efficiently the development period can be minimized. Also it can be highlighted that there is a unique feature in those countries, making it possible by preparing basic information provision to private developers through guidelines and various infrastructure standards.

Entry of private zone developers and incentives

In Thailand, Indonesia, and Vietnam, the industrial park development scheme was initially made by the central and local governments, but now the entry permit is given to the private zone development companies since the 1990s, and the development by private players is progressing. In Cambodia, there is even a set of incentives given for private zone developers.

Restrictions on foreign investment

While India allows even foreign companies to enter the industrial park development/special zone development, restrictions on real estate development by 100% foreign capital are often applicable in Southeast Asia. However, in the industrial park development and management business, more than licensing, there are needs for a wide range of field support along with the local business practices. Hence, consequently it becomes one of the responsibilities of local companies/partners to cater to such needs. Thus, in models of industrial park development in Southeast Asia, actual JVs between local/foreign capital have been functioning as the best practice.

Coordination with departments in relation to linked infrastructure / utility development

In Thailand, IEAT is given the privilege of conducting development and operation of the industrial park, where all required services and infrastructure facilities for tenants is given by IEAT. Even in private industrial park development projects by private operators, Indonesia and Vietnam have representative focal institutions, which have a legal basis in bearing the obligation and mandate to support infrastructure development/utility services by private zone developers through the Ministry of Commerce and Industry and Ministry of planning and investment respectively. In other words, as members of the development of the industrial park authorities, the Board of IEAT has members of Ministry of Industry, Civil Service Commission, Ministry of Transportation, Ministry of Planning, Ministry of Defense, Ministry of Planning, Revenue, Tourism Bureau, power company and 2 representatives from the private sector, which can be worked as a consultation and coordination body for smooth installation of various necessary infrastructure elements.

The committee system, as stated above, can be seen in some states even in India, and it has

been effective to a certain extent in terms of linked infrastructure development. However, in the SEZs of India, even though the development commissioner under the Ministry of Commerce and Industry is authorized to supervise the development and operation of SEZs, approvals in relation to other ministries (pollution control and labor), lying outside the jurisdiction of the Ministry of Commerce and Industry cannot be obtained in an efficient and simplified manner. Therefore, some individual projects apply to a listing of the Project Monitoring Group of the state government or the Cabinet Committee for Infrastructure under the Prime Minister's Office as a status so that coordination of different linked infrastructure development can be established.

Also in Southeast Asia, for linked infrastructure of industrial parks, it is trust based commitments from relevant ministries and agencies of state government upon which development moves forward. Even imposing the penalty, the effect of applying penalties will not ensure the implementation both in Southeast Asia and India.

Figure3-9: Comparison of linked infrastructure development between India and major Southeast Asian countries

| | India | India/SEZ | Thailand | Indonesia | Vietnam | Cambodia |
|-------------|---|--------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Land | State Industrial Dev. Corporation | SEZ Developer / Operator | Industrial Park Developer / Operator | Industrial Park Developer / Operator | Industrial Park Developer / Operator | Industrial Park Developer / Operator |
| Road | (National Highway Authority is in charge of highways) | | | | | |
| Electricity | Electricity Board/IPP | | | | | |
| Water | Water Supply Body / Dev. Corporation | | | | | |
| Waste water | Individual units | Most of case, Individual units | Individual units | | | |
| EIA | Individual units | Individual units | | | | |

(Source) JICA study team

Environment impact assessment

For industrial park development companies, the implementation of EIA is required, to one extent or another, in all countries. However, in some countries like Indonesia and Vietnam, under certain conditions where an EIA was finalized at the time of industrial park development,

units to come and invest in the industrial park do not require full-fledged EIA but a rather relaxed simpler form of EIA. On the other hand, Thailand seeks a strict adaptation to environmental regulations.

Table 3-14: The current state/ challenges of industrial park development of India and comparisons with industrial parks in Southeast Asia - Industrial park development aspect

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|------------------|---|--|--|--|--|--|---|
| Main legal basis | Industrial Park There are business support (financial) schemes such as the Scheme, 2002. However, there are no laws established by the central government, and instead regulations or other laws relating to the establishment of industrial development corporations are applied according to each state. | Special Economic Zone Act, 2005 Special Economic Zones Rules, 2006 Special Economic Zones (Customs Procedure) Regulations, 2003 Guidelines for Development of Special Economic Zone, 2009 | Thailand Industrial Park Public Corporation Law B.E. 2522 (1979) Revised twice in 1991 (B.E. 2534) and 1996 (B.E. 2539) Announcement of IEAT, No.78/2554 (Guideline on Sewage discharge), No.64/2536 (Guideline on land development), No.25/2547 (Waste discharge) | Presidential Decree Regarding Industrial Parks No. 53/ 1989 (Deregulation of industrial parks by civilians) Presidential Decree Regarding Industrial Parks No. 41/ 1996 (Guideline regarding industrial parks) Government Regulation Regarding Industrial Parks No. 24/2009 (Statute Book of 2009 No. 47, Supplement to Statute Book No. 4987) | Law Regarding the Establishment of EPZ (1991) (Decree No.322/HDBT) Government Regulation Regarding Industrial Park Regulation (1994) (Government No.192/CP): Promotion of industrial park development with foreign capital Regulation Regarding Industrial Parks (1997) (Decree No.36/CP): Revision of government regulation (1994) Decision of Prime Minister relating to national development projects for industrial parks, EPZ, SEZ (2006) (Decision No. 1107/ DQ-TTG): Emphasis of industrial park development, industrial development, and waste water treatment by civilians. Subsidiary Rules Relating to the Establishment of Industrial Parks (2008) | 2005 Government Ordinance No.148 (Sub-Decree No.148 on the Establishment and Management of the Special Economic Zone) (Special Economic Zone Ordinance) 2001 The Land Law | Regulations of infrastructure/ service specifications, standard requirements in industrial park development are necessary measures for the attraction of international investment companies and preparation of industrial park areas that meet international standards with specified values. This guideline is established in Southeast Asia and is clear for zone developers. However, while guidelines are displayed in special economic zones in India, there are no requirement regulations, provisions from the central government regarding infrastructure/ service specifications, and standards with general industrial zones/ industrial parks. |

| India | | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-----------------------------|--|--|--|--|--|--|--|
| Jurisdictional organization | | State government/ Dept. Of Industry State Industrial Development Corporation | Ministry of Commerce and Industry SEZ Authority | Industrial Estate Authority of Thailand: IEAT or Board of Investment: BOI) | Ministry of Industry and Trade Also organizations such as Indonesia Industrial Park Association made by civilian industrial park operators. | (Decree No.29/2008/ND-CP) The Ministry of Planning/ Investment is designated as an organization that is in charge of adjustments with other ministries (Ministry of Industry, Ministry of Construction, Industrial Park Management Committee, etc.), and the Prime Minister makes the final decisions regarding intentions relating to industrial park development. | The "Cambodia Special Economic Zone Board" under the Cambodia Development Council, where the Prime Minister is the chairman, is the management organization of the special economic zone. The Special Economic Zones Trouble Shooting Committee: SEZ TSC in the CDC is responsible for swiftly solving all technological/ legal issues in special economic zones as well as all matters exceeding the authorities of the Cambodia Special Economic Zone Board as well as the Special Economic Zone Management Office by extending over several ministries. Also, the Special Economic Zones Trouble Shooting Committee receives complaints from special economic zone developers as well as |
| | | | | | | | There are various organization authorities according to countries for industrial park development/ management. However, there is the characteristic in Southeast Asia, where the transfer of authority regarding industrial park development/ management legally specifies the principle that the grantor of authority is the head of state, and there are devices so that inadequacies to not arise due to conflicts between ministries. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|---|---|---|---|--|---|---|
| | | | | | | investment companies located within special economic zones, and is responsible for finding solutions for these. | |
| Number of industrial parks (Operating) | N/A | 158 (Government: 20, public: 138)-2012 Special economic zone permission land 61,829ha (2013) | 62 (Government/ IEAT: 11, JV: 25, public: 26) (2012) Industrial park development land 20,560ha (2012) | 225 Industrial park development land 27,320.6ha (2012) | 118(2008) Industrial park development land 33,195ha (2008) | 8 (Public: 7, Government: 1) (2013) Industrial park development land 2,609ha (2012) | Industrial parks operated by private business operators cover the majority in Southeast Asia. |
| Land acquisition | While small differences can be seen, according to states in land acquisitions for the purpose of industrial park development, in general, land expropriation is carried out by request from the Industrial Commissioner of by the state industrial development corporation itself with the fund of the state government. In the case of expropriation by the District Collector, the registered ownership is transferred to the state industrial development corporation. Thus income tax/ stamp duty is not imposed in | The same as standard land acquisition procedure. Special regulations are not mentioned in special economic zone regulations or laws. However, it is widely regarded that the regulation by the government that is stipulated in the land expropriation law that allows the expropriation of "public purpose" expanded land acquisition for the purpose of special economic zone development by the state government for private business operators. | In the event land is necessary for the development or expansion of industrial parks, the IEAT is permitted to expropriate land with the application of the land expropriation law according to imperial ordinance. It is also possible to transfer the expropriated land to operators specified by the IEAT as for business purposes related to industrial park development. (Article 38). Regarding the development of export processing zones, in case the use of public land is necessary, it is | According to the latest land expropriation law passed in the assembly in December 2011, it was regulated that the government can acquire land by providing their share relating to compensation, relocation site, and public undertakings. The price of the compensation is decided by an independent investigation team approved by the Department of National Land, and regulates that it must be paid within 30 days. The land | The government is able to expropriate land with important national projects where investment policies have been decided by the assembly, industrial parks or export processing zones, high-tech parks, special economic zones, constructions where investment policies have been approved by the Prime Minister, new constructions and improvements of new urban districts and rural housing districts, and cases where projects decided by people's councils in the ministries/ urban levels are carried out. In the revised law of | In the 2001 Land Law, it is stipulated that only those with Khmer nationality possess the right to own land in Cambodia. A Cambodian corporation refers to a corporation where over 51% of its shares are owned by Cambodians or Cambodian companies. In the event of expropriating land, it is stipulated that it must be carried out through formalities and procedures stipulated by the law after paying the appropriate compensation beforehand. In the event of using land of the | In Southeast Asia, land ownership systems by private business operators are advancing, and in general the acquisition of lands by these public organizations is the precondition for industrial park development. In India, land expropriation by state governments is substantially acting as the precondition of industrial park development, and so differences between the two regarding the acquisition method of development land and distribution of roles can be seen. Also, in Southeast Asia, the central |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|------------|--|--|--|---|---|
| <p>that process.</p> <p>Also, according to the General Land Ceiling Act, there is a limit with land acquisition by individuals/ private corporations (with land purchase for the purpose of industrial parks, when the area of land exceeds 1,000 acres, permission from the Land Ceiling Exemption Commission (Commissioner of Land Reform) under the Revenue Dept. is necessary), and so the current state is that land acquisition for industrial park development is in reality exclusive for the government.</p> <p>As a method of land acquisition in the state of Rajasthan, a committee including a land pricing officer is established, allotment prices are calculated through resident hearing surveys of the relevant district as well as land-jobbing performance sources, and mainly the two</p> | | <p>possible for the IEAT to continue developing as the land owner with the IEAT paying the value decided by the Ministry of Interior to the Ministry of Finance or by providing substitute land. Or in the event of being reserved as specified land, development of the land becomes possible through payment to the Ministry of Finance. (Article 36).</p> | <p>expropriation law stipulates so that all legal procedures relating to land acquisition for infrastructure operations ordered by the government are completed within 583 working days. A 60 day public consultation period is also permitted to be arranged before expropriation of the land.</p> <p>Furthermore, in early August 2012, the 2012 Presidential Decree No. 71 regarding the code of practice of the 2012 Act No. 2 relating to land expropriation law for public facilities was established.</p> | <p>2012, it is decided that the people's committees of each ministry are able to secure rights of the land user and that compensations are paid according to the law.</p> <p>Also, in the event agricultural land is expropriated, the people's committee of each ministry must carry out occupational training for the farmers of that land and support them until they find a new occupation.</p> <p>Regarding the price of the land, a valuation specialist is required to participate in the land price evaluation council in order to fairly decide the price, and the government is obligated to evaluate the price of the land every 5 years.</p> | <p>government, the private business operator will acquire an ELC: Economic Land Concession for special economic zone development from the government. The maximum land area is 10,000ha, and the maximum contract period is 99 years.</p> | <p>government creates funding, and is attempting to provide compensation when the land is expropriated by the government.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|------------|----------|-----------|---------|----------|-------------|
| <p>methods of providing monetary compensation or providing substitute land to the landowner are taken. With the provision of substitute land, in the case of a development land scheme project that includes industrial parks, the plan is that 75% of the entire land is used as land for business operations and the remaining 25% is provided to the landowner as substitute land. If it is a residential project, substitute land covers 20%, and if it is a commercial facility it becomes 5%.</p> <p>In India there isn't a system that registers real estate titles. So in order to identify the true owner of the selling side, in general, it is necessary to research by looking into the past 30 years regarding the changes with ownerships (documents related to real estate/ sales</p> | | | | | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--------|--|--|---|---|---|--|---|
| | and purchase agreements etc.). | | | | | | |
| Zoning | In the case of new urban development of large areas of land such as DMIC and NIMZ as Greenfield projects, exclusive organizations assigned for each project of the regions create industrial city development plans along with zone plans, conduct land pulling in the process of consensus building with development plans as in the concept referred to as SIP (Special Investment Region) based on the SIR Act in the state of Gujarat and MP state. In the scheme for the re-allocation of land of the land owners land is not expropriated in the business development stage and the system is organized so that industrial city development is carried out through what is known as land re-allocation/ urban re-development | When receiving SEZ Clearance, it is required to set a Processing Zone and Non-processing Zone (the development of commercial zones, schools, and residential facilities are assumed). Regarding Processing Zones, it is required to be roughly over 50% of the entire land, although it also depends on the area to be developed as a special economic zone. | In the master plan that the IEAT approves, differing utilization plans of land according to the characteristics of the industrial parks are required, and these are divided into industrial districts, commercial or service districts, districts of public facilities or infrastructure facilities, and green districts or buffer zones. In other words, the ratio (%) covering the total area, location, and stencil paper of the master plan that shows the details of the following districts must be explained in the application forms. Areas that generate profit - Industrial district - Residential or commercial district Areas of public facilities or infrastructure facilities - Roads - Drainage/Flood prevention systems | It is specified that up to 70% of industrial park lands can be developed as industrial land, and the remaining 30% can be used as common infrastructure or green belts. | It is specified that the Ministry of Construction possesses authority to give permissions regarding the zoning of the industrial parks. | According to the Special Economic Zone Article 3 of the Cabinet Order, "the Establishment of Special Economic Zones", special economic zones require the following zoning conditions. (a) Securing of land over 50ha (b) Establishment of a surrounding fence (c) Establishment of a management office, roads, waterworks, electricity, communication, and fire department within the special economic zone. According to cases facilities for employees, parks, medical clinics, occupation training facilities, gasoline stations, restaurants, parking lots, and commercial facilities may also be established. (d) Establishment of water treatment facility and | From the fact that the majority are developments by private business operators in Southeast Asia, there is a system where the government sets zoning regulations/ guidelines that must be obeyed regarding utilization plans of non-profitable land against zoning plans where the basic principle is the maximization of profitable land displayed by private business operators. On the other hand, there are no clear zoning regulations of industrial parks in India, and each state government; industrial development corporation draws out zoning plans of industrial parks according to their own regulations. Thus, zoning such as power/ power transformation facilities, water treatment facilities, |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|----------|---|--|--|---|---|---|--|
| | method. In other words, it is a method where if it is the Dholera SIR of the state of Gujarat that will control each SIR, the DSIRDA will create urban plans such as zoning, request the creation of DPR according to individual businesses among them to a third party, and sign a PPP or an EPC contract with private business operators depending on the result. In the case of MP state it would be each AKVN. | | - Waterworks system - Effluent treatment system - Communication system - Electric system - Industrial waste disposal system - Other green districts or other buffer zones | | | waste disposal facility. | distribution centers, which industrial development corporations do not have authority over are planned as future plans. However, they are not zoning plans that are made through the accumulation of knowledge regarding details of the minimum public infrastructure services for appealing to public business clients that can be seen in Southeast Asia. As a result the grade of industrial parks is not improving and there is little sales effect. |
| Location | The location selection conditions for industrial park lands advanced by industrial development corporations of the state avoid multi-crop lands and target lands that are not suitable for agriculture while they would not go as far as wastelands, and conduct the selection of industrial park candidate lands from | In the guideline regarding special economic zone development, there are regulations regarding locations that avoid nearby urban areas while securing plenty of land as well as water resources, or avoiding cultivated land and consideration towards the environment. | With the establishment of industrial parks that will be managed by the IEAT, development approval will be given under the conditions that IEAT standards are met through field surveys and that regulations regarding land utilization are not violated. With pure public businesses by the BOI, developments | From the perspective of agricultural land and environmental preservation, industrial park development is restricted to industrial development, promotion lands designated by the central or district government, and is regulated so that development is approved according to the National Zoning Plan/ Regional Spatial | The location of industrial parks is in accord with master plans relating to industrial park developments and conforms to social economic development plans. There are no impediments with the industrial/ social infrastructure developments. The room for expansion with the preparation of industrial clusters is | There are no particular regulations with location selection conditions. | In Southeast Asian countries the setting up of industrial park master plans advance with the use of ODA supports, and the locations of individual business projects are also approved in the category of those master plans. In India there are states where district development master plans are set up by each state |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-----------------------------|---|--|---|---|---|--|--|
| | the perspective of linkage, market access, availability of utility, and celebrity of land. However, even in the New Land Expropriation Law (2013), the expropriation of irrigated multi-cropped land is restricted. | | advance with advantageous location conditions such as along main roads. | Planning. | secured. It is also stipulated in the Prime Minister's Decision (2006) / Industrial park regulation (2008) that there are no issues with the securing of labor force. Also, in the event at least 60% of the provided industrial land of the industrial park area in the same area is not under the lease contract, new industrial park development cannot be carried out. Furthermore, in the event of advancing over 500ha of industrial park development nearby national roads, defense districts, or nature reserves, it is necessary to come to agreements beforehand with the Ministry of Construction and related departments. | | government. However, national industrial park master plans are not established. |
| Geographical access factors | Port access and provision of power supply system are essential for industrial parks. However India seriously lacks production bases that accompany this. | Special economic zones tend to be located nearby large cities in the states of Delhi, Haryana, Gujarat, Maharashtra, AP, Karnataka, and Tamil/ Nadu, while | The entire country of Thailand is divided into three zones by the BOI and more favorable policies for investment promotions are placed as going | An industrial park area is formed in the state of West Java, which is within a range of 50km from Jakarta, the capital, and the industrial park of the district | Industrial park areas are being developed in the three divided areas of the Northern section (Hanoi), Central section (Da Nang), and Southern section (Ho Chi Minh). | Special economic zone development is advancing in conveniently located lands such as the hinterland of the port of Sihanoukville, suburbs of Phnom | India and Southeast Asia share the point that there is the trend of industrial park development concentrating in the suburbs of large cities. However, there are |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|----------------------|--|---|--|---|---|--|---|
| | | special economic zone development is not advancing in the Northeast sections of India such as the states of UP and MP. | further out from Bangkok to the outskirts. However, industrial park developments are concentrated in zone 1 and zone 2, which are relatively close to Bangkok. In general, industrial parks are located in places with good access to ports, stations and other transportation methods. Shipment of products as well as raw materials is good and is located in places that are easy for working people to commute. | covers approximately half of the area of the industrial parks in Indonesia. Standard access to the industrial park of this district is by highway. However Tanjung Priok Port is the only international port in this district, and traffic jams are becoming chronic. Efforts in order to improve the situation are being carried out. | The industrial park area of the suburbs of these three cities covers approximately 70% of all industrial parks. | Penh, and near the borders with Thailand/ Vietnam. | few industrial parks/ special economic zones that have convenient access to ports in India. With industrial park development business in Southeast Asia, the expansion of existing industrial districts/ parks is becoming the mainstream, and not greenfield projects. Focus on greenfield projects can be seen more in India. |
| Development approval | Industrial park development by industrial development corporations of the state are given the permission for example to develop land forming, power lines, water pipes, and access roads as authority relating to industrial park development in accordance with state laws that are substantiations of the establishment of | Development business operators must submit a proposal of the SEZ establishment to the development commissioner. Then a decision will be made regarding development permit by the Board of Approval of the central government, and then the area of the SEZ will be notified. With the acquisition of the SEZ clearance | With development approvals there are those from the IEAT and the BOI. Private operators who intend to establish industrial parks by joint management with the IEAT must submit application documents and attached documents to the IEAT, and receive inspection from the IEAT. If the proposal is approved as a result of the discussion by | In the case of business development by a foreign company, the development business operator must obtain a principle license from the Ministry of Commerce and Industry after receiving investment approval from the President or the BKNP. Within 2 years from the issuing of the license, the acquisition of land, land use planning, | The industrial park development business operator must first receive approval regarding the development plan, and then they are able to conduct business services in accordance with the given license and company regulations (Article 9/ No. 192/ CP). In the event of a delay with the development plan, the extension of the development term | Developers must apply for special economic zone development to the "Cambodia Special Economic Zone Board: CSEZB" and also apply for a Qualified Investment Project: QIP). The application fee is 1,700 U.S. Dollars, and the CSEZB shall reply with the approval to the developer within 28 days. After receiving approval from the | The setting up of a system where responsible contact organizations that receive the transfer of authority from the competent authority based on necessary infrastructure/ services for industrial parks to function that have been decided beforehand is advancing with organizations specified as the point of contact responsible for the |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|---|---|---|--|---|---|--|
| <p>industrial development corporations regulated by each state. On the other hand, other competent authorities exist within the state government or as corporations for power source development/ supply, water resource development/ supply, and water treatment facility management, and there are many cases where they do not fall within the jurisdiction of the authority to give permission of industrial development corporations.</p> <p>As major jurisdictions of the central government there is authorization relating to customs and national road access, and authorizations relating to the environment are those from central and state organizations. Thus, separate licenses are required depending on the project.</p> | <p>from the board, it is necessary to receive permission to establish a company from the Ministry of Corporate Affairs and its approval (Ministry of Finance). Also, approval relating to land utilization plan from the EIA clearance and Directorate Of Town & Country Planning, and permit for Land Ceiling Exemption (from the Revenue Dept.), water (from the Irrigation Dept.), and electricity (state power supply company) must be separately received.</p> <p>According to the SEZ (Amendment) Rule 2013, the minimum development land area as an SEZ is 500ha for multi-product SEZ. Sector specific SEZ is possible from 50ha, and in the case of coastal SEZ a minimum space of 100 acres/ 40ha is required.</p> <p>Development business operators must develop the</p> | <p>the IEAT committee, contact will be made to the group that will jointly manage or related government organization, and the contract of joint management will be made in either one of the following formats.</p> <p>(1) The IEAT will provide services of public facilities or infrastructure facility and services of other facilities.</p> <p>(2) Development business operators of the industrial park will provide services of public facilities or infrastructure facilities and other services.</p> <p>After signing the contract for joint management with IEAT, the IEAT will declare the area of the industrial park as a common industrial district or an IEAT free zone through notification of the IEAT committee.</p> <p>The development business operator must submit the application document for construction approval</p> | <p>development of land, environmental effect evaluation, development of related infrastructure/ utility, establishment of industrial park regulation, and the establishment of a management company must be carried out. An industrial park license will be issued when these are fulfilled. An extension of 2 years is also possible if there is a valid reason.</p> <p>The minimum approval standard regarding the area of land is 50ha (Government Regulation Regarding Industrial Parks Article 10). In the case of industrial park development for small and medium size companies it is 5ha (Article 10 of the same regulation).</p> <p>It is also necessary to obtain approval of the location from the district government (either the Regent/ Governor/ Head of National Land Agency according to</p> | <p>limit to an appropriate term must be applied for 30 days beforehand. If this is neglected the requisition of an undeveloped land will be received.</p> <p>The approval process related to industrial park development is stipulated that it depends on the investment method. However, in the case the park development is in accordance with the master plan, the provincial people's committee does not require confirmation by the Prime Minister for the development approval and can advance approval work (In the case of an economic zone: EZ, the Planning and Investment Ministry advances the approval work, and the Prime Minister makes the decision). If it is not in accordance, the provincial people's committee conducts selection of whether to include both</p> | <p>CSEZB, the developer shall create a detailed project plan within 180 days.</p> <p>After receiving the detailed project plan from the developer, the CSEZB shall obtain approval from the relevant ministries on behalf of the developers within 100 days.</p> <p>Then the CSEZB shall issue the final registration certificate to the developer, and the approval as a special economic zone is completed.</p> | <p>approval of industrial park development in Southeast Asia.</p> <p>For the development approval of the land within industrial parks for the purpose of investment promotion and distribution, there is an approval system established in Thailand, Indonesia, Vietnam, Cambodia and so on that focuses on the point of how to speed up/ make efficient the development period. Also, there is the characteristic of the advancement of the preparation of basic information such as industrial park master plans/ guidelines regarding various infrastructure standards that make it possible.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-------|---|--|-----------------------|---|----------|-------------|
| | <p>minimum development land area within 10 years after receiving issuance from the SEZ clearance, and within 5 years 50% of the development must be completed. While it depends on the development approval, in the case of an official approval, a company located within the area of at least one corporation must begin production within 3 years, and the need to begin operation of the SEZ is stipulated (Special Economic Zone Regulation No. 5, Article 6).</p> | <p>of public facilities as well as infrastructure facilities along with other attached documents to the general affairs section of the business service division of the development business operator of the IEAT/ in charge of the jointly managed industrial park.</p> <p>The IEAT will conduct an inspection of the blueprint for the construction of the public facility and infrastructure facility, and notify the inspection result.</p> <p>The joint operator must prove possession of the land at the stage of application.</p> | <p>the location).</p> | <p>industrial parks and EZ in the master plan. Then all examination materials will be submitted to the Planning and Investment Ministry and the Prime Minister makes the final decision.</p> <p>The developers of the industrial park will follow the Decree 153/ 2007/ ND-CP (2007) relating to enforcement of the Real Estate Law stipulated by the Ministry of Construction, and are required to cover at least over 20% of the total investment for the relevant project with their own contribution. Also, for the approval, this Decree states the guarantee of support, as well as the obligation and fulfillment of the rights of the developer for the realization of the relevant project by the concerned department. The organization in charge is regarding the procedures</p> | | |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-------|------------|----------|-----------|---|----------|-------------|
| | | | | <p>relating to the approval of the project is specified as the provincial people's committee, and it is also specified as the advisory body for Prime Minister matters.</p> <p>Furthermore, in the Circular 13/ 2008/ TT-BXD (2008) that stipulates the enforcement guideline, it is stipulated that land price and compensation money shall not be included in the self-investment amount, and regulates specific items as well as procedures for individuals or corporations that run a real estate business.</p> <p>EZ development conforms to the EZ master plan, and it is regulated that it is not accepted unless there is an advantage in terms of access to deep-water ports, airports, and main roads. It must also secure land that is over 10,000ha and</p> | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | | | | | have conditions that would have a positive impact on the social economy of the district. | | |
| Public zone developer entry/ incentive | Industrial park development by private business operators does not have regulations in federal law. It is regulated according to states, and in the state of Rajasthan there is a regulation of the development of industrial area in the revenue law, and this is applied. Public zone development business operators must continue negotiations with various points of contact responsible, with the Department of Industrial Development of the state. Also, it is the common formality to exchange lease contracts of the land through industrial development corporations, and when doing so royalties must be paid. The difference between industrial | It is accepted for various tax benefits and special measures to be taken by the state government for SEZ development business operators (Article 50). Therefore royalties are often exempted in SEZ businesses. Development business operators are allowed to purchase approved items and services that are free of tax from standard customs territories. Also privileges such as exemption of corporation tax, import tax, commodity tax, service tax, and reduction of central sales tax are provided. However, 16.22% has become applied in SEZ from June 2011 to each of the dividend distribution tax (DDT) / shares from developers and the | While the IEAT encourages public groups and government organizations to jointly operate industrial parks together with the IEAT, they seek for the provision of public facilities as well as services of infrastructure facilities necessary for operating industrial park businesses, and have environmental maintenance conducted with permission/ approval as well as under supervision of the IEAT. With industrial parks of Thailand, there are industrial parks managed by the IEAT that have been developed by public operators, as well as industrial parks that form/ sell/ manage with public operators receiving investment encouragement of the BOI, apart from | According the Presidential Decree No. 53/ 1989 regarding industrial parks, the entry of private business operators into industrial parks that have been developed by provincial/ state governments have been accepted until now. Since then many industrial park developments have been advanced by private business operators. | According to the Government Law Regarding Industrial Park Regulations (1994) (Government No.192/CP), industrial park/ infrastructure development has been encouraged regardless of domestic/ foreign capital, and preferential tax treatment towards industrial park developers are being taken. However, those with Vietnamese nationality must be preferentially used as construction workers for development, and the employment of foreigners is accepted for a certain period only in the event there is no one qualified due to technical issues. | Private business operators cover most of the special economic zone development, and special economic zone developers receive the following privileges. - VAT exemption regarding import - Corporate tax exemption for a maximum of 9 years - Exemption of import tax and other taxes for imported facilities and materials for the infrastructure development of the special economic zone | In Thailand, Indonesia, and Vietnam, there was the industrial park development scheme that had been advanced by the central/ local government. However the direction greatly changed to the entry permission of public zone development business operators in the 90s, and since then developments have been advancing with industrial parks developed by private business operators. In Cambodia there is a system that grants privileges to industrial park developers. |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|--|---|-----------|---------|----------|-------------|
| <p>park developments by state government, industrial development corporations is evident due to the cash flow.</p> <p>On the other hand, policies that encourage industrial park development by private business operators are being announced in recent years. When private business operators develop land forming, power lines, water pipes, access roads, or water purification facilities in the state of Gujarat, a scheme that allows the use of a maximum subsidy of Rs. 20 Crore is provided as utility development fee necessary for industrial park development over 100 acres in accordance with the industrial policy announced in 2013.</p> <p>Also, a measure is taken so that there is a 100 % tax exemption of the stamp duty charged when purchasing</p> | <p>weakening of the preferential tax system can be seen.</p> | <p>estates operated by the IEAT on their own.</p> <p>In general, most industrial park development by Japanese corporations possesses the form of receiving approval of the BOI.</p> | | | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--------------------------------|---|--|---|--|---|--|--|
| | land from the landowner and 50% tax exemption when signing the lease contract of corporations entering after that. Also a subsidy of Rs 5 Crore is granted to link infrastructure in public, industrial park development, and in the state of Karnataka a law for promoting industrial park development plans by private business operators is currently being drawn out. | | | | | | |
| Foreign investment restriction | Regarding industrial park development, it is accepted in the event the following requirements are met with the 100% investment by foreign capital that has been automatically approved by the consolidated FDI policy 2012 regulated by the DIPP. (1) Residential areas for over 10 companies are developed and make certain that one company among the ten does not possess over 50% | In the case of SEZ development, the conditions that are usually imposed on land development/ construction building projects regarding townships, residences, commercial facilities, resorts, and entertainment facilities are not imposed, and 100% investment of foreign capital is accepted. | Real estate transactions by foreign corporations are not accepted. However, construction work involving a minimum capital of over 500 million bahts and mediators/ agencies possessing a minimum capital of over 100 million Bahts will be exempt from the regulation. Most entries of foreign corporations in industrial park development take the form of JV. | Regarding construction business using high-level technology, is a high risk project, and where the construction expense is over 1 billion Rupiahs, the maximum foreign capital investment accepted is up to 67%. Factories, forming, establishment, interior construction of commercial buildings fall under the construction field of the above | Foreign corporations cannot possess land. However, they are able to use the land by obtaining the land use right (LUR). The development of industrial districts (industrial parks, export processing zones, high-tech zones) by foreign corporations is carried out with the development companies obtaining the LUR from the Vietnamese government. The period of use is | Foreigners and foreign corporations are permitted to possess land only through long term or short term leases. In the case of corporations possessing the Cambodian nationality (Cambodian capital is over 51%), the possession of land is accepted. (2001 land law) | Regulations in India are more flexible as foreign corporations are permitted to develop industrial parks/ special economic zones. However, there are many places in Southeast Asia that impose restrictions on real estate development with 100% foreign capital. Yet, mentally quick and resourceful correspondences that follow the business customs of the region is required |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | the land available for sale. (2) Out of the land available for sale, over 66% is industrial land. 100% financing is accepted if 10 hectares are developed for service residential projects and at least 50,000m ² of the land area for construction development projects. However, in the case of 100% foreign capital, a minimum investment of 10 million Dollars is required. Also, it is regulated that the initial investment cannot be remitted to the country unless 3 years have passed since the completion of investment of the minimum capital. | | | mentioned. Therefore, only the JV form is accepted for the entry of foreign corporations into industrial park development. | specified as 50 years. | | when dealing with the wide-ranging approval organizations in industrial park development/ management, and these are roles that can only be fulfilled by local enterprises. Therefore, it can be said that as a model of industrial park development in Southeast Asia, JV by local/ foreign capital is functioning as the best practice. |
| Department in charge of linked infrastructure / utility development and adjustment | In an industrial park development by industrial development corporations of the state government, corresponding adjustment can be seen in some places such as by arranging posts from other departments for | With the adjustments with other ministries and departments in the development of SEZ, Development Commissioners of the Deputy Secretary level shall be placed in charge (Article 12 (2) (c)). Also, the SEZ Authority organized so that the | Important matters such as linked infrastructure development are decided by the IEAT committee. However, the chairperson and members are selected by the cabinet, and the IEAT president is also considered as a | It is stipulated that the Ministry of Commerce and Industry conducts coordination, such as linked infrastructure with industrial park development (Presidential Decree No. 41 (1996) Article 3) It is stipulated in No. | Industrial park developers must submit business plans of infrastructure development to the authorities and also submit documents regarding the necessity of development relating to linked infrastructure as well as requests | The Special Economic Zones Trouble Shooting Committee: SEZ TSC in the CDC is appointed with the responsibility of swiftly resolving all technological/ legal issues that occur in the process of special economic zone development as well | The Thailand IEAT is granted by authority for developing as well as managing all infrastructure facilities and services necessary for companies located within industrial parks. Even though it is a development project by private business |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|---|--|--|---|--|---|
| board members of industrial development corporations. For example, the Maharashtra Maritime Board (MMB), MSEDCL, MPCB are participating with the board members of the MIDC, and it is a system where reconciliations and consensus building at government policy levels can be conducted. On the other hand, there are states that do not arrange posts of other departments for board members of state government, industrial development corporations and adopt a system where adjustments are devised with several departments in separate organizations that generalize all industrial infrastructures including industrial parks. In industrial development corporations of such states, the adjustment | Development Commissioner is placed as the Chief Executive shall be responsible for resolving issues relating to infrastructure development and management within the SEZ. (Article 34) In the guideline relating to special economic zone development, temporal terms are provided and appropriate development support is given regarding the link infrastructure of special economic zones by the state government. However, as a legal basis, it is not that lateral discretions such as where the central government or state government transfers authority to other ministries or departments towards the Development Commissioner/ SEZ Authority, and there is a limit with necessary measures. | member (Article 18). The responsibilities and authorities of the committee are land forming, sales, rental value, moving into housing estates, maintenance, and the creation of regulations that include internal human affairs and salaries apart from regulations of IEAT work (Article 23). If necessary a subcommittee can be established (Article 24). Also by approval of the cabinet the president is selected by the committee (Article 25). According to policies and regulations of the committee the president shall generalize the IEAT secretariat (Article 28), and represent the IEAT towards third parties (Article 30). It is stipulated that along with the establishment of industrial parks the IEAT have the following public facilities as well as | 230/ M/ SK/ 10/ 1993 as a technological standard of infrastructure in industrial parks and this includes roads, water disposal systems, waterworks, power supply, communication system, industrial waste disposal, wastewater disposal, street lights, and firefighting. | towards the government. The government side is responsible of all dealings of pending problems relating to industrial park development (also linked infrastructure preparation) as not only the Ministry of Planning/ Investment, but also the Vietnam Board of Management of the IZ(s) are given authority by the Prime Minister, and they also have the role of adjusting with related ministries as well as departments (including local governments). Also board of management of local industrial parks is similarly appointed to work on the resolving of pending issues with an industrial park development/ management in local regions. | as all matters that exceed the authorities of the Cambodia Special Economic Zone Committee and the Special Economic Zone Management Office by extending into several ministries and departments. Also, the SEZ TSC accepts complaints from special economic zone developers or investment corporations located within the special economic zone, and are responsible for finding solutions. The structure of the committee is as follows. 1) Chairman of the Council for the Development of Cambodia (CDC) 2) Cabinet Council Minister member 3) Minister of Economy and Finance member 4) Minister of Commerce and Industry member 5) Minister of Land Management/ Urban Planning/ | operators, they are in charge of adjusting duties with other infrastructure development/ utility service contact departments while each of the Ministry of Commerce and Industry and the Ministry of Planning and Investment, which are the representing contact organizations of Indonesia and Vietnam, have legal bases. Thus, there is a system/ institutional design where linked infrastructure/ utility development necessary for industrial parks can be smoothly prepared. In other words, the development authorities possess a system where discussions/ adjustments can be made with the establishment of various necessary infrastructures of the Ministry of Industry, Civil Service Commission, Ministry of Transport and |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|---|------------|---|-----------|---------|---|--|
| of link infrastructure/ utility development that is a characteristic of industrial parks cannot be carried out alone by industrial development corporations, and there are many states where adjustments are not functioning in a coordinated manner (such as the state of Haryana, Karnataka, Tamil/ Nadu). With industrial park developments by private business operators, large amounts of time are required to receive approval from the state government/ central government and carrying out connections, especially for the establishment of junctions (junction with nearby main roads/ preparation of surrounding access, power lines, water pipes, gas pipes, etc.) due to matters with infrastructure maintenance. With the development of | | infrastructure facilities. Water supply to factories Maximum supply amount per day: total of 8,000 to 50,000 cubic meters Wastewater disposal Maximum disposal capacity per day: total of 8,000 to 40,000 cubic meters Main roads The roads within industrial parks are made based on the standards of the industrial park public corporations of Thailand. The specifications of roads vary according to industrial parks; however the widths are 16 to 18 meters with 2 to 4 lanes. Power supply The Thailand Province Electric Authority establishes high voltage substations in industrial parks, and a power system of three phases 22KV is directly connected to the lands within the industrial parks Communication | | | Construction member 6) Minister of Environment member 7) Minister of Industry and Mining/ Energy member 8) Minister of Public Works and Transport member 9) Minister of Labor and Vocational Training member 10) Deputy Secretary General of the Council for the Development of Cambodia 11) Deputy Secretary General of the Cambodia Special Economic Zone Board | Planning, Ministry of Defense, Ministry of Planning, the Revenue Authority, Department of Tourism, Department of Electricity, and another committee made up by 2 officials of a private corporation, similar to the board of the IEAT. This type of committee system can also be seen in some states of India and there are some places where this has an effect on the aspect of link infrastructure preparation. However, on the other hand, since organizations under the Ministry of Commerce and Industry are in reality the supervising authorities in the SEZ of India, there are cases where approvals with the authority of other authorities (such as pollution control, labor, etc.) cannot be given and adjustments of the operation method |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| linked infrastructure, it is said that MoU that is said to be a state service agreement is formed between the state government and the establishment of connecting infrastructure as well as conclusive evidence such as construction approvals are secured from the government corporation. However the effectiveness varies. As the correspondence of the state government side, in the event a problem arises with an industrial park development/ management, first the Additional Chief Secretary/ Principal Secretary of the Department of Industrial Development will be in charge of solving them. However, with problems that exceed their authority (labor, environment, etc.), the problem will be taken up by the | | <p>The industrial parks in all of Thailand have a system that can provide services with landline phones, cellular phones, and Internet communication.</p> <p>Provision of services through pipeline system</p> <p>In the Map Ta Phut industrial park, otherwise known as the Petrochemical Complex, there is the service of transporting raw materials as well as products through the pipeline system.</p> <p>Provision of high level factories</p> <p>The IEAT will cooperate with industrial parks and provide the sales of high level factories as well as leasing services in several industrial parks.</p> <p>Flood prevention system</p> <p>U-catch drains are to be used for the prevention of floods within industrial parks.</p> <p>Pipeline for natural gas</p> <p>In many industrial</p> | | | | <p>cannot be made. For these reasons not enough optimization/ simplification of wide ranging administrative work, which is the significance of establishing special economic zones, are attempted. Therefore, there are also cases where projects are devised to advance relatively smoothly with development coordination of linked infrastructure through obtaining data by applying for making lists to the Cabinet Committee for Infrastructure of the Prime Minister's Office or the Project Monitoring Group of the state government according to individual projects.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>Conversion Committee if it is the state of AP, and on the committee where the PS or number 2 of other departments and agencies gather in the state of Tamil/ Nadu, and measures for resolutions are mainly decided there. If an even more strong decision is necessary for resolving the problem, there is the measure where the resolution of the problem is taken up to the upper levels to the Chief Secretary and next to the Chief Minister.</p> <p>Also with the infrastructure (On/ Off Site) related to industrial parks, a development support scheme referred to as the ASIDE from the central government (Ministry of Commerce and Industry) can be used, and if the purpose of the industrial park is beneficial to the export corporation it is perceived as a target of support.</p> | | <p>parks, natural gas pipes of the PPT company are laid in order to supply fuel necessary for the production process.</p> | | | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | Similarly a support scheme referred to as the Industrial Infrastructure Development Fund: IIDF is provided in the Department of Industry of the state of AP. | | | | | | |
| Environmental Impact Assessment (EIA) | There is the need to display to the central government/ Ministry of Environment and Forests or Central Pollution Control Board what kind of preparations are made regarding polluted water/ wastewater/ wastes/ toxic wastes discharged from industrial parks when applying for EIA. Frameworks that require time are institutionalized regarding the EIA, and the setting up of plans on a time base is relatively easy by using specialist firms. It is necessary that there are no Eco sensitive parks or bio-spheres within a 10km radius nearby the industrial park, and it is also necessary to prove | In reality the EIA in SEZ needs an EIA Clearance from the developer, co-developers such as utility service providers (companies that invest over 26% of SEZ businesses), and companies located within the zone. In the case of the SEZ developer having obtained an EIA approval as a regulation, the interpretation of the law is that an EIA is not necessary for each individual corporation for expansion into the SEZ. However, in reality, it is stipulated that the SEZ developer must take responsibility regarding the environment/ pollution of the | Public operators who have the intention of establishing industrial parks that are jointly managed by the IEAT must create an EIA report by the developers on their own during the period of applying for the industrial park establishment, submit that to the IEAT, and then the IEAT submits that report to the Office of the Natural Resources and Environmental Policy and Planning under the Ministry of Natural Resources and Environment. After that the IEAT will conduct a document examination, notify the developer of the industrial park and their consulting company of the opinions as well as advice when | The Regulations State in the Environment Management Program (RKL) and Environment Monitoring Program (RPL) must be observed with an industrial park development. Therefore the carrying out of the EIA towards developers is required at the state of each industrial park development. And so the environment management standards based on the EIA must be observed by the companies located within the parks in the form of laying down the results mentioned above in the Estate Regulations. | In general, industrial parks are required to submit an EIA report at the time of applying for industrial park development as a part of the development approval document. For this reason, with the basis of Environmental Impact Assessment by industrial parks and based on the Circular No. 490/ 1998/ TT-BKHCNMT) regarding the examination of the Environmental Impact Assessment report for the investment project, most corporations that expand are able to utilize the system where Environmental Impact Assessment procedures can be completed by submitting a simple | In the event it matches with the EIA necessary case list stipulated by the Environmental Protection and Resource Management Law (December 1996), an EIA application by the Ministry of the Environment becomes necessary before applying for the QIP. However, regarding special economic zone development, the CSEZB assesses whether it is an EIA necessary case, and if necessary it will be notified to the business operator. | The carrying out of the EIA is required in all countries towards industrial park developers. However, there are countries such as Indonesia or Vietnam, where measures that have been laid down mitigated regulations of Environmental Impact Assessment, under specific cases, that simplify procedures towards corporations that have completed the EIA, which assume entering industrial parks. On the other hand, there are countries such as Thailand that require strict adaptations towards environmental regulations. |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| this in the environmental parameter study. In connection, there are cases with the above regulation of the 10km radius becoming more flexible within the TOR as a 5km radius if the point of industrial park development being advanced by targeting industries that do not cause atmospheric pollution is explained in the EIA application document. | companies located within the zone, and most cases are where the developer seeks each company located within the zone to individually obtain an EIA. However, there are also cases where the SEZ developer provides service for reducing the term of the EIA such as by providing data that can be used for monitoring work that is required with EIA TOR in one season. | submitting to the environmental subcommittee. Then the Office of the Natural Resources and Environmental Policy and Planning under the Ministry of Natural Resources and Environment will examine the EIA report and approve. | | Registration for Securing Environmental Standards) and going through a screening. | | |

From the perspective of industrial park management and operation

Customs duties

As for the customs business, different methods, in particular, are not taken so far between India and Southeast Asian countries, but the customs offices are often installed in a number of individual industrial parks in Vietnam and Cambodia, so that the efficiency of logistics by having customs offices at industrial parks is taken into consideration.

Residential/housing and commercial facilities

Housing supply for industrial park workers is sometimes one of the encouraged policies in many countries. But in practice, whether it leads to residential and commercial development adjacent to industrial parks depends on the cultural patterns for housing and marketability at the individual project site or country. Policy-induced unilateral government intentions would sometime end up in developing unattractive housing complexes. The trend in India does not imply the employees will be living in the housing compartment facility next to an industrial park, but it is rather common for workers to commute from the villages around the industrial zone. Hence, with the exception of foreign employees, development of the housing component in industrial parks is not so common in India.

However, it is also a fact that residential and commercial facility development in Southeast Asia has become an important source of revenue for the industrial park developers, township development along with the implementation measures of public services and surrounding social infrastructure has become a successful model by creating synergetic effects in Indonesia, Thailand, and Vietnam. Township development around the industrial park in Southeast Asia brings about a rich social life infrastructure and urban development, which offers business as well as a social life to workers in the industrial park.

Power supply

Industrial parks in Southeast Asia, in particular Japanese industrial parks, attract investor's confidence by offering a stable power supply system with IPP installation at their parks. However, from the business side, when the IPP business focuses only on tenant companies in the industrial park the business should embrace risk in scale and buyers. Hence most of the IPP business is based on a condition that the surplus power from IPP (the amount of power that exceeds the demand in the industrial park) should be able to sell externally to power distribution companies in the region and ensure the economy of the business through a reasonable power purchase agreement with the power distribution companies.

Due to the provisions of the Power Purchase Agreements, the IPP power generation business is facing problems in India. The operators are confined to risk hedge measures that limit their options by suffering from fixed price agreements for power supply between state power distribution companies and then experiencing sudden increases in coal prices. Because of this imposition, the price of power cannot be properly adjusted with rising fuel costs. Moreover the Cross Subsidy Surcharge in current law is causing the high cost of electricity. Consequently, it is a reality that cost/risk to promote IPP projects to be taken up in industrial parks would become greater than the expected benefits from the projects. Also to do IPP business in industrial park in India, it must be considered the ways how to synchronize with existing self-generator that is already introduced in individual units in industrial parks.

Water supply

Otherwise, there is no difference between the water supply system of the industrial park operations in India and Southeast Asia. But in India, some industrial zones do not allow the industries to use a large volume of water resources, and regulations on water recycling are imposed.

Sewage treatment

It is found that the concept of wastewater is somewhat different between Southeast Asia and India in that sewage (domestic wastewater) and effluent (industrial wastewater) are clearly defined separately. There is a separate regulatory framework for the industrial wastewater and domestic wastewater, and the system design for treatment is also made assuming that the treatment is going to be individually processed. At present it is extremely rare that a domestic wastewater treatment plant (centralized processing facility) is available in an Indian industrial zone, and, it is rather common for individual units/companies to install their own treatment plants at their premises and process treatment by their own in accord with regulations.

Effluent treatment

In Thailand, Indonesia, Vietnam and Cambodia, it has become a standard for an industrial park to equip a common industrial wastewater treatment plant at the site from the beginning. The availability of a treatment plant that accepts both domestic and industrial wastewater after initial treatment at the plant is also the first and most important condition for units/companies to consider investment in the industrial park now.

The current situation in India can be illustrated that, in the industrial park developed by the state government corporation, there are only few industrial parks that have industrial wastewater treatment facilities, and then individual companies have their own treatment facilities provided the company has enough space and expertise. CETPs for small businesses are running, but they

are operating with a target of single industry (such as leather and dyeing industry), and for the development of new CETP for ordinary industrial cluster, issues are encountered with the availability of land and the scope of drainage. Hence it is difficult to set up CETP at existing industrial cluster as they wish. If India intend to install a captive CETP in the future, industrial park is the deal site for setting up such utility that allows the wastewater treatment on the assumption that industrial wastewater from unspecified industries can be treated collectively in accordance with the specified inlet standard, and CEPT, with such development scheme, can release outlet in compliance with the provisions of SPCB's outlet standard.

Table 3-15: Comparison of Inlet standard of common wastewater treatment plants in India and major Southeast Asian countries

| Parameter for inlet effluent quality of CETP | Standard (Concentration in mg/l) | | | | | Treated Effluent Quality of Common Effluent treatment Plant (CPCB, India) | | |
|---|---------------------------------------|----------------|-----------------------------|--------------------------------------|---|---|--------------------|---------------------------|
| | India (Total discharge upto 25kl/day) | VSIP (Vietnam) | IEAT Leamchabang (Thailand) | Amata Nakorn / Amata City (Thailand) | Greenland International Industrial Center (Indonesia) | Into inland surface waters | On land irrigation | Into Marine Coastal areas |
| pH | 5.5 - 9.0 | 6.0 - 9.0 | 5.5 - 9.0 | 5.5 - 9.0 | 6.0 - 8.0 | 5.5 - 9.0 | 5.5 - 9.0 | 5.5 - 9.0 |
| Temperature °C | 45 | 40 | 45 | 45 | 30 | *1 | - | 45 |
| Odour | - | - | - | - | - | - | - | - |
| Colour, Co-Pt at pH=7 / Chromaticity | | 50 | - | - | 300 | - | - | - |
| BOD ₅ (20 °C) (mg/l) | | 400 | 500 | 500 | 300 | 30 | 100 | 100 |
| COD (mg/l) | | 600 | 750 | 750 | 500 | 250 | - | 250 |
| Suspended solids (SS) (mg/l) | | 400 | 200 | 200 | 200 | 100 | 200 | *2 |
| TDS | | | 3000 | 3000 | 2000 | 2100 | 2100 | - |
| TKN (Total Kjeldahl Nitrogen) | | | 100 | 100 | | 100 | - | 100 |
| Oil & Grease | 20 | | 10 | 10 | | 10 | 10 | 20 |
| Mineral oil and fat | | 5 | | | 10 | | | |
| Animal-vegetable fat and oil (mg/l) | | 16 | | | 5 | | | |
| Ammonical Nitrogen (as N) | 50 | 8 | | | | 50 | - | 50 |
| Free ammonia (mg/l) | | | | | 1 | | | |
| Arsenic (as As) (mg/l) | 0.2 | 0.05 | 0.25 | 0.25 | 0.1 | 0.2 | 0.2 | 0.2 |
| Barium (as Ba) (mg/l) | | | 1 | 1 | 2 | | | |
| Blue methyl active compound (mg/l) | | | | | 5 | | | |
| Boron (as B) | 2 | | | | | 2 | 2 | - |
| Cadmium (as Cd) (mg/l) | 1 | 0.05 | 0.03 | 0.03 | 0.05 | 1 | - | 2 |
| Total Cadmium (as Cr) | | | | | | 2 | - | 2 |
| Cyanide (as N) | 2 | 0.07 | | | | 0.2 | 0.2 | 0.2 |
| Cyanide (as HCN) (mg/l) | | | 0.2 | 0.2 | 0.5 | | | |
| Chloride (as Cl ₂) | | 500 | 2000 | 2000 | | 1000 | 600 | - |
| Residual Chlorine | | 1 | | | | 1 | - | 1 |
| Free chlorine | | | 1 | 1 | | | | |
| Chlorine gas (mg/l) | | | | | 1 | | | |
| Chromium (VI) (as Cr ₆₊) (mg/l) | 2 | 0.05 | 0.25 | 0.25 | 0.1 | | | |
| Chromium (III) (as Cr ₃₊) | | 0.2 | 0.75 | 0.75 | | | | |
| Chromium (total) (as Cr) (mg/l) | 2 | | | | 0.5 | | | |
| Cobalt (mg/l) | | | | | 0.4 | | | |
| Coliform | | 5 | | | | | | |
| Copper (as Cu) (mg/l) | 3 | 2 | 2 | 1 | 2 | 3 | - | 3 |
| Fluoride / Fluorine (as F) (mg/l) | 15 | 5 | 5 | 5 | 2 | 2 | - | 15 |
| Formaldehyde | | | 1 | 1 | | | | |
| Iron (mg/l) | | 1 | | 10 | 5 | | | |
| Lead (as Pb) (mg/l) | 1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | - | 1 |
| Manganese (as Mn) (mg/l) | | 0.5 | 5 | 5 | 2 | | | |
| Mercury (as Hg) (mg/l) | 0.01 | 0.005 | 0.005 | 0.005 | 0.002 | 0.01 | - | 0.01 |
| Nickel (as Ni) | 3 | 0.2 | 1 | 1 | 0.2 | 3 | - | 5 |
| Nitric acid (mg/l) | | | | | 20 | | | |
| Nitrous acid (mg/l) | | | | | 1 | | | |
| PCBs (Poly chlorinated biphenyl) | | 0.003 | | | | | | |
| Pesticides | | | | | | x | x | x |
| Pesticides: Organic Phosphorous | | 0.3 | - | x | | | | |
| Pesticides: Organic Chloride | | 0.05 | - | x | | | | |
| Phenol (as C ₆ H ₅ OH) (mg/l) | 5 | 0.1 | 1 | 1 | 0.5 | 1 | - | 5 |
| Percent Sodium | | | | | | - | 60 | - |
| Silver (as Ag) (mg/l) | | | 1 | 1 | | | | |
| Scandium (as Sc) | | | 0.02 | | | | | |
| Selenium (as Se) (mg/l) | 0.05 | | | 0.02 | 0.05 | 0.05 | - | 0.05 |
| Sulphate (as SO ₄) | | | | | | 1000 | 1000 | - |
| Sulfide (mg/l) | | 0.2 | 1 | 1 | 0.05 | 2.8 | - | 5 |
| Surfactants | | | 30 | 30 | | | | |
| Tin (mg/l) | | | | | 2 | | | |
| Total iron | | | 10 | | | | | |
| Total nitrogen | | 20 | | | | | | |
| Total phosphorous | | 5 | | | | | | |
| Zinc (as Zn) (mg/l) | 15 | 3 | 5 | 5 | 5 | 5 | - | 15 |
| Gross α activity | | 0.1 | | | | | | |
| Gross β activity | | 1 | | | | | | |
| Radioactive Materials: | - | | - | x | - | | | |
| Alpha emitters, Hc/mL | 10 ⁻⁷ | | | | | | | |
| Beta emitters, He/mL | 10 ⁻⁸ | | | | | | | |

Industrial waste treatment

The processing scheme of industrial waste in the industrial park does not differ between India and Southeast Asia. But the location of the industrial waste treatment plant is not in conjunction with the industrial park development by region in India. Consequently, it seems that business planning and systems design are often required in advance of factory investment.

Human resource development

In order to improve the productivity of workers in the industrial park, industrial parks have become a place of practical human resource development to encourage employees and local people involved in vocational training in each country. Even in India, in order to increase the stability of the workforce in the region, Tool Room in association with industrial park development operators would deliver a curriculum where hands-on training of the machine tool and production management can be provided, so to serve as measures to facilitate the competitive advantages of industries.

Sales method

Sales methods vary from country to country but, the lease agreement of 50 years is common in Indonesia, Vietnam and Cambodia, whereas there are some states in India which provide lease terms of 99 years. For investors that element can be reflected as a relatively attractive option.

One stop service

Specific organizations are established by state law, such as One Stop Service Act in each state. In response to the transfer of authority to the organization, these organizations practice a one-stop service or a one-stop facilitation service on delivery of variety of licensing. However, at present, the central government still holds a significant power on business licensing and the one-stop service practiced by the state government has been facing difficulties in improving the performance of approvals of work in this regard.

Also, it should be highlighted that the organization/agency that is designated as a one-stop service provider, is all has its mandate defined in law, and its power is enforced by the head of state, clearly demonstrating its legitimacy in Southeast Asia. The recruitment of staff of one-stop service providers is often made from senior officers who have extensive practical experience and who are expected to work as full-time staff members rather than part-time. Human resource development is harshly conducted for making them understand the mind of the private sector through overseas training in Japan and other countries.

Table 3-16: The current state/ challenges of industrial park development of India and comparisons with industrial parks in Southeast Asia - Industrial park management aspect

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--------------------------------------|--|--|---|--|---|--|--|
| Tariff (Customs Duty) procedure | There are no customs offices in particular at industrial parks. | The role of the central government and the state government in regards to customs clearance in an SEZ, Ministry of Commerce and Industry acts for Revenue Dept. and manages Customs Offices in each SEZ. The full time specified officers in each SEZ office who are designated by the Revenue Dept. are there to supervise. Thus, each Customs office reports to the Revenue Dept. through their specified officer. | Customs branches have been established at many industrial parks that have export processing zone (EPZ). | They haven't put a tariff (customs duty) into practice in particular at industrial parks. However their unique customs offices are able to clear goods at bonded areas such as FTZ. | Many industrial parks have established the customs clearance facilities. The system allows them to give clearances to import materials or export products there. A cargo arrives at the airport or the port is to be directly delivered to an industrial park and is to be cleared by a stationed customs staff smoothly. | An officer of Customs and Tariff Bureau is stationed in the special economic zone for customs procedure. (Special Economic Zones legislation, Article 2) | There is no significant difference in regard to customs procedure. However many of individual industrial parks have been established for efficient distribution by setting customs offices etc. in Vietnam and Cambodia. |
| Residential/Commercial establishment | Investment in Residential land, and commercial establishment, development projects by foreign enterprises is approved. However, purchase for the purpose of transfer or lease is not approved. They need infrastructure development as an industrial | There is a regulation, asking for SEZ developers to try to develop the residential establishment for people who work there. (Special Economic Zones regulation, article 11 (10).) In the guideline about SEZ development, the developers are asked to establish the | To have convenient and comfortable life, industrial parks have various facilities. For example, international schools besides national and private schools for children of investors and workers of industrial parks to study. Sporting facilities, golf courses, hotels, | Regulation No.230/M/SK/10/1993 has been set as a technical standard for supporting facilities in industrial parks. Offices, banks, post offices, communication services, clinics, restaurants, boarding for workers, fences, securities, bus stops, and fitness facilities are included. | In 2006, at the beginning, the government didn't approve residential areas in industrial areas. However, in regards to creating the residential environment for the industrial park workers, the government according to the prime minister's decision (decision No. 66/2009/QD-TTg) has | It is possible to have residential/commercial establishments in Special economic zones. (Special economic zone legislation, article 2) | Accommodating industrial park workers is an encouraged policy in any country. However, it depends on the country, marketing trend of the individual business site, and the residential culture or if the one-way government endorsement of the policy leads to the development of residential/commercial |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | establishment and a business investment on the assumption of the sales or lease. | facilities, 5% of the whole if the zone is over 100ha, which can be used as low-cost residential establishments. | international restaurants, leisure facilities etc. are maintained by private businesses for more comfort. | | requested for the industrial park developers/maintenance companies to provide residences for workers. The developer is required to pay their own money of 15% or more toward the investment amount for a residential area development project if it is less than 20 ha. If it is 20 ha or more, 20% must be paid by the developer. (Decree 153/2007/ND-CP (2007)) However, the number of the residential areas developed by the industrial park developers is very limited and it is expected to be more in the future. | | establishments attached to the industrial parks when it comes to carry through the policy. However, it is a fact that development of residential/commercial establishment in South East Asia is a very important source of income for industrial park developers. In Thailand, Indonesia, and Vietnam it is possible to say that the complex township development, which brings a synergistic effect from the surrounding infrastructure and public service policies, is the successful model. |
| Power supply | By following the Electricity Rules 2005, the definition of Captive Power Plant is that 51% of the generated electricity needs to be consumed by the ownership company or the companies that holds more than 26% shares, based on the electricity | It is desirable to establish an independent power supply plant in each SEZ according to the guidelines regarding SEZ development, and it requests to establish its own power plant or a joint developer to establish one in SEZ. | The Thailand Province Electric Authority (EGAT) establishes high voltage substations in industrial parks, and prepares a power supply system whose power system of three phases 22KV is directly connected to the lands of within the | Other than the distribution from Perusahaan Listrik Negara (PLN), each industrial park maintains the power station, which purpose is to make up for the shortage of power supply, power failure (blackout) from PLN and to help in supplying power. They | Although there is a difference in between the industrial parks, in regards to power situation nationally, the demand and the supply seem to be tight. The industrial parks are preparing for the case of power failure (blackout) by having their own | It is possible to establish their own power station in Special Economic Zone and many of them already have done so, however, some of the power stations aren't in operation due to Power purchase Agreement (PPA) | The industrial parks in South East Asia, especially Japanese industrial parks, have the power supply system by IPP and, as a fact, they gained the investor's trust in that. However, from the developer's point of view, focusing on IPP business toward the companies in the |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| consumption rates of these organizations. Thus Captive Power Plant can sell the rest of 49% to any other third party (Open Access Consumer). However, it is either a Captive Power Plant or IPP; there are 4 types of charges for transmission and distribution. 1. Transmission charge: when using the transmission lines of the state transmission company, 2. Wheeling Charge: when using the distribution lines of the state distribution company, 3. Line Loss: partial loss of electricity while distribution, 4. Cross Subsidy Surcharge: when not Captive use. The chargeable amount is set for 1, 2 and 4 by the State Electricity Regulatory Commission. Regarding 4, Commercial/industrial power charge goes as a tax set for the purpose to allot a subsidy for low-income | developers/managing businesses have been given the license to run power supply/water supply businesses (Deemed Distribution License) and they are allowed to sell electric power to the units in the industrial park, either for their own company use (Captive Consumer) or for sales purposes to third parties, by following the Tariff of State Electricity Regulatory Commission. | industrial parks. Meanwhile the private IPP business is progressing by establishing their business in Thai industrial parks and is building their own power supply system. | also purchase electric power from the private power station (IPP) and try to supply steady power. Especially Bekasi, Cikarang, Karwang area are very popular with investors (enterprises) as they have established their own power supply systems. | power supply devices. | with the government. | industrial parks only is a big risk considering the scales and the buyers. Thus the premise for IPP should be the importance of economizing and coming to an agreement with PLN on Power Purchase Agreement (PPA), which the surplus power (the amount of power over the demand for the industrial park) can be sold externally. The problem the IPP power generation business in India faces is the regulation that the developers must risk the rise of coal prices (Power Purchasing Agreement). But the rising fuel price can't be shifted properly to the electricity price. Also, it is a fact that the cost/risk to encourage the IPP business in the industrial parks, as an example of a Cross Subsidy Surcharge in the current Act, invites a high selling price of electricity. In India, each enterprise has its own power generator and synchronizing with these existing generators is the |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>residences' power supply.</p> <p>Regarding power supply, members of private businesses need to invest if they are with Captive. Even if they are with IPP, they need to pay a large some as a Cross Subsidy Surcharge, currently Rs.1/kWh, to the state power distribution company. Thus, this is not the optimal option.</p> <p>Some of the private businesses are considering a scheme to apply Bulk Supply Arrangement in regards to power distribution, so that the Zone Management Company can purchase a large amount of power from the state distribution company and distribute the power to the companies at the industrial park. To make this happen, some businesses are negotiating with the</p> | | | | | | <p>other matter to be considered when it comes to the power generating business in the industrial parks.</p> |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | State Electricity Regulatory Commission. | | | | | | |
| Water supply | Water supply for the industrial parks in India is mainly to be provided by a state industrial development corporation. The limit has been set for using groundwater (200t/a day or more) in Rajasthan and any industry, requiring huge amounts of water, is not allowed to be invited newly. | The guideline regarding Special economic zone development, says that it is required to have a sufficient water supply, to preserve water sources, and to run a system that water recycling is taken into consideration. | There are slight differences between industrial parks, but there is a standard for water supply limit, 8-10 tons/1600 m3 a day. However, recently some of the parks have been offering "No limit of water supply" and some others are offering to supply steam/natural gas. | Establishing its own water supply plant in the industrial park and providing the industrial water service for the companies there is the water supply system mainly in use. | Other than water supply companies in the area are providing water for industrial parks, they have their own water supply services. Also, there is a system that a joint venture of the government and the people is providing the service to the companies in the industrial park. | SEZ Management Company has its own water supply system and provides industrial water. | There is no difference in particular regarding the management of the water supply system in South East Asia and India. However, in some areas in India, there are industrial parks that don't approve any industry which needs a water source, or has a regulation regarding water recycling. That is the characteristic of India. |
| Sewage/waste water treatment | It depends on the industrial parks whether they have established a sewage treatment plant (STP), the main purpose of which is to treat wastewater. The accepted standard is PH (6.0-8.5), SS/suspended solids (200 mg/l), BOD (250 mg/l). Some of the industrial parks have set a severe standard on the premise of treating flushed toilet waste. | According to the guidelines for SEZ development, it requires the establishment of its own sewage treatment plant in SEZ. | The Department of Industrial Works (DIW) under the Ministry of Industry has the authority to grant permission/approval by following the Factories Act 1992, in regard to regulations for wastewater and air pollution in the process of factory establishment and management approval, and factory operations. However IEAT has established its own regulations to | By following government regulations regarding the industrial parks, the industrial park management company is required to run the park by taking the environment into consideration. | The effluent guidelines for environmental standards and a specified industrial pollution regulation are in Vietnam Standards (TCVN), which were regulated in 1995 and are almost 10 of those. There, a regulation of effluent standard (TCVN5945-1995) is in effect as an environmental standard indicating the desirable level of wastewater. | According to the Special Economic Zone Article 3 of the Cabinet Order, "the Establishment of Special Economic Zones", it needs to be developed by the SEZ management company. | Separating sewage and effluent in their regulations in India indicates that there is a difference in cultural sensibilities towards wastewater from those of South East Asia. Sewage and Effluent are in different categories and the system has been set to treat them individually. Very rarely an integrated wastewater treatment system is in the industrial park for sewage treatment, but usually every factory treats their own human |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | | | manage wastewater in the industrial park, which manages and operates, and also provides its own wastewater treatment service. | | | | waste individually by following the regulations. |
| Effluent treatment | There is a concept and a group of businesses of an integrated effluent treatment facility called "Common Effluent Treatment Plant (CETP) in India. This is the development concept and establishment which only applies to Small scale industry. Although Inlet Effluent Standard is regulated by the Central Pollution Control Board, the basic policy is to treat wastewater individually for medium/large scale companies. When the company needs "Consent to establish" and "Consent to Operate" approvals from the State Pollution Control Board in advance to | No particular regulation to distinguish from sewage, but it's understood that it requires the developers to establish an effluent treatment facility in SEZ. | IEAT has no regulation in particular to separate sewage from effluent. It doesn't require installation of the individual pipes, but asks for each business to install drains connecting to the common drain, sending waste water from the industrial activities of the central effluent treatment facility in the industrial park. Because of that, the effluent water from the factory is treated before discharging it into the public water system to prevent pollution. At the same time the business can save the building cost of its own effluent treatment facility. | Almost all industrial parks have established integrated effluent treatment facilities. Although the effluent from each factory is required to be treated to a certain standard, the integrated effluent treatment facility treats properly to nationally require effluent standards and the treated water is discharged into a river etc. at the end. | By the decision of the prime minister (2006/Decision No.1107/DQ-TTG) the importance of establishing the effluent treatment infrastructure has been announced, though many of industrial parks (except for Japanese asset etc.) have no effluent treatment facilities or the facility has been established, but the treatment is not good enough and the wastewater not meeting water quality standard is discharged into a river and the ocean. Some cases are causing severe water pollution. To expand industrial parking lot, a condition has been decided that the effluent treatment facility must be completed. The | According to the Special Economic Zone Article 3 of the Cabinet Order, "the Establishment of Special Economic Zones", it needs to be developed by the SEZ management company. | In Thailand, Indonesia, Vietnam, and Cambodia, it has been a standard to establish industrial park maintenance, which can perform integrate effluent treatment, since the time of introduction of the development. Even for the companies considering locating in industrial parks, it became the minimum demand that effluent needs to be treated in the industrial park and also the treatment facility which accepts sewage needs to be established. Meanwhile, in India, regarding the industrial park development by the State Government Corporation, there are only limited numbers of industrial parks which have established effluent treatment facilities nationally and the current situation is |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>build a factory and to operate the factory, they won't be issued unless the company's effluent treatment system and the method of sewage treatment are confirmed.</p> <p>Also, it depends on the state or the industrial area, but many of them have a system that doesn't allow wastewater to be discharged into a river or the ocean, or anywhere outside the factory. Thus the company must plan to establish a factory on the premise of having its own wastewater treatment facility.</p> <p>Fully 50% of the development cost comes from the central government (MoEF), and 20% comes from the State government of Industry, 5% from the Pollution control board and the rest of the donation from the association of enterprises as the development</p> | | | | <p>regulation regarding establishment of effluent treatment facility has been emphasized.</p> | | <p>that the individual company is building its own facility in its factory. Hereafter in the industrial parks in India, it is desirable to set Inlet standards and to develop the utility which can perform effluent treatment based on Outlet standards regulated by SPCB on the premise that they accept effluent from many unspecific industries if they establish Captive CETP.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>support policy of CETP. The standard model is to be run by the Industrial Association itself or by their designated business. In each state, CETP, for solo industry, is progressing to some extent. However CETP development is very limited in industrial parks.</p> <p>To promote the introduction of the latest technology, there is a support scheme called the National Clean Energy Fund from the central government. Also, there is a system called Water (Prevention & Control of Pollution) Cess Act 1977, which is set to enable private companies to maintain the wastewater standard but is tied together with a favorable policy in taxation. This provides the system for the state government to rebate Cess if the</p> | | | | | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | company maintains the standard for one month. However, the examination is very severe and it is mainly the case that the standard isn't maintained by several points and receives no rebate payment actually. | | | | | | |
| Industrial waste disposal | <p>The Central Pollution Control Board and The State Pollution Control Board are the competent authorities in regard to Industrial waste disposal.</p> <p>Regarding disposal of the industrial waste from industrial parks, a development scheme similar to SCTP can't be used for the development of common infrastructure such as landfill sites or incinerators.</p> <p>However the Central Government has a support scheme to a certain extent as a subsidy (Grant), which was 25% of the cost in the past, but it seems to have</p> | <p>According to the guidelines regarding SEZs, to the SEZ must have a storage space for all industrial wastes inside the SEZ and to designate a landfill disposal facility outside the SEZ.</p> | <p>Usually the Ministry of Industry, DIW, grants a permit for disposal and selects the manifest system, standards of harmful industrial wastes, and non-harmful industrial waste regarding industrial wastes. However, the industrial parks operated by IEAT have their own harmful industrial waste control regulations. General wastes and harmful industrial wastes from the industrial parks are either landfilled or incinerated by a private waste management company or GENCO (General Environment</p> | <p>By establishing the transfer stations where they can collect the industrial wastes in the industrial parks, some private companies provide the industrial waste transport services to the final disposal facilities, but currently most of the companies which produce harmful substances are treating and storing industrial wastes inside their companies.</p> | <p>By the order of the prime minister (Directive No.23/2005/CT-TTG) regarding promotion to control Solid wastes from the central urban area and the industrial parks, the roles of the central ministries and the peoples' committees in states are regulated to control the wastes.</p> <p>It is necessary to develop the industrial waste disposal facilities in the industrial parks by the order of the Prime Minister (2006/Decision No.1107/DG-TTG), and solid wastes are separated into 3 categories, general waste (household waste), harmful waste and recyclable waste.</p> | <p>According to the Special Economic Zone Article 3 of the Cabinet Order, "the Establishment of Special Economic Zones", it needs to be developed by the SEZ management company.</p> | <p>Especially about the systems of industrial waste disposal in industrial parks, the systems have no difference in between South East Asia and India. However, certain areas in India need to design their business plans as the industrial waste disposal plant sites aren't linked with the industrial park development.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>changed now.</p> <p>An industrial waste disposal facility is developed and managed by a joint business of the government and the people in each state, although there is a case that the industrial wastes need to be transported far away as there is no disposal facility in the adjacent area.</p> | | <p>Conservation Public Company), a joint waste management specialist of the Ministry of Industry and IEAT.</p> <p>The wastes produced, and no longer needed, at the EPZ can be disposed outside the EPZ, without the need to pay any duties.</p> | | <p>In general, general waste is collected by a truck from the government owned disposal business through a contract, which was signed by the waste producer and the government owned disposal business.</p> <p>A harmful waste producer needs to use a solid waste disposal service provided by an organization that has a license to collect harmful wastes.</p> <p>"The targets by 2010 and the visions toward 2020 regarding environmental conservation" decided in 2003 has listed a target to introduce the integrated waste disposal system in 70% of industrial parks and export processing zones.</p> <p>As for the standards, and the laws and regulations, they exist by the unit of each state and each industrial park.</p> | | |
| Human | No industrial park | The guidelines | To enhance the | No industrial park | A private industrial | A private industrial To improve the |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| resource development | provides a human resource development program in particular. | regarding the development of special economic zones request the establishment of a technical training facility by the developers in Non-Processing areas. Also, it requests to establish a night school facility on the company's request. | workers' skills, human resource development centers are established in IEAT industrial parks as mentioned below. - Training centers of the Automobile Association and the Institute of Electrical and Electronics in Bangpoo industrial estate - Ayutthaya High-tech skill center in High-tech industrial park (Bangker industrial Estate) - Training center (Thai-German Institute) in Amata Nakorn Industrial Estate. - Swinburne School of Engineering in Laem Chabang industrial estate. This school has provided a special curriculum for workers in the industrial park. Other than these, IEAT cooperate with NIDA (National Institute of Development Administration) is | provides a human resource development program in particular. However, there are some actions requesting the establishment of a vocational training school when developing any new industrial park. | park called VSIP, established Vietnam/Singapore technical training school in the adjoining land to VSIP. As a joint business of both governments of Vietnam and Singapore, they have spent about US\$6,000,000 and offer 4 courses, Electrical Equipment, Mechanical Maintenance, Electronic Engineering, and Mechanical Engineering since 1998 and they are training 178 people every year. This school is operated based on a technical training curriculum in Singapore and the duration of a course is 6 months. Although in Vietnam it has been a pending problem of securing excellent technicians for companies in the industrial parks, the graduates of this school have priority to work at companies in VSIP. | park, Phnom Penh Special Economic Zone (PPSEZ) with the Ministry of Labor and Vocational Training (MLVT) is holding workshops periodically for a vocational training. | productivity in the industrial parks, every country encourages a vocational training to the workers and residents in the area. Also, industrial parks became a good place to put the industrial park programs into practice. In India, a cooperative policy with the developers of industrial parks - Tool Room - has been thought out. Providing a curriculum such as production control and practical machine tool training, will bring a higher rate of a steady worker and possibly will be the measurement to assist the industrial comparative competitive force. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | | | planning human resource development in environmental control at each industrial park and is set to establish a master's course in environmental engineering. | | | | |
| Sales method | Sales methods of industrial parks are different in each state. Rajasthan and Karnataka are especially based on public announcement and approximately 80% of the whole sections are on a bidding system. If there are more bids placed than the number of sections available, then it goes on a draw to decide the allotment. If there are not enough bids placed, then "First-come-First" system applies to the allotment. The rest of the 20% is for auction. Meanwhile, in the industrial parks exclusively for Japanese or Korean companies, they don't take these | Only lease contract can be offered in SEZ. SEZ developers can set the duration of the lease in between 5-99 years. | As for the industrial parks managed by IEAT, private businesses turn the land into industrial lots and sell them but IEAT manages and operates the park. In private industrial parks, they generally sell the land that already has the infrastructure in the park, but they also provide the service mainly for small/medium business to rent a factory. | The method to sell the land with building rights (30 year + extension 20 years) is generally in use, but development of factories for rent is progressing in each industrial park. | The rest of the duration of Land Use Rights (maximum: 50 years) for industrial parks acquired from the Vietnamese Government is to be offered for sublease by signing a lease contract (memo). Recently the number of medium/small businesses coming in has been increased and custom-made factories for rent are establishing. | As foreign companies are not allowed to own any land, they sign a contract for long-term land lease (maximum: 50 years) with SEZ developers. The number of factories for rent is also increasing. (2001 land law) | Sales method varies from county to country. Although a 50 year lease contract is common in Indonesia, Vietnam, and Cambodia, some states in India offer a 99 year lease and it has some attractive factors for investors. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | <p>methods. They negotiate the price by designating the section of their choices.</p> <p>Developed industrial park sites in Gujarat and MP don't go through the competitive bidding. "First-come-First" system applies after the announcement when sales starts. Unless the case of excess demands, the bidding method won't be taken.</p> | | | | | | |
| One-stop service | <p>Each state has a various system providing one-stop service and the effectiveness also varies.</p> <p>There are state authorized branches in Greater NOIDA/NOIDA in UP, however, no one-stop service is provided from each authority as they have no cooperation in the state. They must go to the state capital, Lucknow, for EIA. In Rajasthan BIP handles paperwork</p> | <p>The Central government (Mo Commerce) designates the Development Commissioner as the chairman and a nominal approval committee in each SEZ has a total control of various problems in SEZ. However, environmental problems will be entrusted to the pollution control board of the Central government (MoEF) /the state government depending on its content. The other organizations under</p> | <p>As for building construction and factory construction, it is regulated to follow the Factory Act, the Building Standard Act, and the Urban planning Act. However the governor or the person who was delegated the authority of the governor of IEAT has the authority for permission, which authorities belong to these other Ministries, according to Industrial Estate Act, Article 42/1979). It means IEAT has</p> | <p>The government body for investment is the Investment Coordinating Board (BKPM) and it executes all by applying "One-door integrated service" from acceptance of various permissions/approvals to examinations and decisions. It has not only unified the counters of BKPM but also trying to ease the conditions for permissions/approvals, to simplify the procedures, to shorten the duration, to indicate the fees and to reduce the fees.</p> | <p>The investment review committee for each industrial park is established by the prime minister of Vietnam in order to smooth administrative procedures toward foreign companies. The committee is in charge of providing proper guidance to the companies in the industrial parks, accepting investment application paperwork and delivering them to the proper organization. The system of the investment review committee consists of</p> | <p>There is a regulation of the Council for Development of Cambodia (CDC), The General Department of Customs and Excise of Cambodia (GDCE), Ministry of Commerce (MOC), Camcontrol Department, MLVT and the state/special city representative to station in the SEZ office and to provide "One-stop service" for the</p> | <p>"One-stop service" in India is established by every state by following the state laws and regulations such as the "One Stop Service Act". These organizations were delegated every possible authority to execute a counter duty for permissions/approvals or grant them. However, as for the permissions/approvals for the matters which authorities are delegated to The Central Government, it is difficult for the State Government to handle. From this point, the</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| and monitoring on your behalf as "One Stop Window" regarding 86 clearances, which usually are under control of 11 departments. The electronic system informs them in certain days, after the applications if it is approved or not for every clearance. Also in the procedure till its approval/permit, they are allowed to object once and to appeal every time to a committee, that chairman is the chief secretary. The decision of the Committee can overwrite the other determined matters. The applicants can monitor the progression on electronic devices. "Single Window Clearance System" of BIP deals with business licenses for lands, industrial constructions and electricity, but the licenses for environmental | the state government will be in charge of labor and the related problems. Thus, it appears that the total management isn't the actual situation. However, if the central government decides that delegation of the authority to Board of Approval, Approval Committee and Development Commissioner is needed, it can do so (SEZ Act Article 19) and also the state government can delegate the authority to Development Commissioner (Article 50). Thus, it could be improved, however, Development Commissioner is only a designated post from Ministry of Commerce and Industry, and there is still a question left if it can make a superimposing decision over the authority of the Ministry of Commerce and Industry. | been delegated the authority for permission. Also, foreign specialists who work in the industrial parks and their families are allowed to enter the country and to work (Article 45, 46). These procedures can be applied at once, and so it was named as "One-stop service center" Accompanied services provided are as follows; 1. Information center one-stop service center: the latest situation and information about the industrial parks in Thailand nationally, for example the locations, the number of factories and project progress reports, can be provided. 2. Benefit, Permission, Approval center one-stop service center: It can accept applications and give permissions/approvals in the industrial parks. It can also | BKPM also can go through the procedures for acquisition of land rights and factory constructions. As an exception, Batam, Bintan and Karimun islands have the free trade zone port control board, which acts for BKPM, with the delegation of authorities for investment, imports/exports and other various procedures in industrial fields. Besides that, Private industrial park developers are providing support for the acquisition of various permissions/approvals for companies there. | a chairman, who is a principal member of the local people's committee, and members from The Central Government such as Ministry of Planning and Investment, Ministry of Finance and Ministry of Home Affairs. There is no need to apply to or to consult with The Central Government for Permissions/approvals in regards to investment up to US\$40, 000,000, permission to export/import, building permission or granting VISAs as the Investment review committee has its own authority. | residents. (2005/ Special Economic Zone Act) | procedure for the acquisition of permissions/approvals could improve upon this situation. Also The Acts, which indicates the legal basis, and the regulations, which are to follow the laws and regulations by the order of the head of the country, are prepared for the organizations that are designated as "One-stop service" providers, even in South East Asia. "One-stop service provider" in every country has a seasoned senior officer as a fully engaged staff and not having any side job. The appointed personnel are the person who understands the mind of private companies through overseas training in Japan etc. |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| control, environmental regulations and water are controlled by other organizations. Labor and its related matters are controlled by BIP as well, but VISA is controlled by the Central government. In the future after the development of private industrial parks, if developers request to establish "BIP One-stop service office" in the parks, it won't be able to handle by the current Act. One-stop service is provided to investors at Commission of Industry in AP. Currently the system accepts required approvals/permits from 18 bureaus in state government. The important approvals/permits, which aren't included in acceptable approvals/permits in this system, are the ones you acquire from the central | | <p>give permission to operate which includes land use and other related activities. Permission to operate which includes land use and other related activities</p> <ul style="list-style-type: none"> - Land use for business or other related activities - Building permission - Permission to operate factories - Permission to bond in the free zone - Permission for receipt/dispatch of goods in free zones - Permission to own land in the industrial parks - Permission to stay/work permit for foreign technicians/specialists and their dependent families <p>3. Permission/Approval center for industrial park developers</p> <ul style="list-style-type: none"> - Declaration of industrial park area - Permission for basic plan (master plan) - Permission for | | | | |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>government, which are EIA (MoEF), establishment of a company (Ministry of Company Affairs) and Industrial License.</p> <p>MPTRAIFAC supports investors in MP.</p> <p>Based on "Investment Facilitation Act 2008" it functions as "One-stop service office." The services are industrial sites introduction, acceptance of various applications, follow-up, incentives and capital support such as refund of VAT.</p> <p>KUM functions as the window of "One-stop service" in Karnataka, which provides various incentives for investment promotion. The system offers a monitoring system for paper screening, which has due dates, online application, etc. based on "Karnataka Industrial Policy" and</p> | | <p>building plan of public facilities and establishment of infrastructure</p> <p>- Land for sale</p> <p>4. While consulting about the investment in the related organization corporate center in the industrial park, also aiming to simplify and smooth the procedures by reporting and cooperating with related organizations such as BOI, customs office, Immigration, Department of Commerce, Bank, Industrial Bureau.</p> <p>5.E - Service, inquiry counter and coordinator service</p> <p>- Service regarding land use and business management</p> <p>- Service regarding permission to bond in the free zones</p> | | | | |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|------------|----------|-----------|---------|----------|-------------|
| <p>"Karnataka Facilitation Act".</p> <p>Tamil Nadu Industrial Guidance & Export Promotion Bureau is the chairman of "Single Window Committee," which is held at least once a week, in Tamil Nadu. As a one-stop service office for the projects which investment scales are more than Rs.10 Core, it began to provide its service in 1992 for investors based on "Government Execution Order."</p> <p>This committee accepts single application forms for various approvals/permits, which are also on their website, then hold a committee meeting, which invites each No.2 post from 1. Town&Country Planning Dept., 2. Fire Safety Dept., 3. Labor Safety Dept., 4. Electric Safety Dept., 5. PCB, 6. Boiler Safety Dept., 7. Utility company</p> | | | | | | |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|---|------------|----------|-----------|---------|----------|-------------|
| <p>(Power Supply) 8. SIPCOT (land & water), for investors (enterprises) to have a presentation for them. A consensus building process is taken about the enforcement of the project after Q&A. The bureau can issue a certification of approval/permission called a "Composite Approval (close to NOC)" for the investor (enterprise) after the hearing. With this certificate the investor can build a factory to a certain extent. Official approval/permit will be issued later as the bureau will monitor the progress based on a certain period of time given on each approval/permit screening. Also private businesses in Sri City etc., with support from the State government, have stationed assistant development commissioners to</p> | | | | | | |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| execute everyday government duties there. | | | | | | |

From the perspective of units/companies in industrial parks

Conditions of entry

As a condition for entry into the industrial park, units/companies are expected to be an export-oriented entity in an EPZ. But there is no case in Southeast Asia like the Indian SEZ where units/companies are expected to be a positive net foreign currency earner. In this respect, there is a discrepancy in companies who observe India as offering this hugely attractive domestic market and the conditions of entry into SEZs. Thus, it is often a major hindrance for foreign investors who consider investing in India.

Incentives for investment

Thailand, Indonesia, and Vietnam offer incentives for investment when investment is made in rural areas. There are tax benefits and non-tax benefits. The former is a tax-exemption of customs duties and corporate income taxes for certain foreign companies, and the latter may vary from the establishment of 100% foreign companies, land ownership rights to foreign companies, permission of foreign professional engineers, etc. The difference can be seen between India and Southeast Asia in terms of applying the tax incentives by the scale of investment projects (incentives for investment to the Northeast region in India is also present).

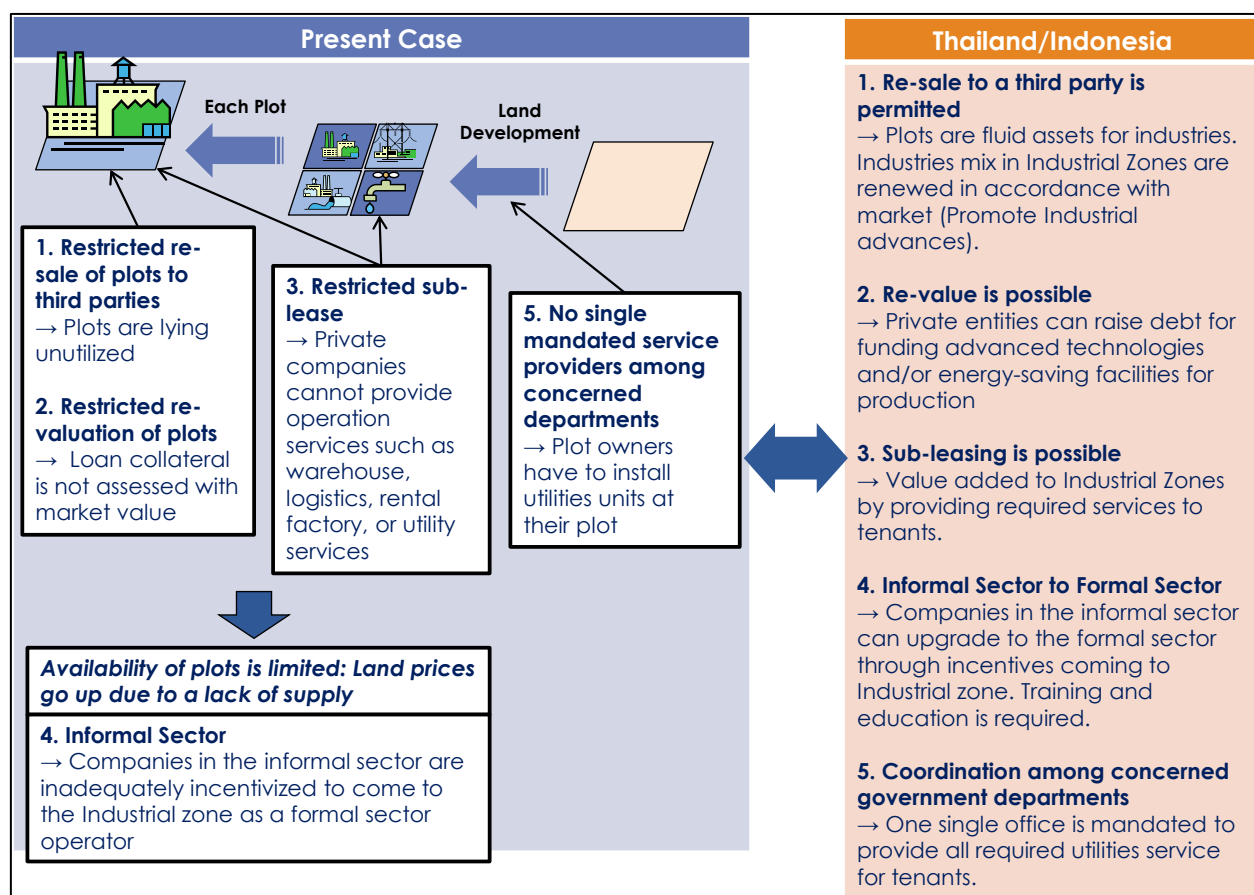
Lease/sales agreement

The lease periods of industrial parks in India, depending on the states, are equivalent to those available in Southeast Asia. However, the problem of defects on the land casts a serious shadow for Japanese companies looking seriously at the Indian market. Depending on the state, but when moving to the industrial park, the seller of the land of an industrial park will take responsibility for the defect attributes in Southeast Asia, whereas the risk potential accrued from land is very uncertain in India, and it is a critical subject for investors to consider investment as there is much room for improvement.

Option of lease/land title transfer

In India, the transfer/resale of the industrial land for industrial park use is strictly regulated. In practice, it is nearly impossible for a company to resell or transfer the land title to a third party. However, the land property of the industrial park/SEZ developed by the private sector can be resold or transferred to the third party at market value as it is practiced in Southeast Asia, and it is contributing to the improvement of liquidity/assets even in India on the other hand.

Figure3-10: Comparison of land property management between India and major Southeast Asian countries



(Source) JICA study team

Regulations and conditions associated with funding

There was a stringent restriction for applicability of two-generation loans for foreign currency funding in India. However, due to the depreciation of the rupee in recent years, as part of the induction measures of foreign currency into the domestic market, restrictions are relaxed, and now the level of restriction measures of funding looks as equal as the funding measures in Southeast Asia. Consequently, the difference, in particular, is not recognized.

Labor: dismissal rules

Major differences are not observed in institutions in particular.

Foreign capital regulation in the manufacturing sector

Differences, in particular, were not observed in that 100% foreign investment is basically unrestricted.

Environmental impact assessment

In the industrial parks in Indonesia and Vietnam, if the parks are granted the EIA clearance to move forward as an industrial park, a detailed EIA is not required to units/companies in the industrial park with a simple examination measures authorized by regulations. On the other hand, in India, an EIA clearance is the subject for each and every business of companies to be operating in the industrial zone, and EIA is the most time-consuming subject for investment approval, and it is the pending factor of investment approval in any states. It appears from this reality, that there is a need of improvement by examining the comparative advantage with other countries from the point of international investors.

Various licensing, plant construction licensing, operation licensing

In the Indian business licensing system, items which are under the jurisdiction of central government would often pose difficulties in their acquisition in comparison with state matters. In Southeast Asia, it is available at even private industrial parks that government staff are dispatched and stationed as a full-time staff and process business administrations to carry out timely and efficient licensing for the benefit of investors.

The difference between Southeast Asia and India in factory construction can be seen in the following manner. Since the construction period is unpredictable in India, the activities of plant design, civil engineering, building construction, and the process of equipment installation cannot be done in an intermittent manner as practiced in Southeast Asia. Consequently, the factory construction period in India in comparison with Southeast Asia would be 1.75 times longer. In Southeast Asia, factory construction that takes two years requires 3.5 years in India.

In the work of connecting utilities with the plant, separate arrangement and contracts are required in access roads (road / bridge dept.), power distribution lines (state power transmission company), gas pipelines (state gas company), and water pipelines (industrial association). Negotiations for installation with each individual organization would increase their cost in time and money. This kind of situation is not so common in Southeast Asia for units/companies to face when they come to enter industrial parks in Southeast Asia, and has led to an increase in their costs.

Certification of origin

India imposes the applicability conditions of FTA by meeting both the achievement of the local content condition of the products from member countries and change of the HS code at the same time, thus the use of FTA is more difficult than trading with other countries.

Parts procurement rate

Local content in India appears to be high at first glance. But when it comes to the variety of manufactured products, supporting industries have not grown with a wide range of industries - which have grown extensively in Southeast Asia.

Power

Unlike Southeast Asian countries, captive power plants in industrial parks do not commonly exist in India. This situation seems to come from the lack of measures for IPP private operators to reduce their business risk, and for state industrial development corporations, duties and authority for development and delivery of power to investors not being given a clear mandate concerning their responsibility.

Industrial water

Industrial water supply is not seen as a major difference between India and Southeast Asia. But the privatization of the water supply project is advancing in Southeast Asia.

Wastewater treatment

Common wastewater treatment facilities capable of processing both domestic wastewater and industrial wastewater simultaneously are available in the industrial parks of Southeast Asia. Each individual unit/company does not need to install independent treatment facilities - it can simplify the system for treatment. In this regard, there is a difference in the system design for wastewater treatment between India and Southeast Asia. That is, individual companies must be in line with regulatory standards specified by CPCB by industry, and each individual company builds its own wastewater treatment facility. Among investors, there is a view that, in Southeast Asia, that is not a requirement. It is a fact that to get approval to build wastewater treatment facilities is a cumbersome process. It is believed that the authority of the state industrial development corporation is not good enough to be responsible for building the required infrastructure and providing service delivery, which should include the installation of industrial wastewater treatment facilities.

Table 3-17: The current state/ challenges of industrial park development of India and comparisons with industrial parks in Southeast Asia - The viewpoint from tenant companies of the Industrial Parks

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|------------------------|---|--|---|--|--|--|---|
| Conditions for Tenancy | Depends on the Industrial Parks. Some places set regulations for factories that generate industrial waste and factories that use large amounts of industrial water. | Regarding a block as five years from the start of production, companies in Special Economic Zones (SEZ), Software Technology Parks (STP), Electronics Hardware Technology Park, Biotechnology Park (BTP) and 100% Export Oriented Units (EOU) are obligated to operate profitably over the course of the block. Selling to Domestic Tariff Areas (DTA) is allowed as long as import custom duties, etc., are paid by DTA. However, in accordance with foreign trade policies from 2009-2014, for companies in STP, EHTP, BTP as well as EOU shall be applied for selling a limit of 50% max of the total export value based on the FOB price. Moreover, selling cars, alcoholic drinks, books, tea or | It is required that the FOB export value must reach 40% of yearly sales to become a tenant in an EPZ. (revised in B.E. 2538 (1995)) | For Bonded Zones, there used to be a rule to allow the companies for domestic sales of 50%, but in accordance with Form No. 147 of the Ministry of Finance stipulation dated Sep 6, 2011; the domestic selling limit was reduced down to 25% after the renewal of bonded license on or after 2012. However, the application was postponed until 2014 due to a persistent argument against this rule. | Regardless of capital investment by foreign or domestic sources, under the Common Investment Law and Enterprise Law enforced on July 1, 2006, Investment Encouraged fields and companies that are going into Investment Encouraged areas shall receive preferential treatment. They are also required to use the land within 2 years. | There are also places in private special zones where Industries with high contamination levels, such as plating processing or dyeing industries are not allowed to become tenants. | Occasionally, conditions for tenants in Industrial Parks are established in an environment which aims to attract export oriented industries, yet there are no countries with provisions like India's Special Economic Zones (SEZ) that require maintaining profitability that are found in Southeast Asia. In this respect, despite many manufacturers currently considering a domestic market in India as their key market, this mismatch between supply and demand is putting a huge restriction on investment for companies that aim to expand in India. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|----------------|---|---|---|--|--|---|---|
| | | other particular items to DTA is not permitted. | | | | | |
| Tax Incentives | All kinds of preferential treatments shall be provided for Investment in fields such as Infrastructure development, electric power development/transmission, renewable energy and chemistry research fields. For royalties, the government may give preferential treatment such as tax reductions in each case (usually limited to large cases). However, there is no significant preferential treatment to medium-scale investments. | In accordance with the Special Economic Zone Law of 2006, tenant companies in SEZs shall be entitled to a corporate tax reduction for up to 15 years. Reduction of customs duties on raw materials is also offered for the purpose of export promotion. Companies expanding to SEZ shall not be subject to the Service Tax. They shall also be exempted from paying Stamp Duty when it's a lease contract. Although, it seems that tax incentives have weakened due to the minimum alternate tax (MAT) / 18.5% of book profit and the dividend distribution tax (DDT) / 16.22% of dividend received from developer application in SEZ from April and June | The Corporate Income Tax exemption shall be applied for up to 3 to 8 years from the taxable income earning day based on an approval from the Board of Investment (BOI). In case of losses that incurred during the exemption period, the amount of the loss shall be deducted from a single year or multi-year net profit within 5 years after the end of the exemption period. Exemption from import taxes on parts, raw materials and equipment depends on the projects. *Project duration varies depending on its location and detail. EPZ includes the following benefits: exclusion from import tax, value-added tax | According to a Cabinet Order (2008, Article 62), based on conditions of region and price, 30% of its investment amount shall be deducted (5% for 6 years) for fixed asset investment in specific industries. Application of accelerated depreciation (half the time) is also possible. A tax holiday (corporate tax exemption for 5 to 10 years) was introduced by provisions from the Minister of Finance in 2011 (dated August 15) to 5 specific industries. It has not been issued as of August 2011. | Even though preferential treatment for tenants in Industrial Parks was abolished on January 1, 2009, with a new corporate tax law that was formulated in 2008 and revised in January 2014 to be applied, tax rate to profit from projects which performs field survey on new Economic Zone and High Tech Park (limited to regions where it's hard to develop natural and social environmentally) shall be 10% with the privilege period of 15 years, the tax exemption period of 4 years and the tax reduction period of 9 years.() Even an average Industrial Park measures an investment incentive to reduce corporate tax rates to 20% unless it's an investment for big cities. Depending on regions, exemption of rent payment of the land and issuing visas for foreign workers who work in Industrial Parks and their family are also | Customs or other taxes are subject to preferential treatment the same as other QIP. QIP shall be applied the tax exemption of corporate tax (max. 9 years), import/export duties and VAT based on Investment Trust Law of 2003. Others are as shown below. - Export Processing Model QIP : Tax exemption on raw materials, materials for factory construction, import duties for production facilities as well as VAT - Domestic Market Model QIP : Tax exemption on materials for factory construction and import duties for production facilities | Countries like Thailand, Indonesia, and Vietnam have a tendency to measure preferential treatment for investment on the areas especially with no industrial development. In this regard, there is a difference shown in India where the tax incentives for an investment shall be applied depending on its size. (There are investment incentives available in the Northeastern states of India). |

| India | | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | | 2011. | (VAT), sales tax etc., on raw materials for manufacturing, machinery and equipment, tools, factories, and building materials shall be exempted (Article 48), and this applies to exporting from EPZ to other EPZs (Article 49). However, in the event of shipping within a country, import tax, VAT, sales tax etc., in accordance with the tax levied at the time of shipping depends on the kinds of goods, which shall be subjected (Article 51). Approval from a president or a delegate authorized by a president is required in order to export or import any goods to EPZ (Article 56). | | encouraged. | | |
| Lease / Land Sale Agreement | As for the acquisition of land, a lot of state laws shall be involved in addition to the | Apparently, lease terms shall be adjustable freely between 5-99 years | For companies with Thai Board of Investment (BOI) incentives and | It's common for tenant companies to purchase through Industrial Park | When implementing the investment, foreign companies and foreign parties with partnership | As foreign companies are not allowed to own any land, they sign a | As for the length of the lease term in Industrial Parks in India, depending on |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| <p>Compulsory Purchase of Land Act from Central Law.</p> <p>For example, according to the Land sale agreement in the State of Haryana, there is a provision stating that the owner of the land shall resolve the issue in the case of a problem occurring regarding land sales. This is creating a concern about the risk of liability for a hidden defect among the companies that are expanding.</p> <p>In Gujarat, 99-year leases or Freehold options shall be available.</p> <p>In the State of MP, 30 year leases are standard, but it is possible to have lease terms up to 98 years and AKVN shall enter into a lease contract with private companies In this event, 8.2% royalties shall be applied to the Premium price which is set by the lease contract.</p> <p>Even in the State of Karnataka, land is for lease contract only. While Freehold agreements used to be approved, it was decided to have 30 years as the basic-standard, renewable for another 30 years to make it a total of 60 years, since August</p> | <p>by SEZ developers SEZ in Mundra provides 30-year lease terms, but in Mahindra World City, both SEZ/DTA provide 99-year leases.</p> | <p>those approved by the Industrial Estate Authority of Thailand (IEAT), land ownership is possible even for foreign-owned companies regardless of the rate of investment, even if it is at 100%. There are no exceptions otherwise for foreign companies to be able to own land.</p> <p>Note that if the joint venture is 50% funded by Thai investors, they shall have the right to purchase land in areas excluding Industrial parks.</p> <p>Lease terms must last over 30 years to under 50 years from the date of contract according to lease conditions for foreign corporations.</p> | <p>businesses lots which are set under Right to Build (30 years + renewable for another term of 20 years) prescribed in Basic Agrarian Law (1960). Basic Agrarian Law was established to act as a basic land law Leasing options are becoming a reality in the future for tenants to be able to rent facilities.</p> | <p>agreements shall not hold the ownership of land in accordance with the Land Law (2003). Tenant companies shall enter into a lease contract for Land Use Rights (memorandum) with Industrial Parks businesses.</p> | <p>contract for long-term land lease (maximum: 50 years) with SEZ developers (Land Law of 2001).</p> | <p>the state, you can expect the provision of the lease term to be competitive with Southeast Asia. Strong concerns over the risk of liability for hidden defects on leased land became an issue among Japanese-affiliated companies wishing to expand into India. In regards to becoming a tenant in Industrial Parks, while the seller accepts responsibility for attributes and defects on the land according to Industrial Parks development models in Southeast Asia; in contrast the liability of the attributes of the land in India is materially uncertain to use to decide which country to move to, and a challenging issue that can be improved.</p> |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|----------------------------|--|---|--|---|--|--|---|
| | <p>2013. Freehold agreements that were contracted before August 2013 shall still be effective.</p> <p>In the State of Tamil Nadu, it's possible to have a 99-year lease but no land purchasing.</p> <p>As for most of the industrial site trades, lease cum sale contracts shall be finalized on the condition that the industrial activities such as plant production shall start within a specific period of time (within 2 to 5 years).</p> | | | | | | |
| Lease / Resale Possibility | <p>As for resale, provisions vary in each state. In the State of Maharashtra, resale for industrial sites is not allowed for companies that are expanding unless 5 years has passed since the date of the lease contract and operation has begun.</p> <p>As for Industrial Parks operated by private companies, tenant company lease rights and factory resale based on market value are acceptable on condition that the developers shall come in to handle the transaction, become a primary negotiator and monitor the entire negotiation. Transfer</p> | <p>Resale of lease sections in SEZs to a third party shall be acceptable, on condition that the buyers must possess an operation permit in SEZ (Letter Of Approval) by the Development Commissioner. Resale price must match the price for which it was bought. Approval from the SEZ Authority is required in order to resell.</p> <p>As for resale of the SEZ land by private enterprise, provision shall be established so that tenant</p> | <p>Tenant shall be able to sublease or transfer their lease to a third party as long as there are no other conditions prescribed in the lease contract.</p> <p>In the event of discontinuing or transferring the business by the foreign industrial company or exporter, they ought to sell the land that was approved to own and property associated with the land to a public corporation or person within 3</p> | <p>Selling or transferring the Right to Build is acceptable. Also, the Right to Lease shall be provided in accordance with the agreement between the parties concerned, since there are no provisions on lease terms and transferability stated in Indonesian Laws.</p> | <p>Foreign-owned companies may use the Land Use Rights (or assets on land) in order to transfer, sublease and use assets on land as collateral (or as security) to trusted agencies. However, onetime payment of the lease fee for the entire period of the lease term in advance is essential if land is on a lease contract.</p> <p>Moreover, in regards to facilities for non-residential purposes such as office use or factories, foreign-owned companies shall be allowed to acquire only if it's a private-use, not for speculation purposes.</p> | <p>As a general principle, resale shall be acceptable by changing the name on the Long-term lease certificate. However, sometimes conditions in regards to this shall be prescribed on its contract (are restriction, etc.). Reporting to CDC in advance is necessary.</p> | <p>As for India, resale / transfer of the industrial sections in industrial areas come with strict regulations prescribed in each state. As for the industrial district by the public corporation, resale/transfer of the land is not possible in some cases. On the other hand, the resale of the land at the market price just like the Industrial Parks system in Southeast Asia shall be possible for Industrial Parks development and development of SEZ</p> |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|--|--|---|--|---|--|--|---|
| | Charge shall be applied in regards to formation of the sales contract. Note that foreign companies shall not be allowed to resale a site and real estate or purchase them for lease purposes through their subsidiary or branches in India. | companies shall be able to resale the land lease right (applies both SEZ/DTA) to a third party after 2 years. Business developers shall be the primary negotiator in this case and although price shall be at its market value, business developers shall be entitled to receive 15% of its profit in event the resale contract came to an agreement with a third party and another provision prescribed that if resold to a group company, then a payment to business developers of 15% of the profit shall not be required. | years; otherwise, the secretary of the Department of Lands must sell the land and property associated with the land to a public corporation or others in accordance with the Land Law. | | They shall not purchase facilities for the purpose of resale or for lease. | | projects by the private enterprise, and this can lead to an increase in liquidity/asset values in India. |
| Regulations and Conditions regarding Financing | As for financing, not only procuring from Local banks, Japanese-affiliated banks or Foreign Capital banks denominated in rupees shall be possible but also to procure from any Indian local commercial banks denominated in foreign currencies by taking advantage of the External | Financing including ECB shall be in accordance with provisions prescribed by the Ministry of Finance but there are no special rules regarding financing. | Financing may be in Baht or any other type of currency within Thailand. There are no restrictions. Parent/subsidiary loans as financing shall also be freely allowed. However, borrowing shall be required to report | It is possible to get financing in rupees or other foreign currency denominations unrestrictedly in Indonesia. Borrowers shall be obligated to report all offshore borrowings such as parent/subsidiary | Financing denominated in dong or other foreign currencies are allowed, although restrictions on the use of borrowing in foreign currencies shall be applied in Vietnam. 1. Payment for imported goods /service from overseas. 2. Payment from Vietnam to overseas. 3. Prepayment for foreign | Getting a loan without having real estate as collateral is relatively difficult. Loan terms are usually short and interest is high. Since there are no regulations regarding loans from overseas, procurement of | Parent/subsidiary loans or financing denominated in foreign currencies used to come with regulations with strict limitations for use of the loan in India. Although, as a part of a plan to bring foreign currency into the country after a |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | Commercial Borrowing (ECB) shall be possible and sometimes you get better interest rates than market interest rates in this case. In addition, borrowing from a foreign parent company that has a 25% share of the Indian subsidiary to finance Working Capital used to be prohibited but as of September 10th, it is now allowed, given certain conditions are met. | | the purpose of the borrowing (loan etc.) to the Central Bank through their banks and a 15% withholding tax shall be added at the time of interest payments on parent/subsidiary loans. Capital stocks, borrowings or other funds originating from Thailand shall be permitted to send outside the country (Article 47). | loans or foreign bank loans to the Central Bank. Also, a 20% withholding tax shall be added to interest payments in relation to parent/subsidiary loans and borrowings from foreign banks. | debt (parent/subsidiary loan etc.). Procurement of parent/subsidiary loans shall be permitted. However, if it is a short term loan, reporting to the Central Bank after the event is required and payment must be made to foreign investment companies' ordinary accounts. The purpose of borrowing must only be for working capital. For a medium to long term loan, prior approval and a separate borrowing registration certificate from the Central Bank is required when borrowing but it's not necessary for parent/subsidiary loans. A 10% withholding tax shall be applied to the total interest payment on the loan. | parent/subsidiary loans are generally used. | recent fall in the rupee, deregulating limitations for use of the loan was implemented. As a result, a significant difference is no longer noticeable from financing in Southeast Asia. |
| Labor : Dismissal Policy | Based on Industrial Employment (Standing Order) Act, the Companies shall add provisions for dismissal procedures on public standing order. Employers must prove employee's wrongful acts (negligence, violation and disobedience of duty) in order to justify employee's dismissal. | While the Indian Labor Law is determined at a state level, it shall still be able to be enacted or revised within a certain range. As a result to this, working conditions differ by each state. So even Special Economic Zones have provisions prescribed | Employers can dismiss employees at employer's discretion. Employer shall be required to give the employee a notice of at least one full payment period in advance of the effective date of dismissal. Severance pay | Employers can only dismiss employees when the work contract has ended or the employee reached the retirement age. If more than 10 employees are involved in a dismissal by its employer, the employer must apply | Based on Labor Law, dismissal is permitted only when the employee has done any of the following: The employee commits an act of theft, embezzlement, disclosure of business or technology secrets or other conduct that is seriously detrimental to the assets or interest of the | Hiring and dismissal of employees must be declared by writing to the Ministry of Labor within 15 days of the implementation day (Labor Law of 1997). | No particular difference is found in these systems. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | <p>Employers shall be required to prepare a document that states the reason behind the dismissal and conduct an internal investigation in office. After the report from a prosecutor is examined, the reason for dismissal notice shall be issued to the relevant employee.</p> <p>Employers shall be required to pay employees 15 days' pay for each completed year of continuous service as severance pay to ensure financial security after dismissal.</p> | by each state to prohibit the formation of labor unions (State of Maharashtra, Karnataka, Tamil Nadu and AP etc.). | varies depending on the length of the employee's service with the employer. | <p>for the request of approval from the government Even for cases like disciplinary discharge, employers may be required to pay for employee's severance payment, retirement benefit etc.</p> <p>1 month pay shall be paid to employees who completed 1 year of continuous service as severance pay and 1/2 of that shall be paid as a retirement benefit. Based on this, employers shall be required to pay the employee up to twice the amount for each case.</p> | <p>company.</p> <p>Repeating a breach while a disciplinary sanction (such as suspension of salary raise, job transfer or demotion) has not been removed for the earlier breach. Repeating a breach after being demoted due to an earlier breach.</p> <p>Absence for 5 working days in a month or 20 working days in a year without justifiable reasons are grounds for dismissal.</p> <p>If dismissals of employees occurred by reasons stated above, the employees shall not be entitled to severance pay.</p> | | |
| Foreign Capital Controls for Manufacturing Industry | In principle, 100% wholly foreign owned subsidiaries are permitted to expand into the country to manufacture anything except for those items that are prohibited, including: nuclear power, tobacco and cigarettes. | Conditions you can see on the left shall not be applied for development of SEZs, hotels, tourist facilities, hospitals, nursing homes and building schools. | Operating under 100% foreign ownership for most of the manufacturing industry is permitted and FOBs are entitled to incentives such as corporate income tax exemption for up to 8 years, permission to own land and permission for | Not a particular regulation towards manufacturing industry except for those on negative list prescribed on No.35 of Presidential Regulation (2010) so it is possible for 100% wholly foreign owned subsidiaries to expand into the country. | Manufacturing industry is an open investment field in principle and foreign-owned companies may be sole-investors regardless of the industry. To operate in the manufacturing industry, companies shall be required to obey articles as well as guidance documents prescribed in the Law on Environmental Protection. | The establishment of 100% foreign owned subsidiaries is allowed in various industries. There are no restrictions on foreign investors in the manufacturing industry. | There is no significant difference between the systems and 100% foreign owned subsidiaries are basically allowed to expand. |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
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| | | | foreign workers to work and stay in Thailand by the Board of investment (BOI). However, there are many restrictions to be applied, such as: applying a min. level of investment capital of 1 million baht, value added shall not be less than 20% of sales revenue and the ratio of debt to equity should not exceed 3 to 1 for a newly established project etc. | | | | |
| Environmental Impact Assessment | NOC from the Union territory Pollution Control Committees are necessary to operate manufacturing for tenant companies in general Industrial Parks. Companies that plan to build over 200,000 sq.ft shall be required to apply to the Regional Office of the Union Ministry of Environment & Forests (MoEF) and others shall apply to the State Pollution Control Board (SPCB) to get approval. | In SEZ, business developer projects determine what kind of companies will be expanded into the country beforehand, so it's not required to submit a new application to EIA as long as the company fits in the same category prescribed in pre-application. Each SEZ places expertise for each category to complete EIA Clearance normally within 2.5 - 3 months. | In accordance with the National Environmental Quality Act of 1992, establishment of new project or expansion of an existing project in Industrial Parks shall be required to submit the analysis report based on the result from Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) to the Office of Natural Resources | Through an Environmental Impact Assessment provided by Industrial Parks project manager called ANDAL (ANDAL), each factory shall be required to meet the environmental standards. If the environmental assessment has already been undertaken by the Park by the time of settlement in Industrial Parks, preparing and | The tenant company must apply for an investment license as well as going through the procedure for an Environmental Impact Assessment. In general, an Environmental Impact Assessment report must be submitted in accordance with Government Decree No. 175/CP of 1994 providing guidance for the implementation of the Law for Environmental Protection. Because investment from overseas is encouraged in Vietnam, they issued the Circular (Circular | If those listed as required conditions listed in the Environmental Protection and Natural Resource Management (December 1996) apply, application for EIA by the Ministry of Environment must be done prior to applying for QIP. If CDC determined that company requires EIA, company shall be notified. | As for Indonesia and Vietnam, tenant companies, seeking to get approval for an EIA, shall expect a simple procedure to be provided and a detailed EIA shall not be required when Industrial Parks have already gone through the EIA clearance. On the other hand, in India, they practice EIA Clearance on every project advanced by companies that are expanding. Since this EIA |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication | |
|---|---|--|--|--|---|--|---|
| | | and Environmental Policy and Planning. All Industrial Parks Offices are responsible for continuously managing and controlling the environmental management system in compliance with the regulations. | submitting a report from an Environmental Impact Assessment shall not be necessary. | No.490/1998/TT-BKHCNMT) so that these investment projects need to follow a simpler procedure to submit the EIA report. Small-scale projects of little environmental impact shall be classified as Category. When a project falls under Category II , the company concerned may complete the Environmental Impact Assessment procedure by submitting the Registration for Securing Environmental Standards to the Ministry of Science, Technology and Environment (MOSTE) through the National Environment Agency (NEA) or the relevant Department of Science, Technology and Environment (DOSTE). Most Japanese-affiliated companies located in Industrial Parks are qualified for this circular. | | procedure takes the longest time to take in relation to Investment Certification, it's causing projects to become a pending status in every state. Based on this reality, it seems that it is necessary to inspect the comparative advantage country by country. | |
| Any Other Permit Building Permit Operation Permit | In the state of Rajasthan, in order to obtain a Business Administration License such as operation approval, if the project costs more than Rs. 10, applying to BIP shall be required. Others apply through Industrial Dept. | Tenant companies in Industrial Parks and SEZs must obtain Consent to Establish from the State Pollution Control Board to prior to building factories. | Companies who wish to operate projects in Industrial Parks must obtain permission from the Governor or a person designated by him in accordance with | As for expansion of the manufacturing industry, it is not allowed to build factories outside Industrial Parks as a general principle since the Industrial Park rule that was | Investment Certificates shall be obtained through the IZ/EZ/EPZ/HTZ authorities. Tax Registration shall be required to apply through local tax office and Labor Registration shall be required to apply through | According to the Cabinet Order No.86 in 1997, in relation to Construction Permits, construction of buildings shall be subject to | Companies are more likely to encounter difficulties in obtaining permits at the state representative office which is overseen by the Indian central government due to |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|---|------------|--|--|---------------------------|--|--|
| <p>offices in each District.</p> <p>In regards to building a factory, a Site Plan and Building Plan must be approved by the authority or a private management company. For some private SEZs, if the size of factory is smaller than 10 acres, obtaining both plans through private management company shall only be necessary. If exceeding 10 acres, you must always obtain approval through the authority.</p> <p>State of AP offers a one stop service which helps investors to file all the documentation to one place on behalf of other authorities within established time limits. Projects shall be reviewed by an organized group having the Chief Secretary as chairman and above that is the Chief Minister as director. For companies that are expanding into Industrial Parks, Escort officer shall direct and guide through anything the company needs, depending on the importance of the project.</p> <p>To build a factory, companies shall be required to obtain</p> | | <p>the rules prescribed by the Board (section 41). BOI investment incentives shall be awarded through committee (Prime Minister as a chairman of the committee for large project, small committee shall be conducted for small projects). As for approval of tenant applications, unlike BOI, infrastructure demand for the Park, pollution level and measurement shall be emphasized. When it's BOI, approved project shall be issued by BOI a Promotion Certificate which explains benefits and conditions. On the other hand, when it's IEAT, tenant and IEAT shall enter into a contract which includes contents that mainly explain how the tenant needs to obey the rules.</p> | <p>formed in 2009 prescribes that having an address within Industrial Parks is necessary.</p> <p>Building Permit (IMB) must be obtained from prefecture or city's section at the Department of Public Works in order to receive public service (water, power, waste treatment, and telecommunications) in connection to build a building or a non-building (parking area, recreation facilities etc.). Also, Business Licenses (IU) must be obtained from the Investment Coordinating Board (BKPM) or State BKPM. Factory construction status must be reported to the BKPM head office or other BKPM offices nationwide.</p> <p>Industrial Business License (IUI) shall be required to obtain through prefectural or state governors depending on the scale of projects.</p> | <p>Ministry of Labor.</p> | <p>construction permits to be obtained from the Land Management, Urban Planning and Construction. After submitting a long-term land lease contract along with basic design (ground plan, elevation and cross section) assessment shall be conducted.</p> | <p>the required condition list.</p> <p>Unlike India where there is no full-time government staff placed for each private Industrial Park, Southeast Asia offers full-time government staff placement service to help with smooth business administrative procedures in consideration of all the investors.</p> |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|---|------------|--|-----------|---------|----------|-------------|
| <p>"Consent to establish" and "consent to operate" from the State Pollution Control Board to be able to operate in accordance with the Water Act and Air Act. Factories shall receive inspection and monitoring irregularly on the factory's wastewater and exhaust gas to see if they meet the standard.</p> | | <p>Tenant application process by IEAT for companies who wishes to become tenants in Industrial Parks are as follows: the industrial operator shall complete application (Kor Nor Aor 01/1) for land utilization for business operations in industrial estates and submit it at the One Stop Service Center located at IEAT head office or any Industrial Park's office nationwide. IEAT shall consider the correctness of the documents. If they conform to relevant laws, IEAT shall issue a notification requesting the industrial operator to sign a contract and obtain a license for land utilization and business operations in industrial estates (IEAT 01/2). Note that the license issuance fee is 10,000 Baht (excluding VAT).</p> | | | | |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-----------------------|--|---------------------------|--|--|---|--|--|
| Certificate of Origin | India -Japan Comprehensive Economic Partnership Agreement (India and Japan CEPA) Rules of Origin: a tariff sub-heading change (6 digit) and the level of local content (=accumulation of value-added criterion) should be a minimum of 35%. Both requirements need to meet. Same as provisions of India-ASEAN FTA. | No particular provisions. | Japan - Kingdom of Thailand Economic Partnership Agreement (JTEPA) Rules of Origin: a tariff sub-heading change (2 - 6 digit) or the level of local content (=accumulation of value-added criterion) should be a minimum of 40%. | Japan - Indonesia Economic Partnership Agreement (JIEPA) Rules of Origin: a tariff sub-heading change (2 - 6 digit) or the level of local content (=accumulation of value-added criterion) should be a minimum of 40%. | Japan - Vietnam Economic Partnership Agreement (JVEPA) Rules of Origin: a tariff sub-heading change (4 digit) or the level of local content (=accumulation of value-added criterion) should be a minimum of 40%. | Since Cambodia is a least developed country (LDC), it is entitled to the Generalized System of Preferences (GSP) schemes operated by USA, EU and Japan. Rules of Origin of exporting by GSPs are at least 35%, but the Rules of Origin treats eligible ASEAN group countries (Cambodia, Thailand, Indonesia, and Philippines) as one country. Authorized to certify the Certificate of Origin at customs located in SEZ. | The conditions to apply FTA in India requires both HS sub-heading change and the local content rate to be fulfilled and this is making it more difficult to utilize FTA compared to other countries. |
| Content Rate of Parts | Indian automotive manufacturers achieved the goal for local content apparently with parts of local content rate at 90%. However, if you only look at content rate of semi-domestic products, a local content rate seems to be around 75% based upon its price (excluding the case which domestic companies supplying parts imported from Japan). | No particular provisions. | The local content rate for Japanese-affiliated companies operating overseas in 2013 is 52.7% and it is the highest rate in ASEAN countries which indicates the high agglomeration of supporting industries. The breakdown of | The local content rate for Japanese-affiliated companies operating overseas in 2013 is 40.8%. The breakdown of local suppliers is 52.0% of local companies and 42.2% of local Japanese-affiliated operating companies. | The local content rate for Japanese-affiliated companies operating overseas in 2013 was increased by 32.2% from the rate of 22.4% in 2010. The breakdown of local suppliers is 41.0% of local companies and 42.6% of local Japanese-affiliated operating companies. | The local content rate is significantly low, only 2.2% (study by JETRO, 2002). To solve the issue of raw materials and parts being unable to be procured locally, strong foreign investment incentives are implemented. | The local content rate in India seems high at a glance, though it lacks in variety of manufactured products. That does not mean the supporting industries are being developed in a wide range of industries either. In fact, they are not doing better |

| | India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-----------------------------------|--|---|---|---|---|--|--|
| | | | local suppliers is 40.7% of local companies and 55% of local Japanese-affiliated operating companies. | | | | than in Southeast Asia. |
| Electric Power Procurement Method | <p>The electricity provided from state government is of poor quality. Based on this, Japanese-affiliated companies are expanding in each area in India, planning for production systems which include private electric generator facilities. It is rare to find companies that depend only on the power supply provided by Industrial Parks.</p> <p>As for large-scale assembly factories, they supply part of their electric power from private electric generators inside their factories supplemented by the neighboring large part factories (subcontract company). Meanwhile, in the state of Gujarat where electric power development is progressing, it's common to purchase power from the State Electricity Board. Electric power procurement conditions vary by state.</p> | Each Special Zone is different. There are private special zone projects that supply from their own power generation projects. As an electric power procurement method, power supplied by electric companies comprises the majority. | Although power outages and instantaneous power failures do happen in Industrial Parks, it is rare and an unproblematic level for operation. Only a few companies set up private electric generators since planned power outages for maintenance are notified suitably in advance. | Most of the main Industrial Parks adopt a Premium Service (variable rate within the range that does not exceed other private electric company's rates) which provides a preferential power supply service by a government-owned electricity company (PLN). Issues in regards to power outages or instantaneous power failure are not reported often from companies that are expanding. However, as a whole industrial division over all, serious shortages of electric power are becoming apparent and this is leading to a growing concern about the effect of power shortages on the Industrial Park in near future. Some private | The electricity rate of Vietnam is outstandingly low-priced relative to major Asian countries. While the companies that are expanding can take advantage of the cheap power costs, the downside to depending on hydroelectric power generation is leading to a great concern about an unstable power supply. Also, due to an order to reduce the peak load of electricity from the electric company, installing emergency private electric generators became essential in each factory. Peak demand was causing the malfunction of the transformer which led to frequent power outages. | The electricity rate in the city is 13 - 25 cents / kwh, which is fairly expensive compared to neighboring countries. Construction of Power Plants and regional power grid systems led by private capital and the Asian Development Bank (ADB) are being implemented. The expected power increments amount shall be 3,500MW (7 times more) by 2020; expansion of a power line shall be 2,362km (7 times more) compared to 323km in 2008 is planned. In regards to power outages in the central part of Phnom Penh city, instantaneous power failures occur a few times a month on a random | Unlike Southeast Asian nations where private electric generators are set up in Industrial Parks, in India, no one has private electric generators installed in Industrial Parks. It is probably due to lacking in risk mitigation measures over private company's IPP project and also state industrial development public corporations don't have the duty and authority against any responsibilities for the development and supply of electric power. |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication | |
|----------------------------------|---|---|--|---|---|--|---|
| | | | Industrial Parks have their power supply backed by both public companies and IPP in order to cope with limited power supplies. | | basis. | | |
| Industrial Water Securing Method | Water supply is basically secured from public corporations. | Water supplied by public corporations is common. | Water supplied by water corporations and Industrial Parks management companies are common. | Water supplied by Industrial Parks management companies is common. | Water supplied by water corporations and Industrial Parks management companies are common. | Water supplied by Economic Special Zone management companies is common. | There is no major difference in system, but privatization of the water supply project is progressing in Southeast Asia. |
| Drainage Method | There is a provision that prescribes that companies must establish their treatment facilities and not discharge wastewater from households and industrial wastewater from the industrial wastewater treatment process, outside the factory. As a result, companies plan the production facilities that are designed to reuse wastewater in the factory as much as possible. | Treated within Special Economic Zones or company's own factories. | The basic drainage system for wastewater treatment that includes additive is to conduct an organic treatment at a central treatment plant in Industrial Parks upon two treatments implemented at each factory. | The central wastewater treatment plant established in Industrial Parks intake wastewater that has been treated once or twice as necessary, at each factories to process until it meets the wastewater discharge standard set by a country to finally discharge. | In order to become a tenant in Industrial Parks which have a central wastewater treatment facility with a biological treatment, each factory shall be enforced with a lenient numerical valued (normally class C level of industrial wastewater standards) standard compared to industrial wastewater standards for first treatment as BOD, COD and suspended substances shall be treated at central treatment facilities in Parks. However, normal industrial wastewater standards for applicable classes shall be applied to heavy metals and other harmful substances that are untreatable at a central wastewater | Industrial wastewater shall be transferred to wastewater treatment facilities established in Special Economic Zones to implement wastewater treatment. | Both household wastewater and industrial wastewater can be treated at Industrial Parks' central wastewater facilities in Southeast Asia, so tenant companies are not required to establish treatment facilities themselves or have it pre-processed. In this respect, the difference can be seen from systems in relation to Indian wastewater treatment. A primary factor of that matter may be that there are no responsibilities or authorities given to state industrial development public corporations in |

| India | India/ SEZ | Thailand | Indonesia | Vietnam | Cambodia | Implication |
|-------|------------|----------|-----------|---------------------|----------|--|
| | | | | treatment facility. | | regards to providing infrastructure including industrial wastewater treatment and service. |

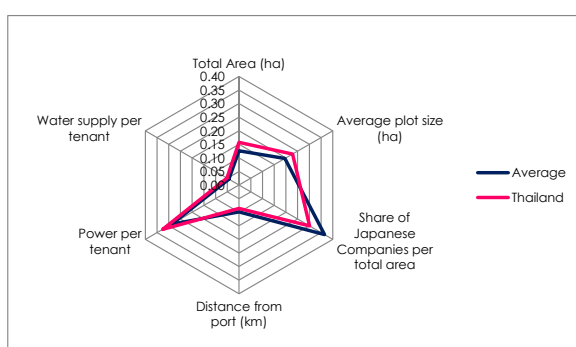
3.8.3. The parameter analysis of the industrial park in the major ASEAN countries and India

In this section, the specifications of the industrial parks in India and key ASEAN countries like Thailand, Vietnam, Malaysia, Philippines, and Indonesia is analyzed with parameters in order to figure out its development features from country to country.

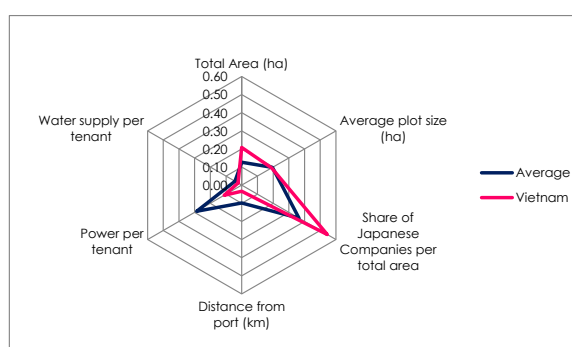
A data set on industrial parks was selected on the basis that the industrial parks are in an advanced marketing stage in which a certain level of infrastructure development was completed, and also have attracted investors so far to the parks. As a parameter, the following items were considered; 1) Total area, 2) average plot size of each tenant, 3) share of Japanese companies out of the total development area, 4) the distance from major ports, 5) amount of captive power capacity per tenant, and, 6) amount of water supply per tenant. In the analysis the average value of the countries under study was obtained, and the figures of each parameter in each country were illustrated in positional relationship as per below.

Figure3-11: Parameter of industrial park

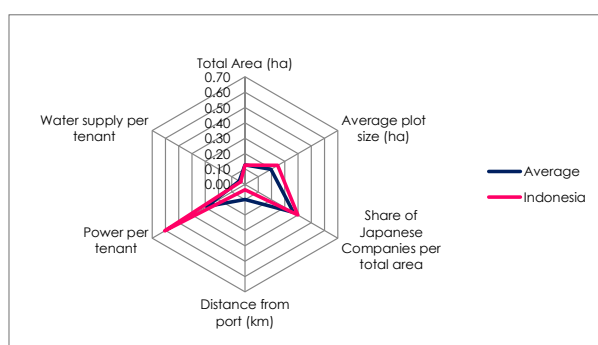
Thailand



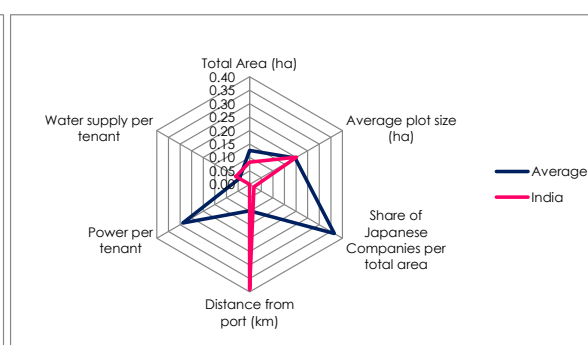
Vietnam



Indonesia



India



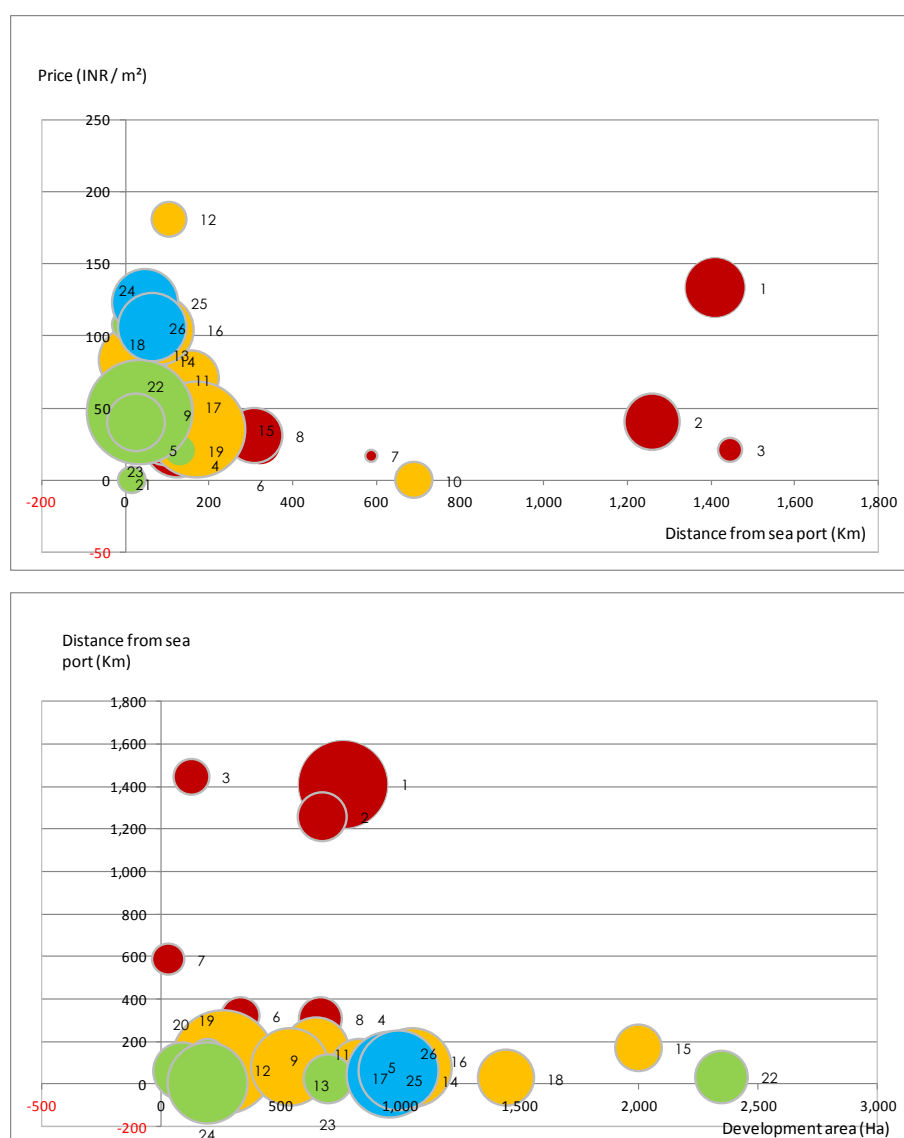
(Source) JICA study team with reference to JETRO "Business environment comparison of major Asian countries"(2012)

The analysis revealed that the parameters of industrial parks in Thailand locate in more or less at average figures, and in also the most well-balanced. In Vietnam, even though a relatively

large area of development and larger share of Japanese companies are observed, less provision of captive power and water supply than other countries at the industrial parks. It is also sighted that Indonesia has a far better provision of a power supply system with its own captive system in the industrial park. To the contrary, when it comes to India, the advance degree of Japanese companies in Indian industrial parks is less compared with that of other countries, and it is observed that industrial parks locate disadvantageously far from major ports in many cases. Furthermore, the captive power supply in India at industrial parks is absolutely non-existent in comparison with other countries.

When we take a look at the comparative analysis on the attributes of industrial parks and land price, development area, and distance from major ports, the average value of each of nine states in India revealed their characters in comparison with the major industrial districts in Thailand, Vietnam, and Indonesia. Some of the states in India situate in an advantageous matrix positioning in terms of land sales prices of industrial parks, though in comparison with other districts of the three Southeast Asian countries, the distance from the port is disadvantageously posed in its feature. Furthermore it is likely to be said that the development scale of the industrial park in India is rather small in comparison with Southeast Asian countries.

Figure3-12: Parameter scatter plot of industrial park group in three Southeast Asian countries and India



Legend

| 9 states of India | Thailand | Vietnam | Indonesia |
|-------------------|-----------------|----------------|------------------------|
| 1 Haryana | 10 Lamphun | 19 Hanoi | 25 Bekasi, West Java |
| 2 Rajasthan | 11 Ayuthaya | 20 Hai Duong | 26 Karawang, West Java |
| 3 UP | 12 Bangkok | 21 Hai Phong | |
| 4 AP | 13 Samutprakarn | 22 Binh Duong | |
| 5 Gujarat | 14 Chonburi | 23 Dong Nai | |
| 6 Karnataka | 15 Prachin Buri | 24 Ho Chi Minh | |
| 7 MP | 16 Pathumthani | | |
| 8 Maharashtra | 17 Chachoengsao | | |
| 9 Tamil Nadu | 18 Rayong | | |

(Source) JICA study team with reference to JETRO "Business environment comparison of major Asian countries"(2012) and interview survey

3.8.4. Financial analysis of government corporations responsible for industrial park development

Financial status

For government corporations of India and Thailand which are engaged in industrial park development, a financial statement was analyzed to reveal the actual situation of those corporations. As shown in the table below, the Industrial Park development corporations of both India and Thailand have been operating a business by investing in land and building, then earning the revenue from them. Although it should be noted that, by states, there are some differences in the interpretation of the balance of payments, the safety and profitability status of each corporation was focused. In addition, as a major private zone development company in India, private industrial park developers of Chennai and Jaipur, which are developed by the Mahindra group, are added to the analysis.

Table 3-18: Balance sheet comparison of government industrial park development corporations in India and Thailand, and private zone developers (India)

| Balance Sheet | Mar, 2013 | Mar, 2011 | Mar, 2012 | Sep, 2012 | Mar, 2013 | Mar, 2013 |
|---|---------------|----------------|-----------------|----------------|------------------------------|--|
| | AVKN - Indore | GIDC | KSIIDC | IEAT | Mahindra World City (Jaipur) | Mahindra World City Developers Ltd (Chennai) |
| Asset | (Rs.) | (Rs.) | (Rs.) | (Baht) | (Rs.) | (Rs.) |
| 1. Non-current Asset | | | | | | |
| (a) Fixed Assets | | | | | | |
| (i) Tangible Assets | 663,097,499 | 493,747,000 | 2,881,250,430 | 1,285,583,498 | 1,434,269,150 | 383,723,389 |
| (ii) Intangible Assets | - | - | 0 | 32,677,322 | 1 | 1 |
| (iii) Capital Work In Progress | 549,221,722 | 36,250,264,000 | 0 | - | 63,324,878 | - |
| | 1,212,319,221 | 36,744,011,000 | 2,881,250,430 | 1,318,260,821 | 1,497,594,029 | 383,723,390 |
| (b) Non Current Investment | 158,340,000 | 2,045,977,000 | 1,053,351,420 | 10,426,932,383 | - | 130,000,000 |
| (c) Long Term Loans & Advances | 664,418,895 | 0 | 545,529,581 | 0 | 117,086,285 | 198,047,172 |
| (d) Other non-current assets | - | - | 280,273,816 | 183,220,563 | - | - |
| | 2,035,078,116 | 38,789,988,000 | 4,760,405,247 | 11,928,413,767 | 1,614,680,314 | 711,770,562 |
| 2. Current Assets | | | | | | |
| (a) Current Investments | - | 1,608,242,000 | 0 | 6,675,495,192 | 10,721,526 | - |
| (b) Inventories | 504,053 | 3,845,742,000 | 0 | 205,305,899 | 4,195,593,331 | 3,499,127,857 |
| (c) Trade receivables | - | - | 4,111,947 | 543,834,582 | 95,529,074 | 34,116,091 |
| (b) Cash & Bank Balance | 2,564,496,841 | 1,940,100,000 | 1,894,531,706 | 1,245,720,492 | 382,434,467 | 30,934,307 |
| (c) Short term Loan & Advances | 258,727,148 | 18,981,221,000 | 0 | 0 | 32,944,143 | 439,622,951 |
| (d) Other Current Assets | 207,138,553 | 7,322,000 | 97,411,906 | 186,513,818 | 18,384,859 | 25,132,786 |
| | 3,030,866,595 | 26,382,627,000 | 1,996,055,559 | 8,856,869,983 | 4,735,607,400 | 4,028,933,992 |
| | 5,065,944,711 | 65,172,615,000 | 6,756,460,806 | 20,785,283,750 | 6,350,287,714 | 4,740,704,554 |
| Equity And Liabilities | | | | | | |
| 1. Shareholder's Funds | | | | | | |
| (a) Share Capital | 16,500,000 | 40,561,354,000 | 5,476,318,220 | 10,330,176,736 | 2,000,000,000 | 850,000,000 |
| (b) Reserve & Surplus | 1,704,694,072 | 10,966,315,000 | (4,077,924,359) | 909,097,281 | 196,917,382 | 882,484,730 |
| (c) Share application money pending allotment | - | - | 170,000,000 | - | - | - |
| | 1,721,194,072 | 51,527,669,000 | 1,568,393,861 | 11,239,274,017 | 2,196,917,382 | 1,732,484,730 |
| 2. Non-current Liabilities | | | | | | |
| (a) Other Long Term Borrowings | - | 4,400,000 | 1,000,779,750 | 7,074,295,384 | 3,101,000,000 | 1,042,500,000 |
| (b) Deferred tax liabilities (Net) | - | - | - | - | 108,276,456 | 275,385,235 |
| (c) Other Long Term Liabilities | 367,335,314 | - | 58,873,301 | 871,831,069 | 53,160,859 | 79,240,217 |
| (d) Long Term provisions | - | 4,663,665,000 | 168,303,463 | - | 1,541,919 | - |
| | 367,335,314 | 4,668,065,000 | 1,227,956,514 | 7,946,126,453 | 3,263,979,234 | 1,397,125,452 |
| 3. Current Liabilities | | | | | | |
| (a) Short Term Borrowings | - | - | 0 | 56,283,197 | 21,850,598 | 650,000,000 |
| (b) Trade payables | - | - | 0 | 479,978,986 | 47,158,025 | 6,832,457 |
| (c) Other Current Liabilities | 2,941,850,324 | 6,326,214,000 | 3,958,517,761 | 289,501,926 | 735,543,920 | 862,163,030 |
| (d) Short Term Provisions | 35,565,002 | 2,650,667,000 | 1,592,670 | 774,119,172 | 84,838,555 | 92,098,885 |
| | 2,977,415,326 | 8,976,881,000 | 3,960,110,431 | 1,599,883,280 | 889,391,098 | 1,611,094,372 |
| | 5,065,944,711 | 65,172,615,000 | 6,756,460,806 | 20,785,283,750 | 6,350,287,714 | 4,740,704,554 |

(Source: Financial statement of each entity)

Table 3-19: Income statement comparison of government industrial park development corporations in India and Thailand, and private zone developers (India)

| | Mar, 2013 | Mar, 2011 | Mar, 2012 | Sep, 2012 | Mar, 2013 | Mar, 2013 |
|--|---------------|---------------|---------------|---------------|------------------------------|--|
| | AVKN - Indore | GIDC | KSIIDC | IEAT | Mahindra World City (Jaipur) | Mahindra World City Developers Ltd (Chennai) |
| Statement of Profit and Loss | (Rs.) | (Rs.) | (Rs.) | (Baht) | (Rs.) | (Rs.) |
| 1. Income | | | | | | |
| (a) Revenue from operation | 310,667,471 | 346,128,000 | 47,077,491 | 4,374,982,862 | 1,041,865,568 | 1,220,852,885 |
| (b) Other Operating Revenue | 28,866,434 | 1,732,328,000 | - | - | - | - |
| (c) Other income | 205,934,474 | 1,510,405,000 | 486,211,884 | 1,005,801,876 | 24,258,467 | 17,288,693 |
| (d) Deferred Govt. Grants | - | - | - | - | - | - |
| | 545,468,379 | 3,588,861,000 | 533,289,375 | 5,380,784,738 | 1,066,124,035 | 1,238,141,578 |
| 2. Expenditure | | | | | | |
| (a) Cost of land and Project development | - | 1,161,446,000 | - | 2,990,167,297 | 552,449,372 | 294,316,050 |
| (b) Changes in Inventories of Work in Progress | - | - | - | - | (427,713,066) | (447,368,652) |
| (c) Employee benefits expense | 68,935,932 | 0 | 61,512,371 | 0 | 53,609,060 | 48,887,431 |
| (d) Finance costs | 67,051 | 2,423,000 | 190,990,083 | 107,453,219 | 494,874,693 | 332,620,029 |
| (e) Depreciation and amortization expense | 26,961,725 | 537,939,000 | 42,091,767 | 0 | 50,223,392 | 17,925,625 |
| (f) Other expenses | 187,170,810 | 1,887,053,000 | 375,983,820 | 0 | 101,078,008 | 164,922,977 |
| | 283,135,518 | 3,588,861,000 | 670,578,041 | 3,097,620,515 | 824,521,459 | 411,303,460 |
| Less : Capitalized | - | - | - | - | (11,029,101) | - |
| | 283,135,518 | 3,588,861,000 | 670,578,041 | 3,097,620,515 | 813,492,358 | 411,303,460 |
| 3. Profit before tax | 262,332,861 | 0 | (137,288,666) | 2,283,164,223 | 252,631,677 | 826,838,118 |
| 4. Tax expense | | | | | | |
| (a) Current tax | - | - | 1,500,000 | - | 61,200,000 | 165,500,000 |
| (b) (Less): MAT Credit | - | - | - | - | - | (16,000,000) |
| (c) Net Current Tax expense | 0 | 0 | 1,500,000 | 0 | 61,200,000 | 149,500,000 |
| (d) Deferred tax | - | - | - | - | 25,593,760 | 132,402,001 |
| | 0 | 0 | 1,500,000 | 0 | 86,793,760 | 281,902,001 |
| 5. Profit (Loss) after tax | 262,332,861 | 0 | (138,788,666) | 2,283,164,223 | 165,837,917 | 544,936,117 |
| Less: Prior Period Adjustments | (713,971) | - | - | - | - | - |
| 6. Profit for the year | 261,618,890 | 0 | (138,788,666) | 2,283,164,223 | 165,837,917 | 544,936,117 |

(Source: Financial statement of each entity)

Source of income and expense

For checking the source of income and expenditure, reference is made to the annual reports of each corporation and interview surveys with treasurers were used. Sources of income, as the main industrial park operators, are mainly a land lease fee/land sales, management fee, water supply, and street light services and etc., whereas expenditures are mainly from the maintenance cost of utilities and infrastructure (water supply, building, road, street light utility, etc.) and sales promotion and general and administrative expenses.

Profitability and financial soundness

The most recent financial statement ((balance sheet, income statement) of each corporation was analyzed, and their respective financial status was checked. As shown in the following table, these financial indicators were analyzed in this study.

The rate of return of each entity shows that AKVN-Indore, IEAT of Thailand and Mahindra World City Developers Ltd hit more than 40%, while KSIIDC gets minus and GIDC results in the revenue offsetting the cost. However, in terms of the total asset turnover, both IEAT and Mahindra World City Developers Ltd come to 26%, and it is revealed that total assets were effectively invested and utilized in the business. On the other hand, other state industrial development corporations in India only attain poor figures, and it is indicated that they are not effectively using their assets.

Table 3-20: Financial indicators comparison of government industrial park developers and private developers of India and Thailand

| | AVKN - Indore | GIDC | KSIIIDC | IEAT | Mahindra World City (Jaipur) | Mahindra World City Developers Ltd (Chennai) |
|-----------------------------|------------------|---------|---------|-------|------------------------------------|--|
| Current ratio | 102% | 294% | 50% | 554% | 532% | 250% |
| Equity ratio | 34% | 79% | 23% | 54% | 35% | 37% |
| ROA | 5% | 0% | -2% | 11% | 3% | 11% |
| ROE | 15% | 0% | -9% | 20% | 8% | 31% |
| Interest coverage ratio | 422269% | 148116% | 351% | 2883% | 167% | 124% |
| Profit margin on sales | 48% | 0% | -26% | 42% | 16% | 44% |
| Sales to total assets ratio | 11% | 6% | 8% | 26% | 17% | 26% |
| Operating profit on sales | 48% | 0% | -26% | 42% | 24% | 67% |

(Source: JICA study team based on financial statement of each entity)

As a result of analyzing the balance sheet, the current ratio, which is often used for evaluating the ability to repay the debt in the short-term, was revealed that all Indian state industrial development corporations, except GIDC, showed poor performances while private zone developers and the IETA of Thailand are healthier. Furthermore, it can be said that government corporations of both India and Thailand have relatively large amounts of idle assets. The equity ratio is generally high for IEAT and GIDC. Although ROA (Rate on assets) of Indian state industrial development corporations are in general low level, IEAT has a value as equal as the private businesses. As for ROE (Return on equity), some Indian industrial development corporations fetch the similar value as the one of the IEAT.

When we look at the income statement, the interest coverage ratio (an indicator for measuring the ability to pay interest on loans to the companies) shows that, in general, Indian state industrial development corporations have high values, though the total asset turnover ratio (indicators showing the effective utilization of assets) are lower than the one of IEAT of Thailand. Also net borrowing of the Indian state industrial development corporations are kept low in comparison with IEAT or private zone developers. Sometimes when new borrowing exceeds value added of the year of entities, it would indicate that the funding is at stake. The Indian state industrial development corporation and private zone developers are both in the position in which their net borrowing exceeds their value added. IEAT has the amount of value with six times larger than its net borrowing. Consequently the financial statement shows that the Indian state industrial development corporation has achieved a very low added value creation, and does not effectively utilize their resources as equal as private players and other countries' governments like IEAT.

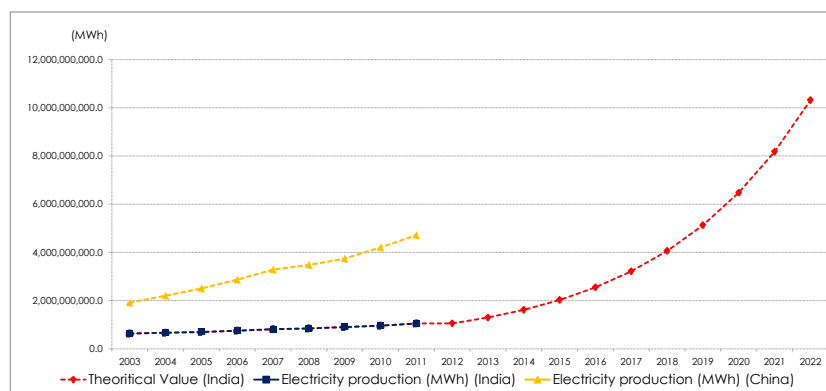
3.9. Demand forecast of necessary industrial infrastructure

Demand forecast of industrial infrastructure

Not only in India, but in the process of industrialization of nearly any country, the development of industrial infrastructure (power, industrial water, waste water, communications, roads, and ports) is a vital requirement. In particular, this is true for the business activities of the manufacturing industries. In this section, based on the assumption that there is a correlation between industrialization and the development of industrial infrastructure, it was studied to what extent of demand forecast could be assumed for the realization of the national manufacturing policy set by the Government of India.

Based on the World Development Indicators announced the World Bank, multiple regression analysis for demand forecast up to 2022 was conducted. In this analysis, the following elements are used: the number of employees, the value added of agriculture, manufacturing, other industries, and the service sector, between 2003 and 2012. As a result, demand forecast of industrial infrastructure, like power and roads, was obtained as below.

Figure3-13: Demand forecast of power in India



(Source: JICA study team with reference to World Bank, WDI)

Figure 3-14: Demand forecast of road expansion in India

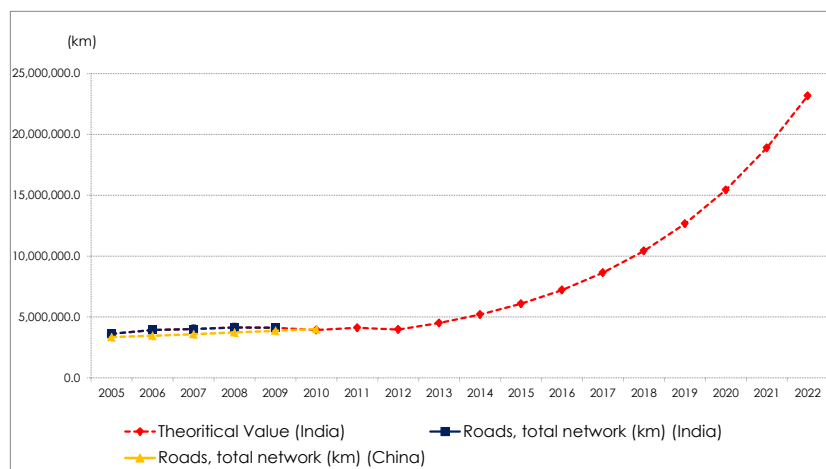
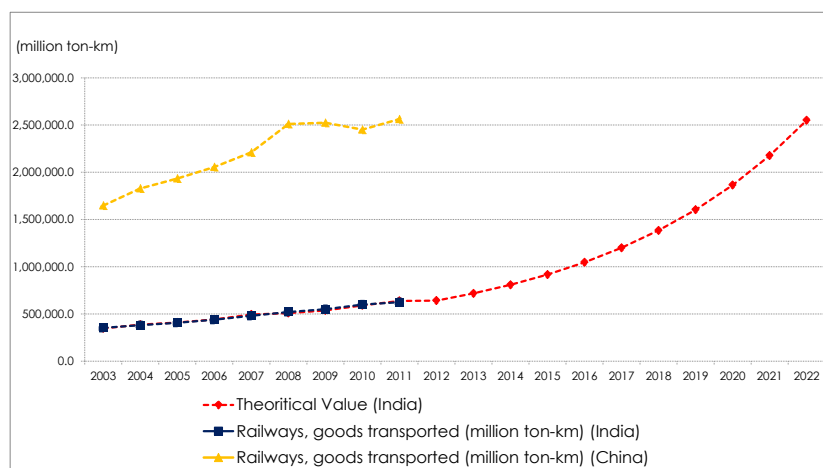
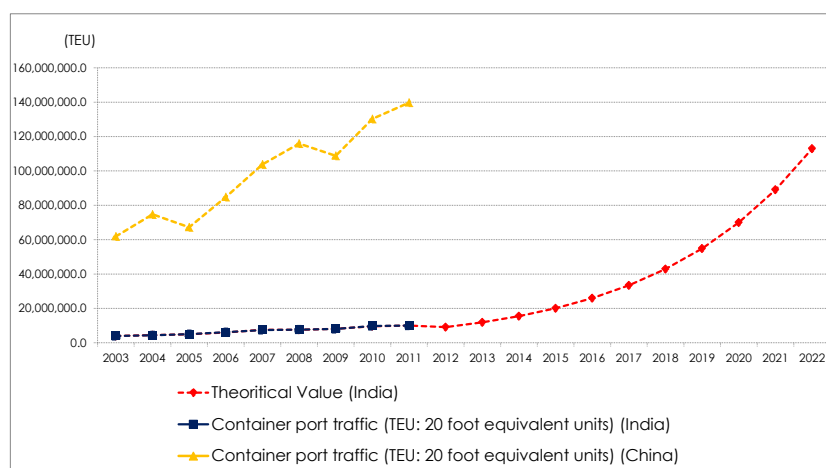


Figure 3-15: Demand forecast of railway traffic in India



(Source: JICA study team with reference to World Bank, WDI)

Figure3-16: Demand forecast of container transactions in India



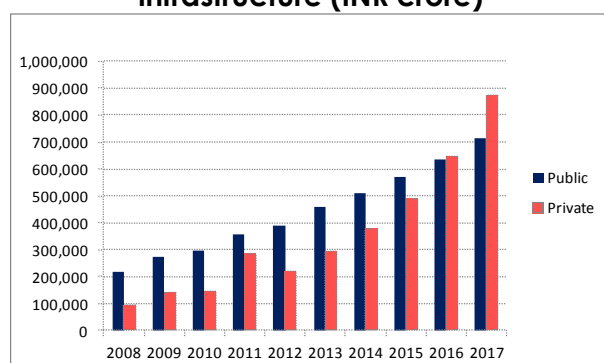
(Source: JICA study team with reference to World Bank, WDI)

Targeting the vision to attain 25% of the GDP contribution from the manufacturing sector, together with additional employment creation requirement to accommodate another 100 million people in the work force by 2022, India is expected to achieve a power demand increase of 10 times that of the present demand, roads are expected to be 5 times greater, and railway freight volume and container volume at ports are expected to be increased by 4 times and 11 times respectively from the present status. In other words, it can be interpreted that if there is no implementation of the infrastructure development to meet those levels of demand, policy thresholds implied by the NMP vision will not be achieved. Also, when it was compared with the actual value in recent years of China, infrastructure development in India is illustrated as being delayed, and in order to achieve the policy goals by 2022, it is regarded as necessary for India to implement the infrastructure development to the same level as currently in China.

Current state of infrastructure investment in India

As shown in the figure below the situation of infrastructure investment in India is currently slowing down mainly due to the drop in the private sector's involvement in recent years. Consequently, combined with the industrial park development, industrial development of India is believed to have been facing a need to develop the surrounding infrastructure together with more elaborated ingenuity for system reform in order to cater to the ambitious vision of NMP.

Figure3-17: Private investment at core of infrastructure (INR crore)



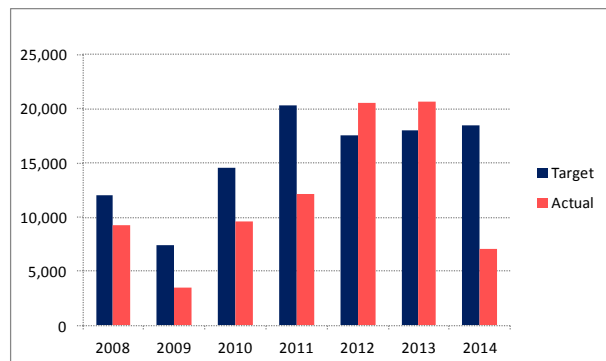
(Source: Planning Commission, Government of India)

Table 3-21: Project awarded by National Highway Authority of India (NHAI)

| | BOT | EPC |
|------|--------|-------|
| 2006 | 1,608 | 3,055 |
| 2007 | 1,390 | 345 |
| 2008 | 1,145 | 89 |
| 2009 | 643 | 0 |
| 2010 | 3,360 | 0 |
| 2011 | 5,058 | 0 |
| 2012 | 6,491 | 0 |
| 2013 | 1,116 | 0 |
| 2014 | 22,168 | 600 |

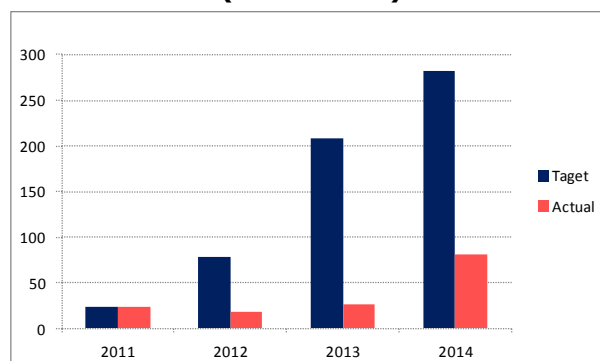
(Source: NHAI)

Figure3-18: Power capacity addition in MW



(Source: Planning Commission, Government of India)

Figure3-19: Ports – PPP projects awarded (million tons)



(Source: Planning Commission, Government of India)

Chapter IV

Recommendations for industrial park development in India

4. Recommendations for industrial park development in India

4.1. Development trend and recommendation for industrial park development in India by Japanese companies

1) Recommendations for industrial park development in India

In India, the following Japanese companies have promoted industrial park development projects; Toyota Tsusho Corporation (Karnataka), Sojitz (Tamil Nadu), Mizuho JGC (Tamil Nadu). JETRO also came into the picture by assisting with sales and providing support to Japanese companies, for the Japanese dedicated park at the Neemrana Industrial Park in Rajasthan. However, it has been pointed out that there are many challenges in Indian industrial park development faced by developers who have been successful in other parts of Southeast Asia. The following are mentioned as the main challenges:

- 1) Land acquisition related problems;
- 2) Inadequate infrastructure development (in particular, water and electricity);
- 3) Social problems and opposition from residents to the development of the industrial park;
- 4) Cumbersome and un-clear laws related to industrial park development;
- 5) Capacity and budget shortfall of organizations to overseas industrial park issues in the central government;
- 6) Difficulty in finding reliable local Indian private sector partners.
- 7) Difficulty and complexity in developing off-site infrastructure
- 8) Difficulty in setting up a captive power plant in industrial parks
- 9) Land price hikes in the suburbs of Delhi, Mumbai, Bangalore and Chennai, not suitable in industrial park development

In order for the Japanese companies to participate in the industrial park development in the future, the way that the Indian private sector addresses the problems described herein above becomes an important issue requiring attention.

2) Confirming the willingness of Japanese companies to develop industrial parks in India

In recent years, Japanese companies such as engineering, trading companies, and construction companies have shown interest in industrial park development in Asian countries, but so far, Japanese motivation to develop industrial parks in India is lukewarm. It is assumed that there are fairly good prospects in India, once the Government of India clearly stated its support for a roadmap for the development of attractive industrial parks, to be developed in public and private partnerships. This public private partnership approach has been envisaged a powerful tool for paving the way for developing industrial parks in Asia, and for attracting foreign and domestic investment and boosting job creation in the manufacturing sector. Consequently, it is important

to have the pilot project success in one of two places in India. The interest of developers participating in industrial park development through interviews by the Study Team is summarized as follows.

- There are many recommendations from Japanese companies in Southeast Asia that India should have Japanese industrial parks for setting up factories in India. A trading company is looking for a suitable site of about 200-300ha commutable by car in the suburbs of Delhi, Mumbai, Bangalore, or Chennai.
- A trading company has provided services to Japanese companies in the case of the development of an industrial park in Southeast Asia. An industrial park development in India also has to be started based on the integration of Japanese companies (trading company).
- There are an increasing number of companies aiming at exports from India; Chennai and Gujarat have potential. Access to the port is important in developing an industrial park (trading company).
- A local company has several tens of thousands of hectares located between Pune and Mumbai to be developed as an industrial park and township, and has an intention to form a joint venture. A trading company has decided to start a feasibility study and make an MOU agreement.
- A real estate company would like to develop an industrial park as well as a township including commercial and residential areas to ensure the profitability in the commercial sector (real estate company).
- With the acceleration of assemblers in India, a trading company is planning to develop an industrial park for Tier1 and Tier2 suppliers.

4.2. Analysis of factors affecting management decisions of Japanese FDI in comparison with India and other Asian countries

1) Satisfaction and requests of tenants in industrial parks of India

The Study Team conducted a survey for Japanese manufacturing companies doing business in India through home and field survey, comparing industrial parks in Southeast Asia and India. The satisfaction and challenges are as follows:

Table 4-1: Satisfaction of an industrial park in India in compared with Southeast Asia

| 1) Road |
|--|
| <ul style="list-style-type: none"> • A large truck cannot enter the industrial park (a company in Tamil Nadu State Industrial Corporation industrial park); • Roads of the industrial park are unpaved, a company has been requesting to develop an access road from the factory to the main road from the initial stage of its operation, but nothing has been developed (a company in Karnataka State Industrial Corporation industrial park); • The traffic jam has not been solved for a long period due to the construction between the site and the company to supply (a company in Andhra Pradesh private industrial park); • The trucks are parked on the roads inside the industrial park causing congestion, since no truck terminals are available (a company in Tamil Nadu State Industrial Corporation industrial park); |
| 2) Electricity |
| <ul style="list-style-type: none"> • A company has to switch to self-generators to respond to power outages three hours a day. Not only the amount of power supplied is inadequate, but there are variations in voltage (a company in Tamil Nadu State Industrial Corporation industrial park); • A company cannot operate a factory due to a power cut once a week (a company in Maharashtra State Industrial Corporation industrial park); • A company introducing the use of a self-generator as the supply of electricity is unstable in terms of productivity. When a company complained to the Power Authority that the power supply was insufficient compared to the factory next door, the Power Authority requested additional payment (a company in Haryana State Industrial Corporation industrial park); • The Power Authority has agreed under an MOU with Japanese companies to supply preferential power to them with the acceleration of Japanese companies present in Tamil Nadu. The situation of power distribution to local companies and suppliers has deteriorated (a company in Tamil Nadu State Industrial Corporation industrial park); |
| 3) Industrial water |
| <ul style="list-style-type: none"> • Brown brackish water (a company in Tamil Nadu State Industrial Corporation industrial park) • Since there is no water supply from the industrial park, a company has to dig wells at their own expense, and purchase industrial water to fulfill the tank (a company in Karnataka State Industrial Corporation industrial park) |
| 4) Wastewater |

| |
|---|
| <ul style="list-style-type: none"> • There are no wastewater facilities in industrial parks, but a company does not handle a process that the wastewater treatment is necessary (a company in Gujarat State Industrial Corporation industrial park); • A company has to treat wastewater inside the factory to maintain a zero-discharge system (a company in Gujarat State Industrial Corporation industrial park); • A company treats wastewater by themselves. Some companies undertake wastewater treatment, but it is difficult to trust other companies undertaking treatment (a company in Gujarat State Industrial Corporation industrial park); • Local companies that do not have enough budget to handle wastewater treatment discharge water directly from their factories without compliance with wastewater standards (a company in Tamil Nadu Industrial Corporation industrial park); • The government has strict standards despite the fact that there are no wastewater treatment facilities in the industrial parks. A company must set up a pond to accumulate treated water as treat water cannot be discharged outside its boundaries. Since the drainage is poor, water is not absorbed into the soil (a company in Karnataka State Industrial Corporation industrial park). |
| 5) Administrative services (one-stop service, management of industrial parks, etc.) |
| <ul style="list-style-type: none"> • After the land purchase from the State Industrial Development Corporation, a company was forced to pay an additional compensation fee as the old landowners appeared (a company in Haryana State Industrial Corporation industrial park); • The state government does not provide administrative services, but a company does not expect anything from them and addresses issues by themselves (a company in Tamil Nadu State Industrial Corporation industrial park); • Certain management staff has not been so investor friendly, but the local staff in Delhi have accumulated sufficient know-how to deal with any issue (a company in Andhra Pradesh State Industrial Corporation industrial park); • The defect of the site was found after the land acquisition, but the State Industrial Development Corporation did not show any response to the identified issue (a company in Gujarat State Industrial Corporation industrial park); • A company had paid a deposit to set up a factory in a private industrial park, but the agreement in the land acquisition price was not made between the developer and the State Industrial Development Corporation, and the project had to be cancelled (a company in Haryana State Industrial Corporation industrial park). |
| 6) Urban infrastructure (expatriates living environment, etc.) |
| <ul style="list-style-type: none"> • There are few amenities or activity destinations for people to spend their non-working weekends, and the cost to expatriates is high (a company in Tamil Nadu State Industrial Corporation industrial park); • The level of an average Japanese lifestyle cannot be expected in this living environment, but otherwise day to day living is no problem (a company in Andhra Pradesh private industrial park); • There were few residential amenities when a company first set up a factory, but some hotels and commercial facilities are found recently (a company in Gujarat State Industrial Corporation industrial park). |
| 7) Labor issues (quality of workers, wages, ease of ensuring the workers, etc.) |
| <ul style="list-style-type: none"> • The local staff members are responsible for labor issues and no major issues have been experienced. |

Since Japanese staff members do not understand some of the specific local employment issues, such as birthplace and caste, the local managers are responsible (a company in Andhra Pradesh private industrial park);

- Labor unions are present in the industrial park, but there is no significant movement so far (a company in Haryana State Industrial Corporation industrial park);
- There are cases to develop unions if a company hires workers from local villages. Therefore, to avoid unionization, a company hires workers from different places so as not to form a union (a company in Haryana State Industrial Corporation industrial park);
- Due to the shortage of labor around the industrial park, many employees are from North India. There is a problem with the quality of the workers rather than the absolute numbers of workers being insufficient (a company in Tamil Nadu State Industrial Corporation industrial park).

(Source) JICA Study team

There is no company involved in industrial parks in India that measure up to those in Southeast Asia in this evaluation. The satisfaction with industrial parks in India is lower than that of Southeast Asia.

The evaluation of basic infrastructure such as roads, power, water supply, and urban infrastructure such as expatriates' living environment is particularly low. For administrative services to the industrial park management side such as one-stop service, there were a lot of answers indicating that they could not expect any services from the State Industrial Corporations.

However, companies operating in the private industrial parks have answered that the infrastructure is not inferior to that of Southeast Asia. These successful cases of industrial parks are expected to spread to all over India.

Based on the above evaluation, the requests for industrial park development for manufacturing companies in India are as follows:

- An industrial park with full infrastructure is necessary to reach the level of integration of Japanese companies or administrative services (precision spring manufacturing);
- An industrial park providing administrative services is necessary that can do business without any delays or plans after the decision of setting up a factory (electrical equipment manufacturing);
- An industrial park providing a rental factory is necessary as India does not have rental factories like Southeast Asia (metal manufacturing);
- Industrial parks in India do not allow the construction of facilities other than factory buildings, and companies need to build a dormitory without having to report the fact. Setting up a workers factory is indispensable for the industrial park management, and an overall industrial township development is necessary including a dormitory, and commercial and other housing facilities (sewing processing);

- The defect liability needs to be determined in case the defect was found in a plot area of an industrial park (printing ink manufacturing);
- The State Industrial Development Corporations need to understand the importance of wastewater treatment facilities, and the necessary facilities need to be installed inside industrial parks (automobile parts manufacturing).

2) Analysis of factors affecting management decisions of Japanese FDI in comparison with India and other Asian countries

Table 4-2: Comparison of top 5 managerial problems in India faced by Japanese manufacturers with other countries

| Competitors' market shares are growing | | | Quality of employees | | | Difficulties in quality control | | |
|--|---------------------|---------------|-----------------------|---------------------|---------------|---------------------------------|---------------------|---------------|
| Countries and regions | number of responses | Consent ratio | Countries and regions | number of responses | Consent ratio | Countries and regions | number of responses | Consent ratio |
| India | 337 | 65.3% | Myanmar | 13 | 76.9% | Bangladesh | 13 | 61.5% |
| S. Korea | 225 | 62.7% | Bangladesh | 34 | 64.7% | China | 571 | 53.8% |
| Taiwan | 125 | 61.5% | Cambodia | 30 | 63.3% | Sri Lanka | 15 | 53.3% |
| Singapore | 282 | 58.2% | China | 920 | 52.9% | India | 149 | 52.3% |
| China | 917 | 57.1% | India | 334 | 52.7% | Cambodia | 14 | 50.0% |
| Average | 4474 | 53.2% | Average | 4476 | 46.6% | Average | 2311 | 44.9% |

| Major clients requesting lower prices | | | Increase in procurement costs | | |
|---------------------------------------|---------------------|---------------|-------------------------------|---------------------|---------------|
| Countries and regions | number of responses | Consent ratio | Countries and regions | number of responses | Consent ratio |
| Malaysia | 337 | 50.7% | Indonesia | 172 | 54.7% |
| India | 225 | 47.5% | HK, Macao | 35 | 54.3% |
| Taiwan | 125 | 45.9% | India | 149 | 49.0% |
| China | 282 | 45.8% | Sri Lanka | 15 | 46.7% |
| S.Korea | 917 | 43.1% | Malaysia | 165 | 44.2% |
| Average | 4474 | 40.2% | Average | 2311 | 39.5% |

(Source) Compiled by JICA Study Team based on "Survey of Japanese-Affiliated Companies in Asia and Oceania" (December 2013: JETRO)

The table shows the comparison of the top 5 managerial problems in India faced by Japanese manufactures with other countries. The improvement of infrastructure and the development of industrial zones are not included here, as they are considered to be necessary prerequisites for development. As mentioned earlier, the basic and primary concern in India is how to deal with ever-intensifying competition with rival companies. Other factors of concern are the demand for a reduction in prices from clients, the increase in procurement costs, the quality of employees and the difficulties in quality control. As the policies to solve these problems are mentioned in the section "Measures to accelerate Japanese FDI into India," so this section will comment on the institutional aspect. In the institutional aspect, impediments to investment facing Japanese companies operating in India must be resolved without delay. The Indian governmental authorities need to study and solve promptly the problems pointed out by the Japanese chambers

of commerce and industry in India and the Japan Machinery Center for Trade and Investment (JMC) in Japan.

The following are the problems relating to India pointed out by the members of JMC and which are included in the JMC's report on its recommendations to various countries, which was presented to Japan's Minister of Economy, Trade and Industry on November 15, 2013, the Minister of Finance on November 19, 2013 and the Minister of Foreign Affairs on December 21, 2013. JMC is a public-interest corporation established with the authorization of the Minister of Economy, Trade and Industry and its members are about 300 leading Japanese businesses in the electrical equipment and electronics, information and telecommunication equipment, business machine, machine tool, construction machinery, heavy electrical machinery, industrial machinery and textile machinery, plant machinery, automobile and auto parts, and electronic parts industries.

(Examples)

1. Numerous problems were pointed out, including the complicated method of calculating import tariffs, ineffective, non-uniform, and slow custom clearance procedures for interstate transactions, the unreasonable requirement to attach labels showing the maximum retail prices at the time of custom clearance for imports, the imposition of an export tax on iron ore and the rigorous and complicated place-of-origin requirements under the free trade agreement (FTA).
2. Due to the requirement for thorough implementation of the real-demand principle in foreign exchange transactions, there are problems such as the regulations on the use of funds raised through foreign currency-denominated loans, difficulties in rupee-denominated settlements, limits on interest rates on borrowing between the companies in the same group, and non-approval for foreign exchange transactions. Overseas remittances are rigorously regulated and procedures for obtaining central bank permits for them are extremely cumbersome.
3. Tax systems vary from state to state, making tax procedures both cumbersome and opaque, including those for offsetting and refunding taxes, due to their complexity and diversity. Other problems include high indirect tax rates, non-transparent and arbitrary application of the transfer price tax system, and discriminatory taxation on trading company activities.
4. Valid periods of visas are too short. Besides, cumbersome and opaque procedures for acquiring or renewing visas are causing delays in visa issuance. Labor laws are generally tilted toward the protection of workers, and, labor standards vary from state to state.
5. Underdeveloped physical distribution infrastructure, such as road networks, ports and harbors, and freight railways, as well as chronic electrical power supply shortage have been pointed out as serious bottlenecks in attracting foreign capital.

4.1. Policy recommendations to the industrial park development in India

1) Policy recommendations

Land acquisition and industrial park development in India has been driven by the State Industrial Development Corporation. The situation varies from state to state, and it is necessary to examine the challenges and countermeasures state by state.

First, the roles of the central government and the state government in industrial park development can be classified as follows:

| | |
|-------------------------------------|---|
| The roles of the central government | The legislation necessary to achieve the goals and vision for the development of manufacturing industry development, investment promotion program development, organizational structure, human resource development, and large scale infrastructure development |
| The roles of the state government | Land acquisition, industrial park development support for private developers, off-site infrastructure development in collaboration with the central government, investment promotion program by state |

In order to develop industrial parks successfully, resolving issues in all areas is necessary through public-private partnerships. The central government, state government, the Japanese government, and private developers must become partners to eliminate all obstacles. The central government has indicated an intention to utilize VGF (Viability Gap Fund)¹⁹ for infrastructure components that cannot expect profitability in a short term, as a measure to boost industrial park development by the private sector.

In the industrial park development success cases of Southeast Asia, a concrete action plan with a clear goal and direction established by a strong political will has been the success factor. In India, the development authority has been given to the state government, and, if the political will of the Chief Minister exists, industrial park development through public-private partnership will be successful and an increase in employment and direct investment is achievable.

In addition, in order for industrial parks to be operational tools to create employment, income, and tax revenue, the State Industrial Development Corporation cannot just designate the land as suitable for an industrial park. Without adding value to the land that will attract foreign manufacturing companies, the industrial park will not be successful.

In the case of Southeast Asian countries, some government-led industrial parks could not expect tenants due to a lack of predictable enterprise need. Various factors need to be considered to select a site for manufacturing companies, therefore, industrial park developers need to be sufficient in legislation, organization, funding, and human capacity to attract them. Also in India,

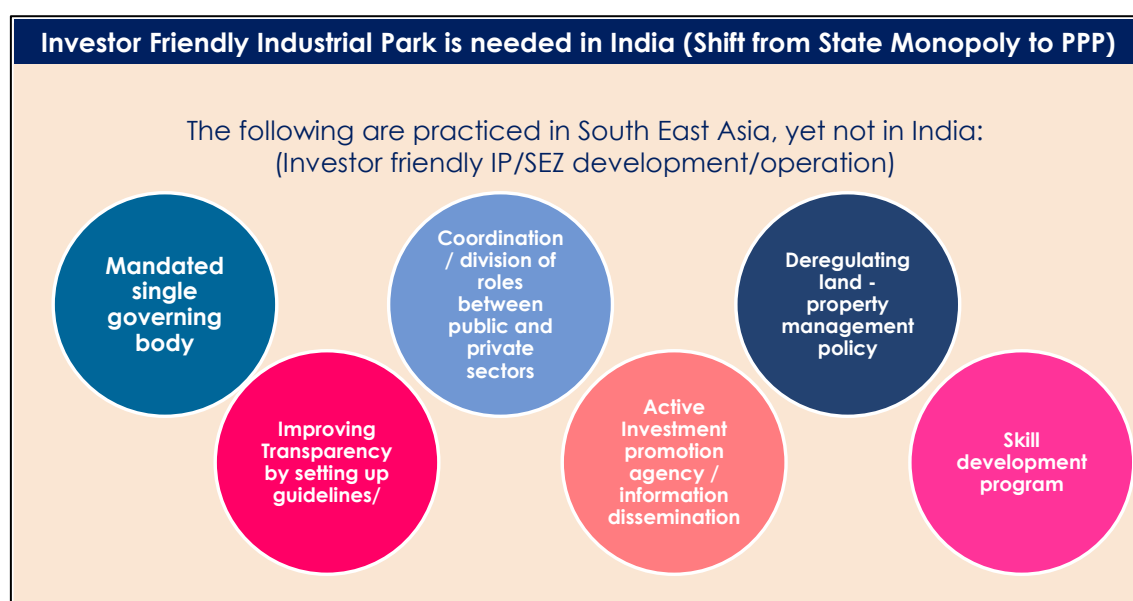
¹⁹ VGF is one of the PPP infrastructure schemes of Ministry of Finance, India, providing a maximum of 20% of the total project cost in the form of a capital grant to improve the project profitability.

the sharing of roles is important; private developers promote industrial park development, and state governments conduct land acquisition and off-site infrastructure development. Meeting satisfaction of customers is the most important business rule in the market economy, and this principle could be applied to industrial park operation and management. A manufacturing company is the one to decide which industrial parks to locate, not the government bureaucracy, nor private developers. Therefore, the FDI policy must be sufficiently attractive to meet potential investors' requests and demands.

In the industrial parks developed by the State Industrial Development Corporation of India in general, the gaps with the manufacturing companies are seen in terms of system design, infrastructure development and operation planning. Special industrial parks such as "Hi-Tech Parks," "Software Parks," and "pharmaceutical industrial complexes" are often seen in India. They are in the development stage of soft engineering such as IT and R&D, but they are not effective in attracting manufacturing industry as described above.

These industrial parks have limited effects in forming industrial clusters and correlating with other industries, and, the scale of employment is limited. Integrated scale of industrial clusters and employment is not expected. Based on the above, the Study Team has summarized the policy recommendations to increase the direct investment of private manufacturing companies as follows, including the improvement of the industrial parks by the State Industrial Development Corporation in India and promotion of the industrial park development by the private sector.

Figure4-1: Policy recommendations to industrial park development in India



(Source) JICA Study team

1. Establishment of an industrial park committee

| | |
|----------------|--|
| Challenges | <ul style="list-style-type: none"> ✓ No single mandated authority to deliver all required infrastructure development and utilities service provision in industrial park ✓ Insufficient coordination among concerned department and private zone developers ✓ Development of infrastructure / utility by different legal jurisdiction |
| Recommendation | <p>It is necessary to set up an industrial park committee chaired by the Chief Minister and composed by several departments in charge of industrial park development and operation. The infrastructure is not developed in the current industrial parks, and private developers must obtain each license from multiple government departments. Private manufacturing companies have to develop infrastructure and obtain permits on their own. Such an industrial park committee has to include departments in charge of infrastructure development and operation (construction, power, water and wastewater). A framework needs to be formed that a final decision shall be made by the Chief Minister, the chairman of the relevant committee if there is a problem.</p> <p>Industrial Estate Authority of Thailand (IEAT) can be a model regulatory organization for industrial park development and management in that all concerned department for infrastructure development and utilities services are participated for a mandate to deliver all required measure to make attractive industrial parks for investors. Two board members of IEAT are even invited from private business sector.</p> |

2. Creating guidelines for industrial park development

| | |
|----------------|---|
| Challenges | <ul style="list-style-type: none"> ✓ No mandated agencies to authorize all-inclusive required infrastructure development in industrial zones ✓ Problems in coordination among government agencies ✓ State Industrial Development Corporation is not responsible for companies' operation ✓ Private zone developers faces difficulties in developing full-fledged infrastructure in comply with the request from investors |
| Recommendation | <p>In connection with the above, currently there is no consistency in respect to management and infrastructure development in industrial parks by the State Industrial Development Corporation and private developers. Therefore, it is necessary to develop guidelines for industrial park development, to be consistent in investor support for infrastructure development and management.</p> <p>In Southeast Asian countries, there are laws and guidelines specifying the role and responsibilities of industrial park developers, which includes private developers, to comply all requirement of infrastructure and utility service standard, hence private zone developer can have a guidance to follow, and the government can outsource the development and operation of infrastructure and utility service to private companies in accordance with the regulations and guidelines.</p> |

3. Clarification of the roles between the government and the private sector

| | |
|----------------|---|
| Challenges | <ul style="list-style-type: none"> ✓ Inadequate level of infrastructure quality and utilities service provision can be found in industrial zones in India, which are mostly developed and operated by State Industrial Dev. Corp. ✓ Privately developed SEZ/DTA is well attracting private investment due to the high level of infrastructure and utilities service. ✓ Private sector participation in industrial zone development is limited, except SEZ/DTA development. |
| Recommendation | <p>The current situation of industrial parks developed by the State Industrial Development Corporation is that the only land acquisition and road development is in</p> |

| | |
|----|--|
| on | <p>place, but power, water and sewerage is not installed in industrial parks. In addition, land acquisition is the biggest concern in industrial park development to the private sector. Therefore, the roles of the government and private sector have to be separated clearly. The State Industrial Development Corporation shall conduct land acquisition, and, private developers shall develop infrastructure and management system of industrial parks.</p> <p>Arrange a land by public sector, then development and operation are outsourced to private sector is the model practiced in industrial park project in Thailand, where still public industrial park development body (IEAT) plays an important role in industrial park project like the case in India.</p> |
|----|--|

4. Ensuring marketing tools for investors

| | |
|----------------|---|
| Challenges | <ul style="list-style-type: none"> ✓ Existing investors and Prospective investors are not up to date in new taxing and business related regulations due to inadequate information disclosure system ✓ Each different state have their own individual marketing / promotion scheme, which ends up ✓ Little presence and familiarity of Indian investment climate/opportunities/Industrial park in Japanese industrial/business community ✓ Inefficient one-stop facilitation services |
| Recommendation | <p>Both the central government and state government have few marketing tools for private investment promotion. Information about existing industry and industrial parks in India available to Japanese companies is insufficient. It is necessary to hold India Investment Seminars specifically for Japanese companies regularly, providing investment information about India.</p> <p>The Japan-ASEAN Center plays a vital role for organizing and facilitating investment seminars and business trips for Japanese industry/business communities and ASEAN countries; visits to industrial parks are one of the important investment promotion activities.</p> <p>Industrial park management companies should be the most helpful/efficient information provision body from the investors' point of view. The government can disclose/updates the changes of taxing and business regulations to them.</p> <p>One stop facilitation service may need to be offered at major industrial parks where investors can access to the service in daily base.</p> |

5. Deregulation of the land-use regulation

| | |
|----------------|--|
| Challenges | <ul style="list-style-type: none"> ✓ Conversion of land into non-agricultural land is impractical and challenging in current land development context ✓ Acquiring new land is difficult for private developers under the present land policy ✓ Private sector participation in industrial zone operation is limited such as sub-leasing ✓ Plots in industrial zone are not regarded as common property, which can be freely sold, exchanged, and valued as a collateral for obtaining finance |
| Recommendation | <p>Land is the most crucial item for industrial park development, and the government plays a vital role to play in land preparation in the context of India; this would be the most practical ways of large area acquisition. Private sector has certain limit in its capacity and legitimacy in large industrial area acquisition in current land policy.</p> <p>In the current industrial parks of the State Industrial Development Corporation, resale of land, land-collateral loans and operation of rental factories by sub-leasing is limited. It is necessary to mitigate these regulations, to increase the liquidity of the land and create business opportunities through private operators. The state government has a concern over the speculation of land prices after land resale, but it would be possible to suppress the rise in land prices by making a contract requiring a company to start</p> |

| | |
|--|---|
| | operation within three years of land acquisition. No regulations for land-use are found in Southeast Asia, and the industrial land-use is not limited to developers and tenants. |
|--|---|

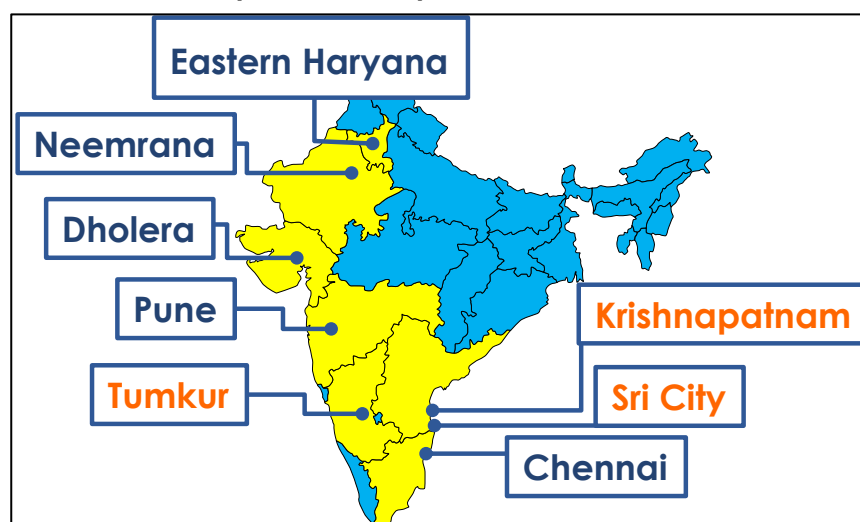
6. Development of human resource development programs

| | |
|----------------|--|
| Challenges | <ul style="list-style-type: none"> ✓ Insufficient skilled labor for manufacturing industries in India ✓ Skill development program for labor force in particular for manufacturing sector is insufficient ✓ Government staff dealing with investors have inadequate experience in international standard one stop service provision |
| Recommendation | <p>Manufacturing industries need a different set of skill for labor in machine tool control, quality management, inventory control and etc., and those are timely up to date in accordance with market.</p> <p>Market driven skill development program is employed in Singapore at first for Singaporean to upgrade their skill from basic vocational skill to professional skill. Practical training by handling physical tools and machinery, which are also installed and used in actual production in the unit factory is required, and the curriculum of training shall be periodically updated in accordance with the change of market.</p> <p>Promoting capacity building programs for the staff of the State Industrial Development Corporation and vocational training programs for developing human resources in general will strengthen the capacity of manufacturing personnel working in these factories.</p> |

2) Proposed industrial park development

There is a possibility to expand Japanese investment at the same time as implementing the proposed program above. By selecting 2-3 states that possess the political will to start certain pilot projects successfully and spread to each state, job creation and manufacturing promotion in India would be possible. JICA can support pilot projects in 2-3 states to develop industrial parks via grants or soft loans focused on problems of the legal system, logistics, labor issues, and/or land issues necessary to the development of manufacturing. Lists of industrial parks in India that can expect the accumulation of Japanese companies in the future are as follows.

Figure4-2: industrial parks in India that can expect the accumulation of Japanese companies in the future



(Source) JICA Study Team

- 1) Eastern Haryana Industrial Park
- 2) Rajasthan Neemrana and Giloth Industrial Park
- 3) Gujarat Mandal Industrial Park
- 4) Gujarat Dholera Industrial Park
- 5) Maharashtra Khed City Industrial Park
- 6) Karnataka Tumkur Industrial Park
- 7) Andhra Pradesh Krishnapatnam Port Hinterland Industrial Park
- 8) Andhra Pradesh Sri City Industrial Park
- 9) Tamil Nadu Chennai suburbs Industrial Park

There are three Japanese automotive clusters in India: 1. Suburbs of Delhi (UP and Haryana) for Suzuki and Honda, 2. Karnataka for Toyota, and 3. Tamil Nadu for Nissan. In addition to that, Honda and Suzuki have decided to set up factories in Gujarat. The supporting industries of the automotive industry in Tier 1, Tier 2, and Tier 3 have been already formed in the suburb of Delhi, supplying to Suzuki and Honda, and have been expanded to Neemrana in Rajasthan recently with a lack of industrial parks.

The supporting industries are expected to expand in the future. Industrial park development in the Chennai suburbs is underway.

4.2. Recommendation of JICA projects from the study team

The study team recommends JICA projects in the future as follows.

Figure4-3: The recommended JICA projects in the future

| | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|------|------|------|------|------|
| 1. NIMZ, SEZ and Industrial Park regulations review and guideline preparation | | | | | |
| 2. Karnataka Tumkur NIMZ & AP Eastern Sea Board Industrial City | | | | | |
| (i) Master Plan & Feasibility Study for Japanese Industrial Park | | | | | |
| (ii) Japanese Industrial Park Implementation by PPP/Private | | | | | |
| (iii) Off-site infrastructure Planning | | | | | |
| (iv) Off-site infrastructure implementation by JICA loan (KIPP: Karnataka Investment Promotion Program) | | | | | |
| 3. Skill development program in particular for manufacturing industry | | | | | |
| 4. Investment Promotion Scheme for Japanese investors | | | | | |

(Source) JICA Study Team

1. Institutional improvements of NIMZ, SEZ and industrial parks, and guideline development support (2014 summer – end of 2016)

Many challenges are found in industrial parks developed by the State Industrial Development Corporation as well as Special Economic Zones (SEZs) certified by Ministry of Industry and Commerce, as described in Chapter 3. They have not been able to attract private manufacturing companies. In addition, the guideline for an NIMZ has not been developed. Thus, it is possible to consider improving the institutional framework and developing the guidelines for NIMZs, SEZs, and industrial parks. The main component of the study will be the development guideline addressing the need to separate the roles of the central government and state government, and to promote industrial park development by private developers.

1. The SEZ law review, and specific goals, an implementation plan, and development guidelines for NIMZ
2. Development guidelines for industrial parks by the State Industrial Corporation and private developers

| | |
|-----------------|--|
| Goal | To review the current development of NIMZ, SEZ and industrial parks, and to develop guidelines for private developers to accelerate Japanese manufacturing companies' investment in India |
| Outcome | <ul style="list-style-type: none"> Guidelines for NIMZ, SEZ and industrial park are established Industrial park development is carried out based on the guidelines |
| Activity | <ul style="list-style-type: none"> To review the SEZ bill of the central government and to develop guidelines necessary to implement the specific goals, implementation plan and implementation To develop guidelines for industrial park development by the State Industrial Corporation and private developers |

2. Pilot project assistance (Karnataka, Andhra Pradesh Industrial Park Development)

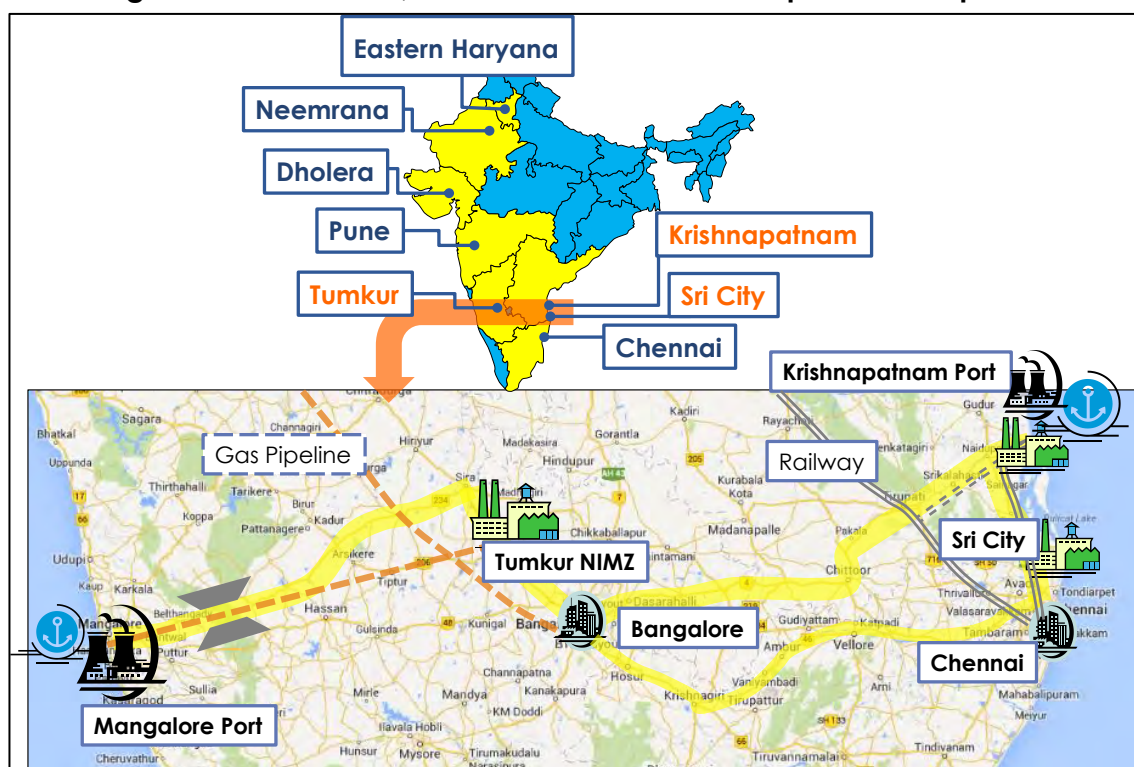
Among the industrial parks listed above that can expect the accumulation of Japanese companies in the future, 1) Karnataka, 2) Andhra Pradesh, and 3) Gujarat have potential since 1) willingness of the state government is confirmed, 2) land acquisition has been completed and 3) expansion of Japanese companies is expected.

Table 4-3: Comparative advantage of the states

| Items | Karnataka | Andhra Pradesh | Gujarat |
|--|---------------------------------|--|--|
| Japanese company / cluster | Toyota, Honda third plant, etc. | Isuzu, Kobelco, etc. | Suzuki third plant, Honda fourth plant, etc. |
| Infrastructure | Airport, water | Port, power, water | Port, power, transportation |
| Access to the airport | Bangalore | Chennai, Hyderabad | Ahmedabad |
| International standard industrial park | N.A. | Sri City | Mundra SEZ |
| Industrial parks under development | Tumkur NIMZ | Hinterland of Krishnapatnam port and Sri City for Japanese industrial park | Dholera industrial township |
| Residential environment | High | Medium | Medium |
| Willingness of the state government | High | High | High |
| Market for Japanese companies | High | High | High |
| Total evaluation in short-term | High | Medium | Medium |
| Total evaluation in mid-term | Medium | Medium | High |

(Source) JICA Study Team

Figure4-4: Karnataka, Andhra Pradesh industrial park development



(Source) JICA Study Team

In the short term, Karnataka has received a high evaluation.

To develop the electrical, electronic, OA, and precision machinery industries in both the domestic market and overseas market in the medium term, it is necessary to develop an industrial park with sufficient power and infrastructure located adjacent to the port. To meet the conditions of the port, power and road for industrial park development, Andhra Pradesh would be selected. The CBIC project has been carried out by JICA, and the synergy with the off-site infrastructure development is also expected.

Gujarat also has plans to develop a road, a railway, and an airport around the Dholera industrial township. The possibility of forming a cluster in the future is high.

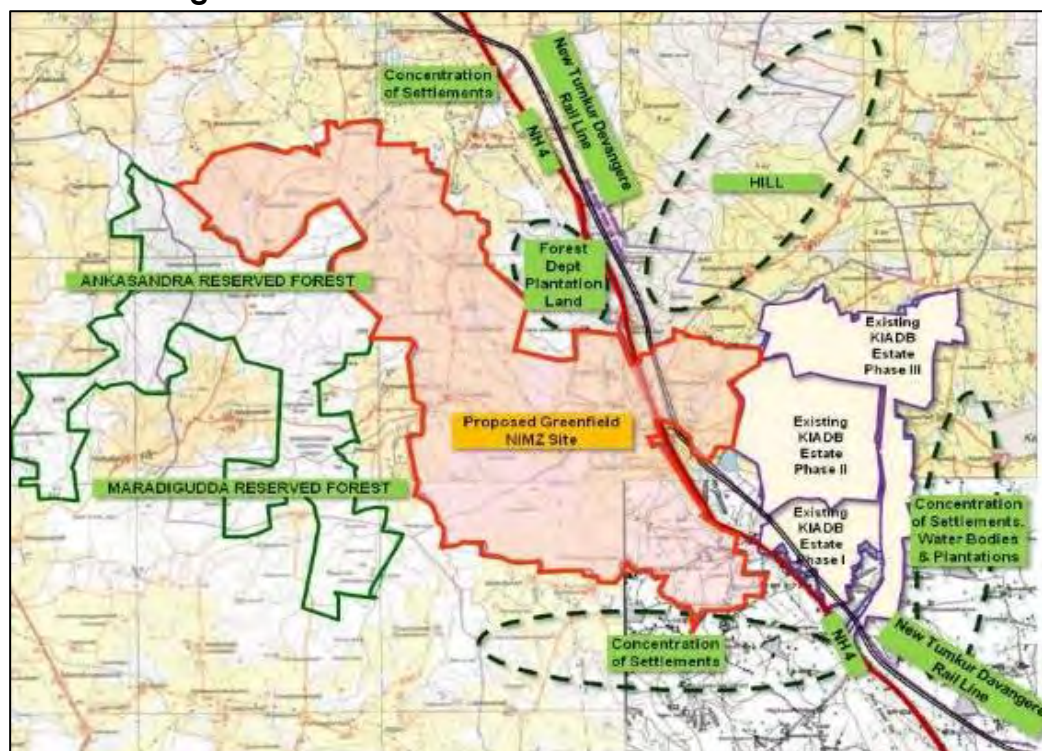
The Study Team would recommend starting pilot projects in 1) Karnataka Tumkur NIMZ, 2) Andhra Pradesh Sri City, or 3) Andhra Pradesh Krishnapatnam Port Hinterland.

4) Karnataka Tumkur NIMZ

The Karnataka state government has identified 5,000ha of land to develop as an NIMZ. Out of that 5,000ha, 3,000ha has been acquired, and the remaining 2,000ha is in the acquisition process. Located 70km north-west of Bangalore along the National Highway 4, a part of the land has been developed as Vasantha Narasapura Industrial Park. The pipeline connecting between Dabhol, Maharashtra, and Bangalore has passed through the site, and the access to the reservoir is also sufficient. Karnataka State Industrial Investment Development Corporation

(KSIIDC) has showed its intention to develop 300-500ha of land as a Japanese industrial park. Suppliers of the automotive industry and electrical, electronics, and information communications equipment industries are expected to form a cluster in the Tumkur NIMZ.

Figure4-5: Potential site of Karnataka Tumkur NIMZ

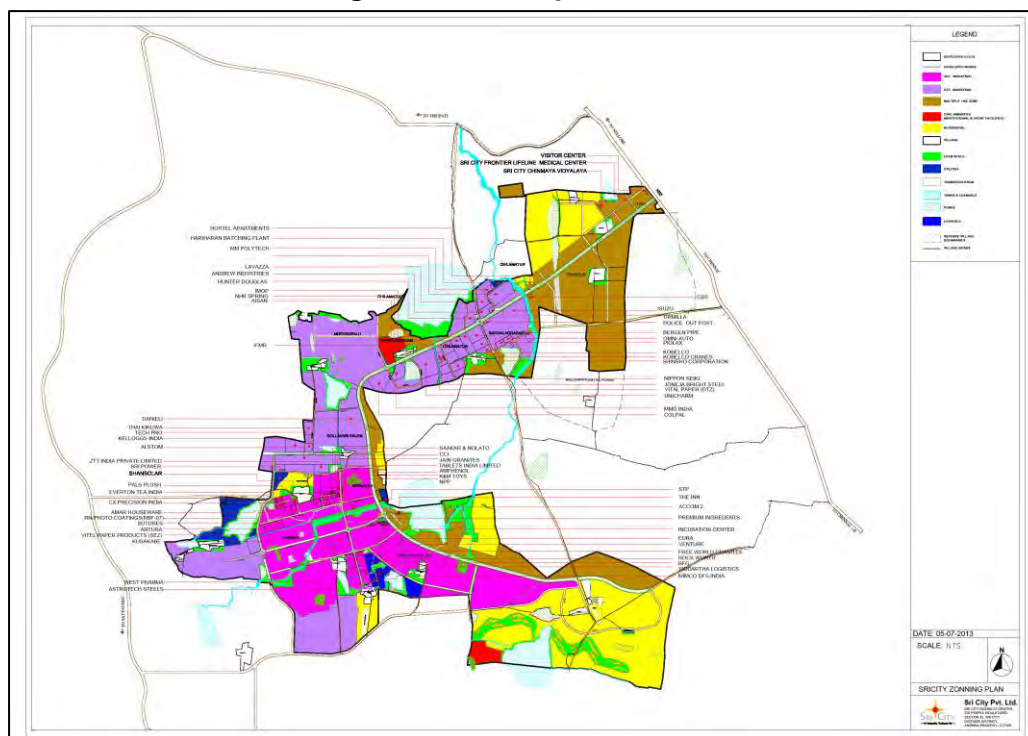


(Source)Karnataka State Industrial Investment Development Corporation (KSIIDC)

5) Andhra Pradesh Sri City

Sri City began operations in 2008 as a private industrial park with an SEZ and DTA, under a lease agreement of 99 years. Japanese leading assemblers such as Isuzu and Kobelco have decided to set up factories in recent years. Sri City is located in the south part of Andhra Pradesh State and 55km from Chennai. Sri City could enjoy the infrastructure of the major city and acquired the land with low cost. The entire area is 6,000 ha. Sri City has been focusing on the development of industrial parks, and is seeking a business partner to develop commercial and residential areas for a township development in the future. Expansion of the automotive industry and industrial machinery industry such as construction machinery, agricultural machinery and industrial machinery are expected.

Figure4-6: Sri City Master Plan

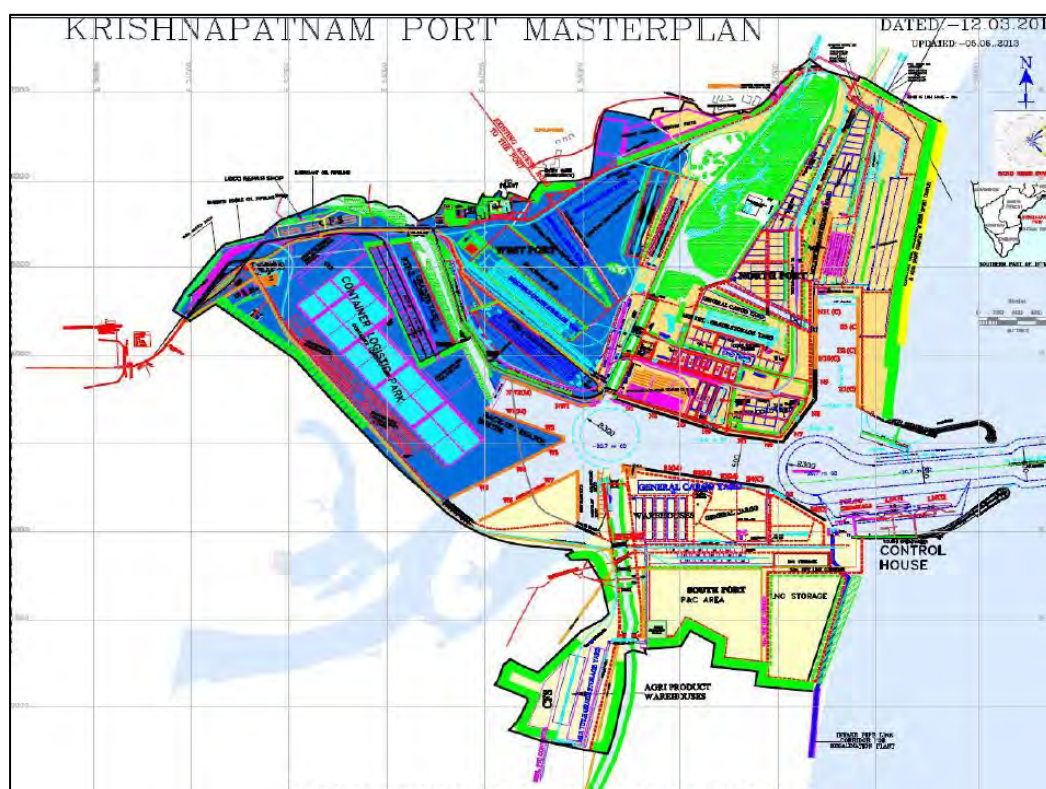


(Source) Sri City

6) Andhra Pradesh Krishnapatnam Port Hinterland

The Krishnapatnam port, a deep seaport of 18.5m water depth, located 180km from Chennai, has been developed and is fully operated by a private company. It is scheduled to have a 6 million TEU annual handling capacity. The new power generation plant is in progress along with the existing coal-fired power plants in the hinterland of the port. After completion, the Krishnapatnam port will have a power generating capacity of 8,000MW after combining with several power plants. There is a plan to connect the gas pipeline to the industrial park to make gas power generation. The developer is looking for a business partner to develop an industrial park. Steel, chemical, petrochemical, and export industries are expected to set up factories there.

Figure4-7: Krishnapatnam Port Master Plan



(Source) Krishnapatnam Port

Possible projects in the pilot projects implementation will be considered as follows:

i. Master Plan and Feasibility Study of the industrial park development for attracting Japanese companies (2014 summer – end of 2014)

A master plan and feasibility study of 2-3 industrial parks to attract Japanese companies is recommended to be conducted. Also, the conditions under which Japanese developers can participate shall be negotiated with the state government, and the developer candidates shall be selected. The utilization of the investment scheme of JICA is also recommended to be examined.

| | |
|-----------------|--|
| Goal | To develop a basic plan of the industrial park for attracting Japanese manufacturers and to examine the possibility that a private company shall participate as a developer. |
| Outcome | <ul style="list-style-type: none"> Master plan of the industrial park development in the candidate sites is formulated Based on the master plan, a study is conducted to assess the feasibility of the project |
| Activity | <ul style="list-style-type: none"> To identify the candidate sites and implement measurement, geographical and environmental research To develop a master plan including the needs of Japanese manufacturing companies To analyze the feasibility based on a master plan To develop a business plan with the assumption that the private companies shall participate as developers |

ii. Implementation of industrial park development through PPP scheme that the private companies shall participate as developers (2015 - onward)

Utilizing the overseas investment scheme of JICA, an industrial park development is recommended to be conducted in joint venture with the state government and private developers.

iii. Off-site infrastructure planning (2015 summer – end of 2015)

In developing an industrial park, required off-site infrastructure (power, water, sewerage, access roads, highway and railway connecting major cities) is recommended to be planned.

| | |
|-----------------|---|
| Goal | To identify off-site infrastructure required for industrial park development such as power, water and sewerage, access roads, and highways, and develop a basic plan |
| Outcome | <ul style="list-style-type: none"> Off-site infrastructure required for industrial park development is identified Basic infrastructure plan is formulated |
| Activity | <ul style="list-style-type: none"> To collect basic information related to off-site infrastructure To formulate a basic infrastructure plan reflecting the intention of industrial park developers To formulate a project implementation plan based on a basic infrastructure plan |

iv. Off-site infrastructure development utilizing Japanese ODA loan (2016 -onward)

The selected off-site infrastructure is recommended to be developed by utilizing Japanese ODA loan, especially for the Karnataka Investment Promotion Program (KIPP) that has been planned at present.

3. Skill development program for the manufacturing industry (2014 summer - onward)

Skill sets in the manufacturing industry requires a different skill in each area, and it is necessary to educate and train to identify the skills that companies need. The Market Skill Development Program that started 40 years ago in Singapore required all of that country to promote manufacturing, and, similarly, the introduction of such a program in every state in India would become an important factor to develop the manufacturing industry in India. It is considerable to develop a market skills development program through JICA support, and to form a framework for dispatching Indian engineers to Japan through the internship program to provide them with technical guidance. Not only the automotive industry, but also electrical and electronics, industrial machinery, precision machinery, OA equipment, shipbuilding, and material industry can introduce internship programs to train Indian engineers.

| | |
|----------------|--|
| Goal | A skill development program for manufacturing industry: to develop a basic plan of the program and to implement the program |
| Outcome | <ul style="list-style-type: none"> A basic plan for a skill development program for the manufacturing industry is developed |

| | |
|-----------------|---|
| | <ul style="list-style-type: none"> Competitive human resources for the manufacturing industry are developed |
| Activity | <ul style="list-style-type: none"> To develop a basic plan of the program and to undertake training To form a framework for sending Indian engineers to Japan through an internship program to provide technical guidance and implement the program |

4. Investment promotion program for Japanese investors (2014 summer - onward)

The investment promotion program in India has not been sufficient, and it is necessary to proceed with the investment promotion program actively in collaboration with the central government and the state government.

| | |
|-----------------|---|
| Goal | To accelerate the Japanese manufacturing investment in India, an investment promotion program shall be established with the collaboration of the central government and the state governments of India and investment seminars shall be implemented |
| Outcome | <ul style="list-style-type: none"> The capacity strengthening of staff of the central government and the state government is achieved through the investment promotion program development The needs of the Japanese companies considering to invest in India are achieved through providing information on industrial parks in India |
| Activity | <ul style="list-style-type: none"> To develop an investment promotion program of India with the collaboration of the central government and the state governments To implement investment seminars regularly and support business matching by introducing Indian companies |

Through the promotion of the above four projects as a package, improvement of industrial parks by the State Industrial Development Corporation and promotion of the industrial park development by the private sector shall be achieved. That will lead to an increase in direct investment of private manufacturing companies in India.

Appendices

1. Needs, roles and implementation practical support in supporting industries

1) Differences in the investment objectives of the China, ASEAN countries and India

Table A-1: Comparison of investment climate in China, ASEAN countries and India

| Country / region | Domestic market | Export to third countries | Infrastructure | Wages | Industrial parks | Industrial cluster |
|------------------|-----------------|---------------------------|----------------|--------|------------------|--------------------|
| India | Big | Small | Bad | Low | Insufficient | Low |
| Southeast Asia | Small | Big | Good | Medium | Good | High |
| China | Big | Big | Good | High | Good | High |

(Source) JICA Study Team

Unlike China and ASEAN countries, India has a huge domestic market that attracts Japanese companies, and they make the decision to invest in product sales in the domestic market. Investment for export to third countries remains less; the reasons are a lack of infrastructure (electricity, water, and ports in particular) and industrial parks, and insufficient policies to develop supporting industries. On the other hand, China and ASEAN countries have accumulated export-oriented industries with 1) close distance with Japan and 2) development of supporting industries of SMEs in electrical, electronic, OA and precision machinery, etc.

2) Industry comparison of Japanese investment

Table A-2: Industry comparison of China, ASEAN countries and India

| Industry | India | ASEAN countries | China |
|------------------------------|---|-----------------|-----------|
| 1. Textile & Garment | Small | Large D&E | Large D&E |
| 2. Food Processing | Small | Large D&E | Large D&E |
| 3. Wood & Furniture | Small | Large E | Large E |
| 4. Electric | Small | Large D&E | Large D&E |
| 5. Electronic & Mobile Phone | No | Large D&E | Large D&E |
| 6. OA & Precision Machinery | No | Large D&E | Large D&E |
| 7. Motorbike | Large D | Large D&E | Large D |
| 8. Automobile | Large D&E | Large D&E | Large D&E |
| 9. Truck | Small D | Large D&E | Large D&E |
| 10. Construction Machinery | JV D | Large D | Large D |
| 11. Agricultural Machinery | No | Large D&E | Large D |
| 12. Industrial Machinery | Small D | Large D | Large D |
| 13. Industrial Plant | D (two companies have started investment) | Large D | Large D |
| 14. Shipbuilding | No | Small | Large D&E |

| | | | |
|----------------------|--|---------|-----------|
| 15. Chemical | Small D | Large D | Large D&E |
| 16. Nonferrous Metal | No | Large D | Large D |
| 17. Steel | D (two companies have started a study) | Large D | Large D |

Note: E/ Export Market, D/ Domestic Market

(Source) JICA Study Team

At present, most of the Japanese investment in India is aimed at the domestic market of India, and investment for both the export market and the domestic market is very small. The Japanese investment in India so far has been mainly in automobiles and motorcycles. Electronic, electrical appliances, OA equipment, and precision machinery are the industries in which Japanese companies hold competitive advantages, and those have not been significant in market terms.

3) Implementation plan for supporting industries parks

The assembly manufacturers of motorcycles and automobiles and their Tier1 companies have set up factories in India, but companies need to install all the necessary infrastructure by themselves and the initial investment cost is more expensive than in Southeast Asia. Therefore, supporting industries of Tier 2 and Tier 3 companies has not expanded. The assembly manufacturers procure parts by importation or local company supply. In order to expand the supporting industries, industrial park development with infrastructure and services is required.

The industries that can expect more Japanese investment are 1) motorcycles and automobiles, and, 2) electrical and consumer electronics. These industries can expect a large Indian domestic market as well as export, and have the potential to bring up to competitive industries.

1) Motorcycles and Automobiles

The motorcycle and automobile industry is expected to grow continuously as a major industry. The percentage of car ownership in India is just 2% of the population - comparably lower than Southeast Asia and China. And that percentage is likely to increase with a rising middle income class. India is expected to become the largest car manufacturing country in the future surpassing China's production volume of 20 million vehicles in 2013. India may soon exceed its current production volume of 10 million units per year in the near future.

2) Electrical and Consumer Electronics

For the Japanese investment in electrical and consumer electronics industry, there is a big difference between India and Southeast Asia. The main investments that have increased rapidly since the yen appreciation in the late 1980s were in: 1) the automobile industry, 2) the electrical

and electronics industry, and, 3) the precision machinery industry.

However in India, Japanese investment has been concentrated on automobile assemblers (Suzuki, Honda, Toyota, Nissan and Isuzu) and their suppliers, and the number of companies in the electrical and electronics industry and machinery industry is limited. Panasonic has set up a consumer electronics factory in Haryana in 2013, but other manufacturers have not expanded their factories in India, or set up import sales offices.

This phenomenon is not the issue only in India. The Japanese consumer electronics industry has lost its competitive edge in the world since the Korean and Chinese companies such as Samsung and LG have become dominant in the world consumer electronics market. The Japanese companies recorded heavy losses after the collapse of Lehman Brothers and have been forced to review their overseas strategy, including the scaling down or withdrawal from overseas markets. However, if the Japanese yen continuously weakens in the future, the possibility of manufacturing bases set up by the Japanese consumer electronics manufacturers increases.

The Government of India has announced its intent to promote the electrical and electronics industries and attract FDI. The current production scale of electrical and electronic equipment and information communication industry in India is only 1.3 percent in the world with US\$45 billion. Currently only refrigerators have been exported, and 50%-80% of flat-screen TVs, mobile phones, OA equipment, and room air conditioners are imported.

As described in “2.3. Foreign investment promotion policy in India”, the Indian government has announced the electrical and electronic industrial development policy, and India Electronics & Semiconductor Association (IESA) has been planning to set up an SEZ for electricity, electronics and information communication equipment industry in Bangalore, where IT software parks are located. The government is planning to provide a subsidy of 20% to tenants in SEZs and 25% to tenants outside SEZs. Based on that policy, the eight Japanese electrical and electronic companies visited Bangalore in early February to seek feasibility of their investment plan in India. There is also a possibility to bring electrical and electronic companies in Tumkur NIMZ. The expansion of trade and investment in Japanese electrical and electronic companies to India will be beneficial to both countries.

- 1) Benefits to India: reduction of the huge trade deficit, increase in production, expansion of the manufacturing sector, and the creation of new jobs in the industry
 - 2) Benefits to Japan: to regain competitiveness in the industry
- India has the potential to grow the industry, and the government has also set a policy to enhance the industry increasing the production volume 10 times from now. India and Japan have entered into a cooperation agreement in the electrical and electronics industry in September 2013 as part of their partnership cooperation.

Apart from the above industries, the construction machinery, the agricultural machinery, and the industrial machinery industries also have high potential to expand domestic demand in India. The shipbuilding industry can be expected to grow by a joint venture of Japanese companies and local companies. Also, the materials industry - such as iron and steel, chemical, and petrochemical - is also expected to grow along with the growing domestic demand in India with a joint venture of Japanese companies and local companies.

2. Scenario analysis

As we proceed with multiple regression analysis by using industrial infrastructure like power, road, rail freight, and port container cargo handling capacity as elements, the status of inflows of foreign direct investment into India, were observed in the following scenarios: 1) measures taken, 2) baseline and 3) measures not taken. In the analysis, the theoretical value the inflows in the scenario 3) dropped from the performance of the first scenario by 58%.

This analysis is just calculating only the theoretical value, though the result in comparison among 3 scenarios shows that the performance value of scenario 1) outperformed 72% from the baseline scenario. Consequently, policy and implementation measures together with development of the industrial park are expected on strategic planning and development of industrial infrastructure.

Also, when we compare the following different three scenarios in which certain set of different constant numerical values were assumed to contribute to nominal GDP up to 2022 as the growth rate of each agriculture, manufacturing, industry and the service industry, the following analytical results are obtained.

Table A-3: The theoretical value of growth rate for the value-added of industries by scenarios

| Value added growth rate (nominal) | Ideal | With certain measures | Without measures |
|-----------------------------------|-------|-----------------------|------------------|
| Agriculture | 10% | 8% | 6% |
| Manufacturing | 20% | 15% | 10% |
| (Share in nominal GDP) | (25%) | (19%) | (14%) |
| Industry | 12% | 10% | 8% |
| Services | 13% | 11% | 9% |

Figure A-1: The nominal GDP and share of manufacturing in the ideal scenario

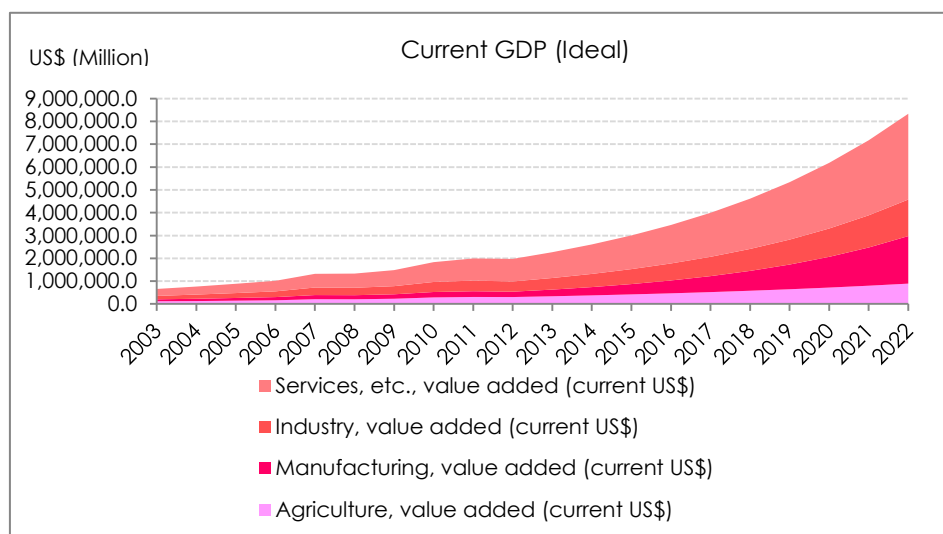


Figure A-2: The nominal GDP and share of manufacturing in the scenario with certain measures

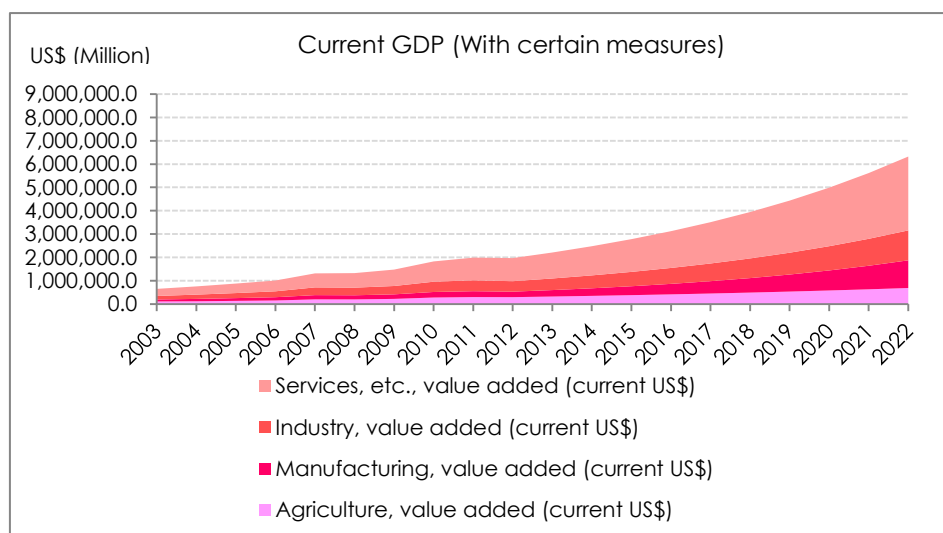
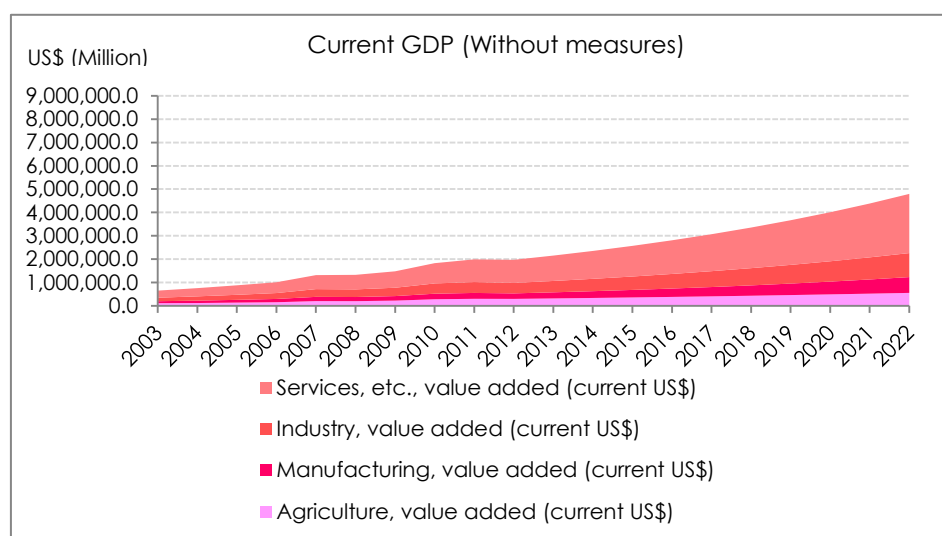


Figure A-3: The nominal GDP and share of manufacturing in the scenario without any measures



When we assume the annual growth rate of manufacturing value added to be 20 % for the coming years, nominal GDP would reach US\$8 billion by 2022 and the share of manufacturing would come to 25% of the total nominal GDP. On the other hand, when we compare the other two scenarios where with and without certain measures on industrial park development and its associated industrial infrastructure (roads, ports, airports, and power plants), the estimated nominal GDP remains in the range of US\$6 billion and US\$5 billion respectively.

There is a need for an enormous infrastructure investment for the policy goal of the Government of India proposed in 2011 in that the current GDP share of the manufacturing sector of 13.5% is proposed to be pulled up to 25% and creation of new jobs by one hundred million people is also aimed.

Together with the development of power, ports and roads), it is expected for the total area of an industrial park to be developed in addition to the present status with the size of about 500,000 ha. The figure is equivalent with 500 places of the size of NIMZ and 1,000 units of ordinary industrial parks/SEZs of each size of 500 ha.

From the experience of China and the ASEAN countries, the goal of NMP is quite ambitious and it would encounter a lot of challengers for its accomplishment by 2022. Having a target and vision is extremely important, but unrealistic goals would become a problem in reverse. Therefore, it might be necessary to adjust the future goal in a much more realistic manner.

Given the experience of Asian countries and China, it may be realistic and still challenging for India to achieve the introduction of 100 new industrial parks/SEZs and to create 10 million

new jobs (200 workers per hectare on average, with each industrial park of the 500ha size). And it is expected that the goal can be set to develop industrial parks / SEZs at 500 locations, and aiming for additional job creation of approximately 50 million by 2034.

Table A-4: NMP target and realistic target of industrial park / SEZ development and new job creation 2014 - 2034

| Year | 2014–2018 | 2019–2022 | 2023–2028 | 2029–2034 | Total |
|-------------------------|-----------|-------------|------------|------------|-------------|
| NMP goal | | 100 Million | | | |
| GDP Share | | 25% | | | |
| New industrial park/SEZ | 20 | 80 | 200 | 200 | 500 |
| New job creation: | | | | | |
| Direct | 2 Million | 8 Million | 20 Million | 20 Million | 50 Million |
| In-Direct | 3 Million | 12 Million | 30 Million | 30 Million | 75 Million |
| Total | 5 Million | 20 Million | 50 Million | 50 Million | 125 Million |
| GDP Share | 14% | 15% | 17% | 20% | 20% |

(Source) JICA study team

A realistic target and vision for the development of the manufacturing industry in India, with the appropriate measures implemented, 50 million direct jobs and 75 million indirect jobs (in total 12.5 million) could be newly created in the manufacturing industry. As a measure, the number of industrial parks/SEZs should be newly added at 500 locations with the average size of 500 ha in each in next 20 years.

3. Comparison analysis of land acquisition in India and Southeast Asia

Real estate related issues (including site acquisition system)

Difficulties of land acquisition are mentioned as one of the impediments to investment in India.

(1) In the field survey by the JICA Study Team, the following problems were pointed out by general Japanese construction companies doing business in India.

(i) Due to the high risks of Indian land problems, Company A cannot start original engineering works or construction works. Therefore, Company A has focused on design and construction supervision for foreign-affiliated companies such as Japanese, European and American companies. Looking at the latest cases, it is quite impossible for Company A to undertake original construction works due to such problems as investors' inability to easily acquire the land, the sudden appearance of landowners claims landownership rights after acquisition, long construction periods beyond the contract period producing cost overruns and labor troubles frequently. Company A undertakes design after confirmation that the land acquisition is completed by investors. In addition, Company A subcontracts original engineering works and construction works to Indian sub-construction companies to avoid being directly involved in the

management of field workers. Furthermore, because it is impossible for Company A to secure large amounts of project works as in Thailand and Indonesia, it targets not only factories, but also hotels, offices, and commercial facilities. However, sales volumes are extremely small in India.

(ii) Company B limits its business to boring, design, and construction supervision to Japanese companies to which land ownership has been transferred completely. Plant construction works for Japanese companies involves many risks such as difficult land acquisition construction delays, and restoration of the factory finishes (i.e. exterior work, painting, etc.).

Company B does not participate in the factory site selection and direct construction activities, but does subcontract construction activities to Indian sub-contracting companies. In addition, Company B requests the customers to solve risks by themselves that they experience. Furthermore, as there are many cases of the sudden appearance of landowners claiming their landowning rights after land acquisition, Company B does not participate in solving problems to avoid risks. Though the construction price is half of that in Japan, incomplete works require from 50% to 100% longer construction periods, resulting in pushing the price of construction to 60% to 80% of that of Japan.

There are lots of hidden risks for Japanese general construction companies.

Concrete problems faced by Company B and clients of Company B are as follows:

Table A-5: Concrete problems faced by Company B and clients of Company B upon the establishment of production bases in Indian industrial parks

| | | |
|-------------------------|--------------------|---|
| A motorbike maker | Karnataka State IZ | Previous inhabitants insisted on landownership rights of the land and filed a suit against the state IZ corporation which had bought the land from landowners and sold it to investment companies. Construction by Company B did not seem to have the direct influence, but the trial continues until now. At last, a client company gave up its plan to be part of Karnataka IZ and has decided to move to another State. |
| A motorbike parts maker | Karnataka State IZ | Due to the significant delay of the access road construction to the planned site by the state IZ corporation, the construction of the factory was also delayed consequently. The access roadwork to the planned site by the state IZ corporation was largely behind the plan, accordingly, the construction of the factory started lately. As the state IZ corporation's action was long overdue, a Japanese company contracted directly with a local sub-contractor to begin work on part of the road network. However, just after the start of construction, it was recognized that the land purchase didn't conclude for the half of the landowners, and the previous landowners came to the site and demanded the construction be cancelled, and so construction was halted. Though the negotiations between the state IZ corporation and the landowners are underway, difficulties are being experienced in the negotiations. Negotiations are continuing with some landowners. |
| A car parts maker | Karnataka State IZ | At the time of the land purchase, the infrastructure of the IZ had not been set up, but the factory construction had begun, because the state IZ corporation had promised to prepare all infrastructure by the completion of the factory |

| | | |
|--------------------------------|--|--|
| | | construction. In fact, the supply of electricity and water service was largely delayed. So, among the first five months from the commissioning the factory to full operation, the company had to depend on its own power generation and water well dug by the company. |
| A steel sheet processing maker | Andhra Pradesh private IZ | Local residents claimed that the IZ private corporation had promised to relocate a small shrine and a children's playground within the site. However, the IZ chose not to relocate them, so a dispute arose between the two sides. For this reason, the local residents have interfered with construction of the factory. As a result of having discussed the matter with each other, the two sides reconciled and decided to relocate them on site and started to construct the factory, but it took a considerable period of time. |
| A car parts maker | Tamil Nadu State IZ | Originally, the local residents had objected to construction of the IZ. So, the State IZ corporation faced difficulties of the land purchase. Even after purchase completion, the landowners and the local residents interfered with construction of the IZ on a daily basis. In addition, as the issuance of the land ownership certification by the state authorities was late, the factory construction had to start about one year and six month later than planned. |
| The problems of the State IZ | <ul style="list-style-type: none"> •When choosing the factory site for an IZ, there are many cases in which the site boundaries are not clear until the payment occurs in accord with a contract. This fact causes trouble after the purchase of almost any land. •Few IZs come with infrastructure already built - access roads to the site, supply services of water and electricity, etc. Investing companies have to be prepared to develop infrastructure by themselves. •State authorities are sometimes selling the sites to investment companies before completing the purchase of those sites. •There are complicated and time-consuming applications for the factory construction, followed by negotiations with the state IZ corporation. In addition, as officers in charge of the state authorities sometime move and change the position, it takes time to get approval. •An Indian domestic standard (including NBC: National Building Code) doesn't meet the specifications of the large-sized factory, so, negotiations for exception of NBC application are needed with the officers at the time of submitting the application. For example, NBC requests that restrooms be a distance of 15m away from a canteen in buildings. This means that laws and building ordinances were formulated under the times of bad sanitary conditions. •In cases of submitting a construction application and a factory application, NBC and the Factory Act present conflicting messages. | |

(Source) Compiled from JICA Study Team

(2) As a case of difficulty of land acquisition, the failure of the Tata Motors factory site purchased by the West Bengal State Industrial Development Corporation is introduced in the report titled "The survey on the real estate circumstances in Asia: the investigation of the real estate circumstances of India" (March 2013, Japanese Association of Real Estate Appraisers). As another example of difficulty in land acquisition, the invalid case judged by the Supreme Court of the residential site purchased by the Greater Noida Industrial Development Authority which belongs to the UP state government is introduced in the report titled "The background of land war in Noida Area"(August 2011, IDA-JETRO). In any case, the central government of India should have paid prudent attention to avoid causing failures of state government. The central government should have formulated the market mechanism on land acquisitions from landowners.

- (3) The coordination of the interested parties among landownership, land acquisition, and land possession is one of the important issues in India in regard to the development of infrastructure, IZs, and PPP and ODA involvement. Under such circumstance, the Indian government authorities amended the old land acquisition act dating back to 1894 and passed a new land acquisition act through the Parliament on September 2013. The table as shown at the next pages compares the new land acquisition act in India with those in the ASEAN countries and China.
- (i) There have been countries which have such systems as state governments acquiring farmers' land at low prices based on use value, and transferring that land to a developer at a high price based on market value. In such cases, state governments enjoy huge capital gains. These countries have become very few among ASEAN countries or China. Such state governments exposed themselves to criticism while receiving compensation from farmers who were landowners, resulting in negative influences upon their managing IZs or introducing FDI.
 - (ii) Since ASEAN countries and China faced such farmer opposition in the past, legal amendments have put into effect based on market valuation for farmers' land. Without those efforts, public-works, infrastructure construction, and IZ development would be delayed by opposition from farmers. Moreover, the introduction of FDI would be subject to serious influences.
 - (iii) When farmers' land is not appraised by use value, but is evaluated by market value, some industrial associations are sometimes anxious about the rising land price. But, some related industry associations, including developers, so far have coexisted with state governments. They have purchased the land cheaply from landlords, leading to accumulated capital gains by state governments, and some related industry associations. If such a mechanism is formed as the capital gain transfers from state governments and some related industry associations including developers to farmers, an accelerating land price is no longer considered a point of anxiety. However, future land price increases, with the development effect of converting value to price, is a result of developers' contribution.
 - (iv) Landowners to request a market value rather than use value for the land acquisition price are behind the cultural standard of landowners being higher. The governments, such as those of the ASEAN countries and China, set forth the policies and the rules which reflect the market valuation for land acquisition from landowners, backed by an upsurge of the social standard of landowners and heightened public opinion. The government of India has just enacted a new land acquisition act similar to the ASEAN countries and China keeping with the current trend of the times. In addition, if the government of India will formulate related

rules and enforce those rules appropriately, FDI will welcome the enforcement.

(4) Another common background shared by China and the ASEAN nations, legitimized in its direction as a reform movement, relates to the policy on infrastructure projects funded by the World Bank. This direction was recommended in World Bank reports such as, "Operational Policy on Involuntary Resettlement" (enacted in 2001, amended in 2013), and, "Compulsory Acquisition of Land and Compensation in Infrastructure Projects" (circulated in 2012). The World Bank has evaluated real estate of inhabitants by applying repurchase prices for the compulsory purchase of land in the resettlement of habitants accompanied with the implementation of infrastructure projects, including PPP projects. The basic principle of this policy is that unless residential land values include a replacement value in their pricing, the current land on which inhabitants' live is undervalued and contributory to both a rise in real estate prices, and, inhabitants' satisfactory resettlement could not be accomplished. In addition, if the governmental authorities applied the prices, after accounting for depreciation, to their housing, and applied coercive pressure to purchase it at the lowest possible price, inhabitants could face difficulties in affording housing for their resettlement. Therefore, the World Bank has made the application of the replacement cost for their housing. However, the World Bank does not claim to reflect the future price increase of the real estate evaluating many times the present market price. However, the World Bank does not claim to materialize the future market rising prices of real estate and evaluate the real estate of inhabitants at many times of the existing market prices.

If a land market is not formed in the development area, replacement prices will result from negotiated prices that are necessary to maintain the real estate value of the existing inhabitants. In addition, based on the principle of replacement prices, the World Bank supports not only the real estate value, but also the earnings compensation through taking a variety of methods, when inhabitants lose their jobs by leaving the their own land.

The World Bank has applied replacement prices to infrastructure projects that are involved, in the latest example, in India, Tamil Nadu Urban Development Phase III (~2014), in Indonesia, Indonesia Power Second Transmission Development Project (IPTD-2) (2013~). The Asian Development Bank has also applied replacement prices to infrastructure projects.

So far, the governmental authorities in China and the ASEAN countries exercised public authority to force the application of cheap use prices for real estate evaluation. However, based on the background mentioned above, in order to solve disputes earlier in infrastructure projects associated with the advent of inhabitants' sense of entitlement, the governmental authorities had to accept the principle of current prices (including market prices in market formed cases and repurchase prices not in market formed cases) and came to revise the related legislation.

Table A-6: Comparison of Improvements in Policy, Legislation, Implementation, and Land Acquisition Problems in India and Other Relevant Countries

| Item | India | Thailand | Indonesia | Vietnam | China |
|---|---|--|--|---|---|
| Problems or Disputes over Land Acquisition So Far | The old land acquisition law is one of the oldest laws in India enacted in 1894. Frequent troubles occurred by farmers due to the low compensation with a high price sale to developers from the state government which led to frequent campaigns against factory construction and industrial park development. For this reason, a drastic revision was needed by the central government. It should be noted that in the 1894 Act, the compensation amount is defined as the market price plus 30%, however, the definition of market price, guarantee of an alternate site, and compensation for daily life is not included. | Cases of disputes over land acquisition have not been found in recent years. | The land acquisition for the power generation project promoted by a Japanese company has delayed and a Japanese trading house company employee was detained by an opposition group. Also, in many highway construction projects, land owners have refused the land acquisition price proposed by the government. So far, the land acquisition has been carried out by the Presidential Decree (2006 No. 36) legally based on the Land Basic Law (1960). These accidents occurred due to the absence of compensation period or cost. However, the problems of unclear compensation cost and land acquisition date became clear. | Frequent disputes have occurred against industrial park development and large-scale investment over the objections of residents. The opposing reasons are complaints about the compensation amount and the reemployment support after land acquisition. In response to the complaints of the residents, the local government has embarked on arbitration, but the problems have not been solved. According to the investigations of local administrative authorities, as of 2010, 90% of the complaints from the private sector about the land problem were about inadequate land | Cases of the local government officers embezzling money are prevalent in which officers have been found reselling forcibly expropriated land at a higher price to private developers. According to the "Social Blue Book of 2013" announced by the Chinese Academy of Social Sciences, in several hundred thousand cases every year, disputes over the land acquisition occupies half of all such cases, disputes over corruption and labor account for 30%, and other types of disputes account for 20%. |

| Item | India | Thailand | Indonesia | Vietnam | China |
|---|---|---|---|--|---|
| Corresponding situation by policy, legal, and implementation action | The new Land Acquisition Act (The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013) has been enacted by the National Assembly (September 2013). | Constitution of the Kingdom of Thailand (No land acquisition act) | Land Acquisition Law (2012 No.2) and administrative instructions (Presidential Decree 2012 No.71 and National Land Agency Decree 2012 No.5) were enacted. | acquisition prices. (1) According to the Decree 2009 No.69 based on the 2004 Land Law determining subsidies paid upon land acquisition, provision of alternative agricultural land and compensation when there is no alternative agricultural land is defined, however, there are no provisions about the size of the resettlement area and life security of household evictions. (2) In September 2013, the Deputy Prime Minister told the Minister of Land, Infrastructure, and Transport of Japan Mr Oota that they would appreciate the opportunity to share the experience of land acquisition and various other policy | (1) The 2004 revised Constitution defined that compensation for private property acquisition is needed for the benefit of the public. However, the Real Rights Act of 2007 did not clearly define the criteria for the calculation of the compensation amount. Therefore, the Land Management Act established in 1998 shall be the base act. According to that act, the land compensation to farmers is 6-10 times of the average annual production value of the three years before the land acquisition. In addition, the total value including land compensation and life stability subsidy shall not exceed 30 times the average annual production value of the three years prior to the land acquisition. Farmers complained that the standard for calculating the compensation |

| Item | India | Thailand | Indonesia | Vietnam | China |
|------|-------|----------|-----------|--|--|
| | | | | implementation of Japan with relevant ministries of Vietnam. | <p>amount for agricultural land is valued on use. On the other hand, the land shall be converted to the market value after acquisition, and thus the capital gain is generated in the land. The gain has been distributed to the local government for 70% and the central government for 30%. The situation is similar to India as the local government achieves the capital gains, and the complaints of farmers are extremely high.</p> <p>(2)The Revised Land Management Law was adopted at the State Council Executive Meeting held in November 2012. Premier Wen Jiabao stressed that the protection of the interests of farmers, protection of agricultural land, and the protection of the production capacity of important food and agricultural products should be considered</p> |

| Item | India | Thailand | Indonesia | Vietnam | China |
|---|---|--|--|--|--|
| | | | | | first priorities. The Revised Land Management Act has been under discussion at the National People's Congress in November 2013. The main contents are described below. |
| Implementation year of the laws and regulations described above | Implementation since April 2014 | Revised in 2007 | Implementation since 2012 | Implementation since 2009 | Implementation planned from 2014 |
| Targeted projects | The Act includes private projects for public purposes and PPP projects, and excludes highways, railways, and ports developed by the state governments and the central government, and SEZs regulated under the SEZ Act enacted in 2005. | Land reform, public facilities, urban planning, industrial development, etc. | Public projects | Public projects | Public projects |
| Reform Policy | Enactment of the new Land Acquisition Act | Compliance with the land acquisition provisions under the Constitution | Faster infrastructure development and fair compensation amount of the land | Land acquisition is included in the new provisions of the Constitution, and the Land Law 2004 was revised in November 2013 | (1) A strict criminal liability is specified if civil servants become involved in land acquisition embezzled acquisition and sales price manipulation for self-interest and personal gain. (2) By integrating house compensation and land |

| Item | India | Thailand | Indonesia | Vietnam | China |
|-------------------|--|---|---|--|--|
| | | | | | use compensation, increasing compensation amount by market value is introduced. |
| Consent of owners | When private companies acquire land, consent of more than 80% of the land owners is required. PPP projects also require consent of 70%. SEZs managed by the government do not require consent but a "reasonable compensation" to owners is required. | Based on the provisions of the Constitution, the country sets up a process of public hearings with land owners affected by projects and discloses information before the process of land acquisition. | A process of land acquisition is defined in 2012 No.71 Presidential Decree as an administrative instruction of 2012 No.2 Land Acquisition Act (enforced in January 2012). (1) One single window for land acquisition: National Land Agency shall implement all procedures related to land acquisition, compensation and negotiation as a one-stop action. (2) Establishment of the compensation amount calculation by an independent appraiser: conducting an objective assessment by an independent third party (3) clarification of deadline for conducting negotiations on compensation (4) Clarification of the litigation process in the | In the Diet for a constitutional amendment of October 2013, opinions to say that in land acquisition, prior information should be disclosed and the Law should specify that the compensation amount shall be based on current value accounting for a large number. The land law reform and constitutional amendment was passed in the Diet in November 2013. | (1) No single corporate or individual can become violent or threatening, and cannot force eviction of people by illegal methods such as to suspend water, heat, and electricity supply and road traffic. (2) Public hearings for land acquisition are introduced for giving rights to people whose land is acquired, and for confirmation of compensation. The expense shall be determined through mutual negotiations. |

| Item | India | Thailand | Indonesia | Vietnam | China |
|------------------------|---|--|--|---|---|
| | | | case of a breakdown of negotiations: clarifying the litigation process and deadline avoids a situation of prolonged negotiations and litigation period and any project interruption. | | |
| Amount of compensation | <p>(1) Compensation amount shall be up to four times the land value (market price or sale price whichever is higher) in rural areas and twice the land value in urban areas.</p> <p>When any land is transferred to any person for consideration, 40% of the appreciated land value shall be paid among the owners.</p> <p>(2) Facilities such as roads, drainage, agricultural irrigation, transportation, power receiving equipment, schools and safe drinking water are provided to affected families.</p> <p>(3) A constructed house or financial assistance are provided in case of displacement</p> <p>(4) Job placement shall be</p> | Land acquisition compensation amount shall be based on the sale price in the market. | Land acquisition compensation amount shall be based on the market valuation. | Land acquisition compensation amount shall be assessed by an independent appraiser based on the market value of land. The compensation amount shall be paid to landowners in a lump-sum payment within 30 days after land is transferred. | <p>Compensation includes 1. Compensation of targeted housing value, 2. Compensation of transfer, 3. Compensation for any suspension of production and operation. Compensation amount must be paid before land acquisition. Compensation of targeted housing value can be clarified by evaluation of real estate land value evaluation organizations, and it should not be below the market value of real estate similar to the targeted housing value nearby.</p> |

| Item | India | Thailand | Indonesia | Vietnam | China |
|-----------------------------|--|---|--|---|---|
| | <p>provided to affected families if employment occurs after development</p> <p>(5) Other than above, moving expenses and a subsistence allowance for one year shall be provided.</p> <p>(6) If the compensation for land acquisition is not paid to date, the New Act shall be applied up to five years.</p> | | | | |
| Other Compensation Measures | Living expenses compensation, work costs compensation, relocation costs, and housing provision | Living compensation expenses, relocation expenses and housing provision | Living compensation expenses and relocation expenses | Living compensation expenses, work compensation expenses, and relocation expenses | <p>(1) Displacement fee is compensated in cash payments. The housing acquisition compensation regulation states that if people whose land is acquired elect to exchange housing property rights rather than being compensated with a displacement fee, new housing must be provided.</p> <p>(2) The compensation amount for loss from any suspension of production can be determined by the income from agricultural products before the land</p> |

| Item | India | Thailand | Indonesia | Vietnam | China |
|----------------|---|---|---|--|---|
| | | | | | acquisition and production suspension period, etc. |
| Other Measures | When any person is purchasing land, social impact assessment, including an environmental impact assessment, should be conducted and the results should be revealed to the land owner before private negotiations ensue. | Fair compensation shall be paid to all rights holders affected by land acquisition. | Land owners can submit a petition to the Supreme Court and the State Government if compensation from the government is deemed insufficient. | Administrative Procedure Act shall be drafted. | <p>(1) To protect the legitimate interest of farmers, the upper limit of 30 times the average annual production value of three years before land acquisition will be removed in compensation for the land acquisition.</p> <p>(2) Compensation for crop production will be increased as employing farmers having no land or a house is difficult. In addition, vocational training is introduced.</p> <p>(3) Farmers may request a public hearing with the administrative authorities against illegal land acquisition when alternative places are not provided.</p> <p>(4) To implement land acquisition and compensation promptly, the State Council will enact the Administrative Procedure Act.</p> |

| Item | India | Thailand | Indonesia | Vietnam | China |
|-----------------------|---|---|---|--|--|
| Reputation of the Act | While land owners in rural areas welcome the New Act, the industry concerns about increasing land acquisition costs. Private developers show disappointment that there is no change of land acquisition by the state governments and a direct land acquisition from land owners by private developers is still limited. | The Constitution guarantees the right indicating self-opinions to not only land owners but also to lenders, central government, local government and state-owned enterprises. | There is an opinion to welcome the enactment of the 2012 No.71 of a Presidential Decree and the Administrative Instructions as the procedures and time span for land acquisition has been clearly defined. However, there is a complaint from the industry that the Decree cannot be applied to the ongoing projects. | Landowners express appreciation that the Constitution clearly describes an increase in the compensation amount to more than the market price that used to be unreasonably low. Private developers are concerned about the rising land acquisition cost. However, they expect development projects to progress. | The Act is under discussion in the National People's Congress Standing Committee, but is expected to pass as proposed by the State Council. |
| General Evaluation | The Act reflects consideration to land owners in rural areas that the compensation amount to land owners has been increased to several times of the market value. If the state governments carry out the Act faithfully, disputes will be reduced and development will progress. However, there is a concern that the compensation amount will increase, and land prices will also increase thereafter. Problems are the state government having purchased the land with an unfair price. The definition of | (1)Transparency is high in land acquisition such as land evaluation based on market price and holding public hearings, this is due to the effect of the Constitution. (2)The Thai government is generally tolerant of land occupation by farmers. For example, the government permitted the private ownership by farmers where the king owned the land. In addition, | Even if a land acquisition issue becomes a lawsuit, with unnecessarily prolonged negotiations, a project interruption can be avoided as the negotiation deadline and litigation period has been clarified. | The number of disputes is expected to be reduced with the establishment of the land acquisition clause in the Constitution and the Land Law reform in 2004. It is unlike in India where the State Governments obtain capital gain between the land acquisition amount and the land sale fee. The difference with India is that farmers owing land can directly | (1)The land compensation cost will be converted to be based on the market value from the used value, and farmers will be able to claim their rights at public hearings (2) A severe punishment to a government staff person in an embezzlement case will be defined. (3) Defining public punishment of civil servants can be determined, although the land cannot be valued at several times the market value like in India. |

| Item | India | Thailand | Indonesia | Vietnam | China |
|------|---|--|-----------|------------------------------------|-------|
| | market price has not been clear, formulation of an administrative procedures act will be important. | private ownership was not permitted in forest area under the government jurisdiction. However, with the rapid increase of population, migration and cultivation has increased. In response to this, the government did not force farmers out, and the cultivation rights were permitted. | | negotiate with private developers. | |

*Malaysia is not included in this chart as the number of new industrial parks in that country is fewer, and the problems in land acquisition with market price are also much fewer in number than any of the other countries appearing in this chart.

4. Comparative analysis of long term economic growth between India and China

The long term economic growth in India has been constrained by a balance of payments issue, namely, a trade deficit. This is different from the long term economic growth in China when not constrained by trade deficit. This constraint in India has resulted from a trade structure, which still sees the importation of expensive goods such as massive amounts of machinery and materials, luxurious consumer goods, while exporting mainly cheap goods. Accordingly, the trade balance has long been one of deficit accompanied with hyperinflation caused by the pressure of strong domestic demand. To cope with such internal-external dis-equilibrium, the governmental authorities take countermeasures of tight monetary policy and restraint governmental investment for suppressing the internal-external dis-equilibrium, which then leads to a low-ceilinged long term economic growth in India compared with a high-ceilinged long term economic growth in China.

In order for India to achieve a high-ceilinged long term economic growth relieved from the internal-external dis-equilibrium, the governmental authorities should promote the export of higher value-added manufacturing goods based on inflows of export oriented FDI. Through this study, the JICA team will introduce a strategy of export-oriented Japanese FDI.

Figure A-4: Economic growth trends in India and China

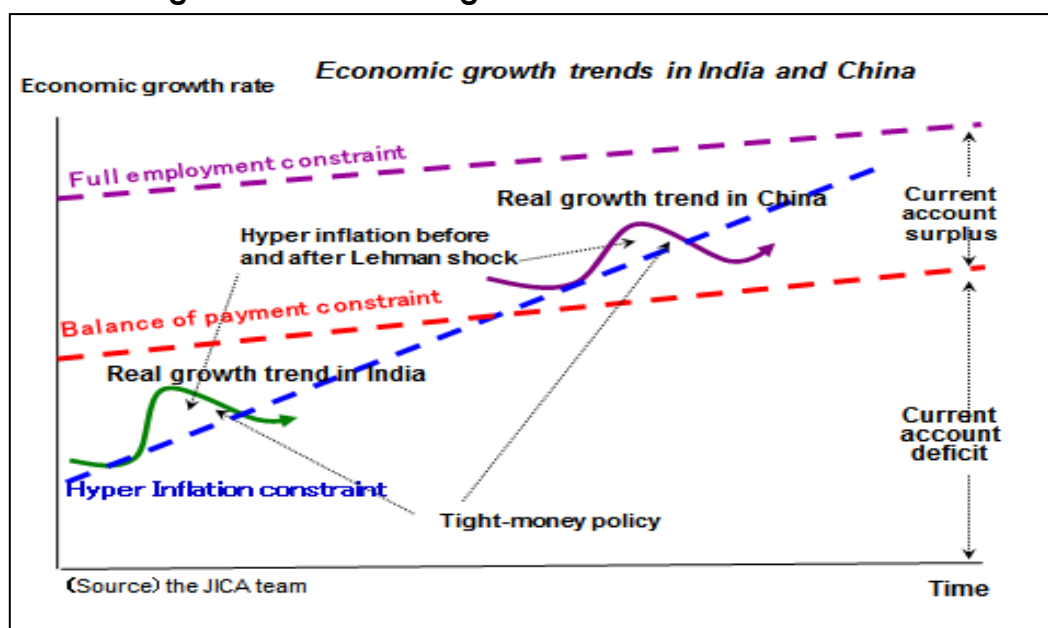
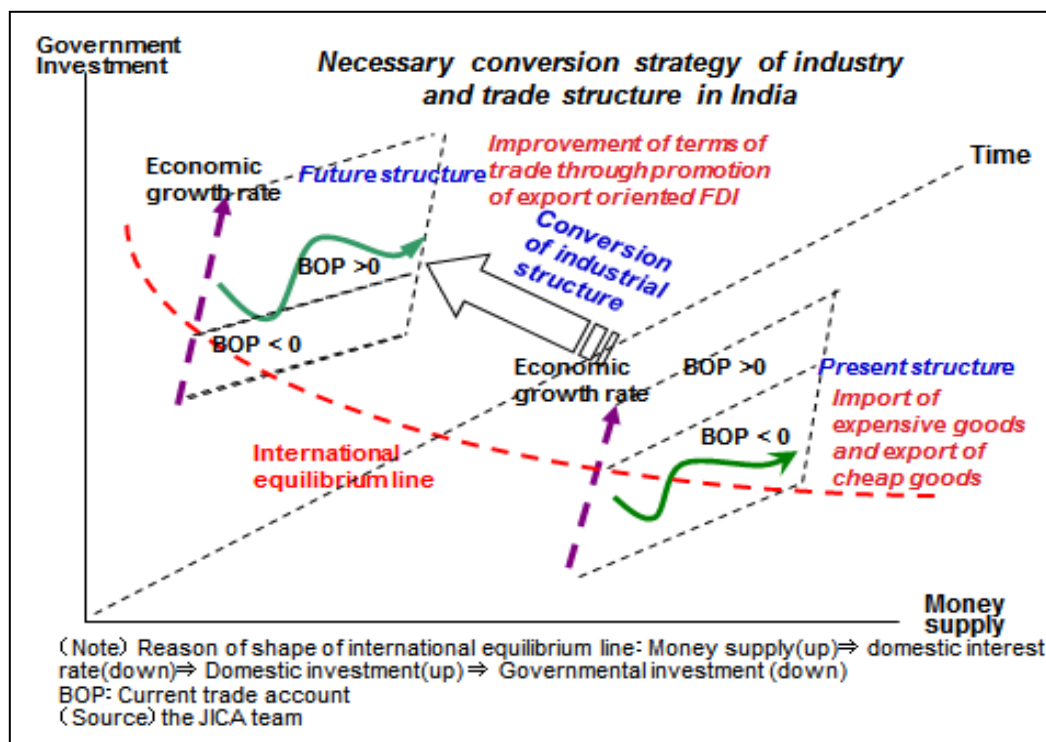
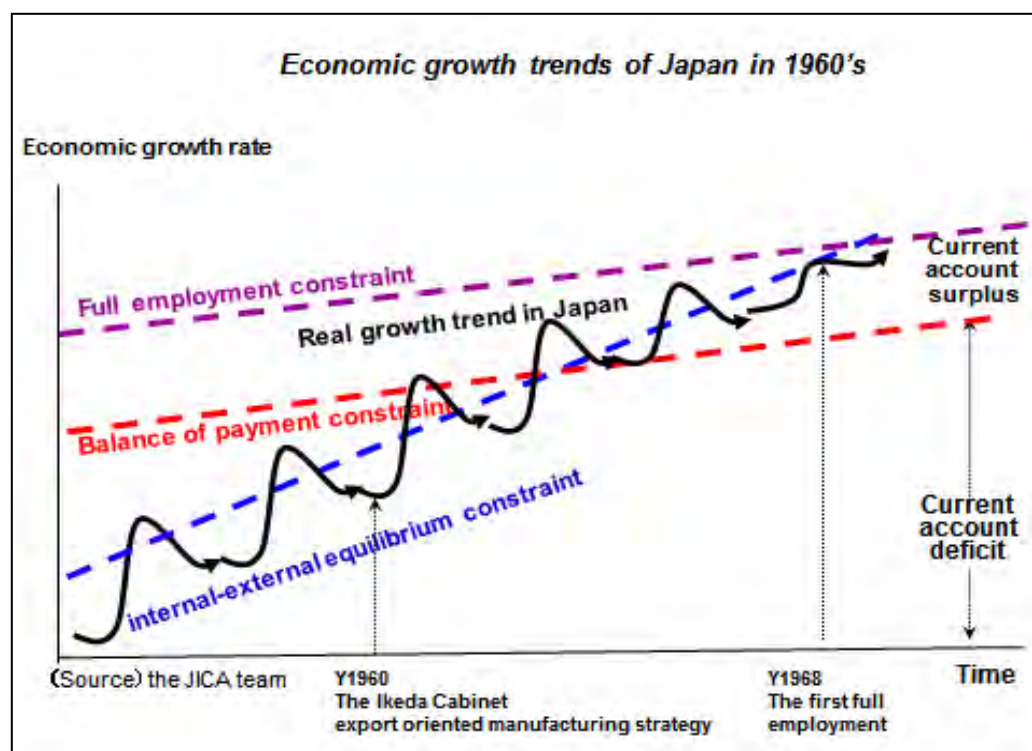


Figure A-5: Necessary conversion strategy of industry and trade structure in India



Japanese experience in formulating export-oriented manufacturing strategies and their success

Figure A-6: Economic growth trends of Japan in 1960's



This strategy was inaugurated in 1960 of half a century ago for the Ikeda Cabinet as an income doubling plan. The Cabinet formulated an export oriented manufacturing strategy which was quite successful. The Japanese economy after World War II was in a precarious position with a small trade surplus in a recession and a big trade deficit in the economic boom alternately. In other words, over a period of about 15 years from just after World War II, Japan had fallen into a serious spiral such as trade surplus → monetary easing → active domestic production → import increase → trade deficit → tight monetary controlling → stagnating domestic production → import reduction → trade surplus. As a result, the constraints of the trade deficit and the underemployment of labor had continuously caused low economic growth rates in Japan.

Therefore, the governmental authorities looked at ways it could realize a trade surplus or positive trade balance, and how to formulate an export-oriented manufacturing strategy aiming at the income doubling plan within 10 years. According to the record of the government authorities at the time, implementing Johnson's fundamental equation was decided. The derivation process is important in this equation, but should be shown only equation as follows (See Appendix about derivation process).

Japan's economic growth rates = (income elasticity of export in Japan / income elasticity of import in Japan) x real economic growth rates of foreign countries – {(price elasticity of import in Japan + price elasticity of export in Japan) / income elasticity of import in Japan} x changing rates of terms of trade in Japan

The first term of this equation is defined as the income elasticity standard. The first term implies the following:

- 1) In order for Japan to achieve high real economy growth rates and exceed real economic growth rates of foreign developed countries by realizing a trade surplus or positive trade balance in Japan, the industrial structure of Japan had to be rebuilt as the income elasticity of export in Japan / income elasticity of import in Japan had to become larger.
- 2) At that time, real economic growth rates of foreign developed countries were assumed to be 4%, income elasticity of import in Japan to be 1, and terms of trade in Japan were constant. Under these assumptions, Japan must have experienced income elasticity of exports at 2 such that real economic growth rates in Japan would reach an average of 8%.
- 3) Thus, the income elasticity standard became the theoretical background for converting export oriented manufacturing in Japan from garment and textile to shipbuilding, steel, chemical, automotive, electrical and electronic.

The second term of this equation is defined as the productivity growth standard. The second term implies the following:

- 1) If Japan would lower terms of trade, namely, {the yen-denominated export price / (dollar-denominated import price x exchange rates)}, real economic growth rates in Japan could increase.

2) To do so, there were three options at that time. The first was to lower the yen-denominated export prices. The second was the introduction of income policy to reduce the growth rates of labor productivity within nominal wage pulling rates. The third was to develop large scale capital-intensive industries which used to provide higher growth rates of labor productivity rather than nominal wage pulling rates. In addition, the low level of the exchange rate at a 360 Yen per 1 USD contributed excessively to the promotion of exports.

3) Of these options, the first option was opposed by other countries as tantamount to a policy that would permit Japan to dump cheap goods on the world market. The second option was not adopted due to opposition to the income doubling plan in Japan, though inflation would have occurred as a result. Finally, the third option was adopted to reinforce the export oriented manufacturing strategy.

4) Under the figures of real economic growth rates in Japan (8%), income elasticity of imports (1) was given and income elasticity of exports was not given. Furthermore, price elasticity of exports and price elasticity of imports were assumed to be the same at 1.5, and changing rates of terms of trade in Japan as -0.5% , income elasticity of exports in Japan was estimated to be 1.6.

Japanese economic growth rates have gone down from high growth to low growth after evaluation of exchange rate of the Yen. But, the Japanese trade structure has continued to maintain a surplus for a long period as a result of successful export oriented industrialization.

After the Lehman shock, existing export industries and import substitution industries in India will not have easily maintained long-term economic development with the external and internal equilibrium. In order to aim at the development of an export oriented industrialization in India, it is important to prepare economic statistics, an elaborate economic model, introduce a priority production system under budget constraints, privatize state-owned enterprises, foster SME, and enforce anti-pollution measures as well.

Time-series analysis of wages and labor productivity in India and the targeted countries, and, challenges in the investment climate in India

India's labor related policies, regulations and organizations cannot simply compare with those of the ASEAN countries or China as there is a country-specific system and labor practices, although these practices are in accord with the ILO policies. Therefore, the Study Team shall approach from the comparison of nominal wages, labor productivity, unemployment rate, and, the costs (wages) and performance (productivity) of India and the targeted countries shall be compared with respect to a Japanese company investing in India.

Touching a little upon the conclusion first, particularly in India since 2008, the nominal wages have been rising rapidly even though the labor productivity growth rate has been declining. This may lead to a strike if companies do not increase nominal wages more than consumer price inflation rates. A solution to this investment climate problem shall be described later.

The analytic results are as follows after creating a Phillips curve (see graph).

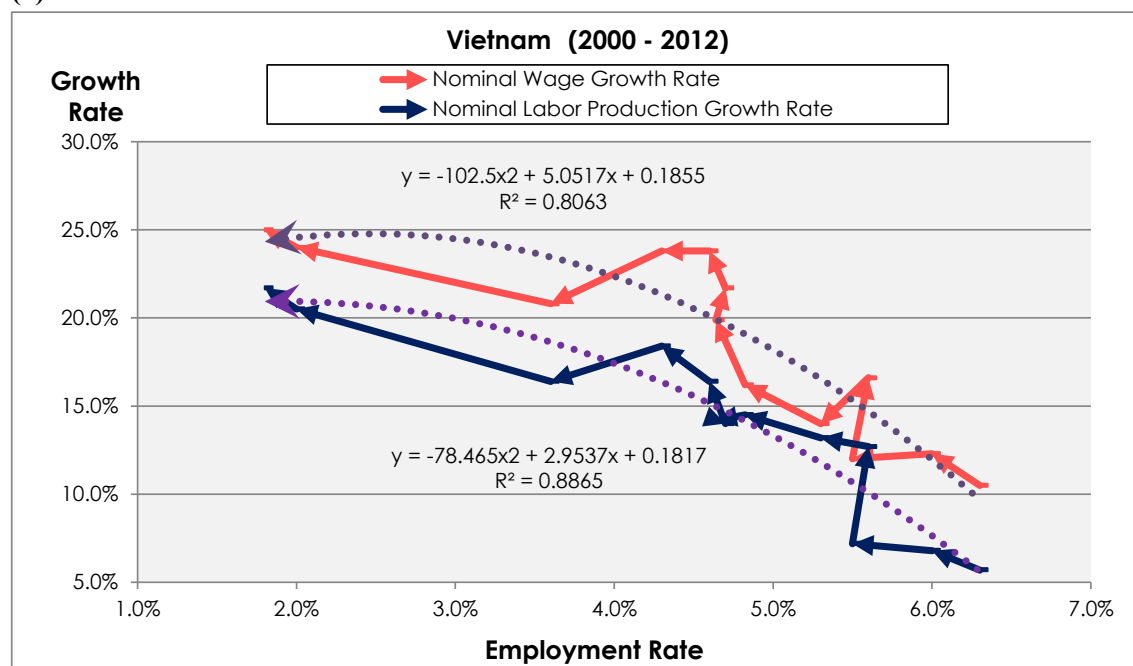
1. Trade-off relationship is observed between nominal wage increase rates and unemployment

rates. The hike in the unemployment rate shall loosen the rise of the nominal wage rate, however, crossing the horizontal axis of the unemployment is not found during the measurement period. Due to the employment shift to foreign companies from local companies affected by the economic slowdown, the nominal wage rate rise has not been halted. Therefore, the wage cost push inflation has been observed after the expansion of foreign companies.

2. A trade-off relationship is also seen between labor productivity growth rates and unemployment rates. However, during the comparable period of nominal wage increase rates, the labor productivity growth has been surprisingly lower than the nominal wage rate on a consistent basis.

Analysis is shown below; the targeted four countries are namely Vietnam, Thailand, China and India.

(1) Vietnam



(Source) Compiled based on various statistical data

Vietnam has the highest growth rate of labor productivity among targeted countries. The reasons are; 1. People are encouraged to rebuild the country by leveraging industrial growth after the devastation of the Vietnam War, 2. Foreign companies highly evaluate the technological skills of Vietnamese workers and they rank Vietnam as a top country to relocate, 3. Vietnamese are strongly motivated in production, and the government focuses on the development of policy, legal system and institution-building as an industrial nation, and 4. Infrastructure in industrial parks is developed efficiently by developers from Japan (Sumitomo Corporation, Nomura Securities, Sojitz and Itochu), Korea, Singapore, Taiwan, China, Malaysia

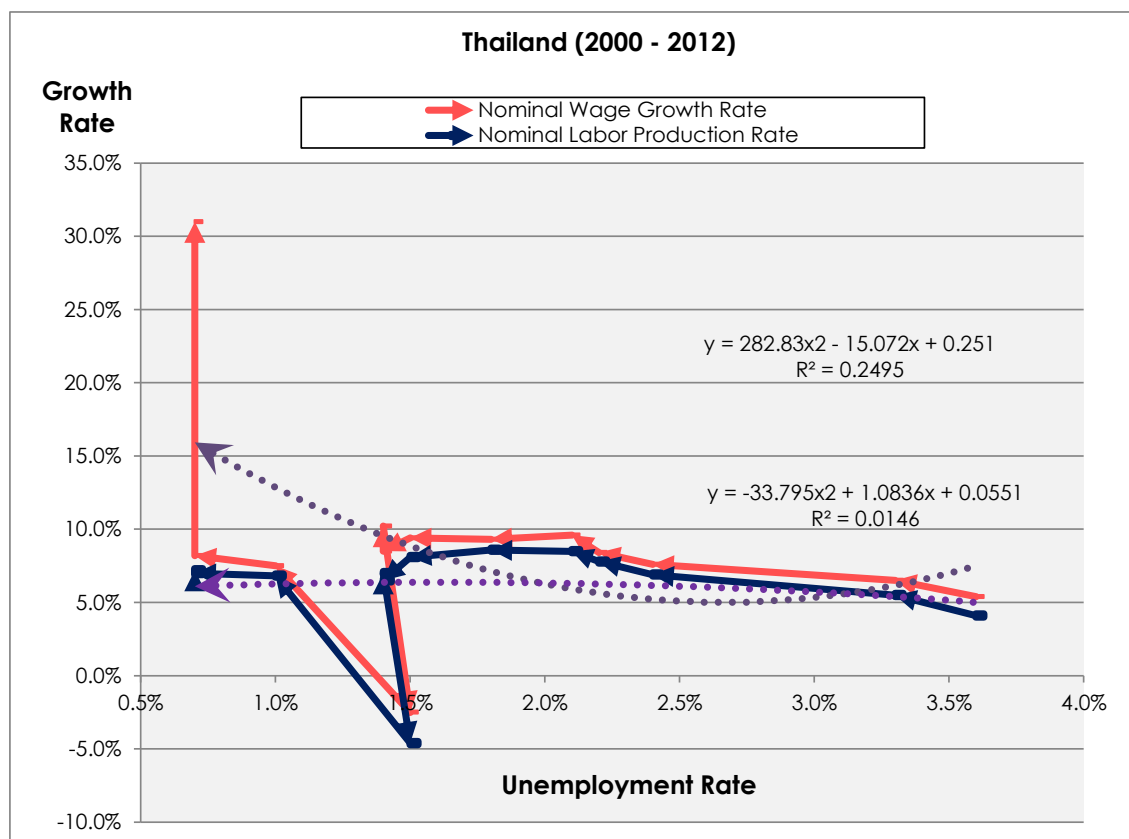
and local (private and local governments).

In Vietnam, the nominal wage growth rate has been significantly higher than the labor productivity growth rate. The average deviation rate from 2010 to 2012 was 4.9%. The government will not change the policy of nominal wage rises in the future in an effort to improve people's lives.

With the falling exchange rate of the Vietnamese Dong against the US dollar, export oriented companies have become advantageous and domestic oriented companies have become disadvantageous. In addition, the falling Dong exchange rate has an impact on absorbing the Dong-denominated nominal wage growth rate in dollar terms by foreign companies. Increasing nominal wages have made the management of low-margin industries (sewing, footwear, etc.) difficult. High-margin machinery industries (motorcycles, electronic machinery, copying machines, and oil refinery, etc.) have been absorbing employment. In response to the strong foreign investment in Vietnam, the unemployment rate was as low as 1.8% in 2012 next to Thailand. Regardless of foreign capital or domestic capital, the tight labor supply more than hiked nominal wages - becoming one of the concerns for companies in Vietnam.

Industrial parks developed by foreign companies have been well developed with high standards, and the improvement is also seen in industrial parks developed by domestic companies. Foreign-owned industrial parks are often carried out in joint venture with Vietnamese firms. The land acquisition of industrial parks had been initially conducted by relevant local governments. However, they have begun by Vietnamese joint venture partners after the liberalization of land. Foreign partners conduct land preparation, infrastructure development, compliance with the government environmental standards, installation of standard factories, sales and follow-up works for tenants.

(2) Thailand



(Source) Compiled based on various statistical data

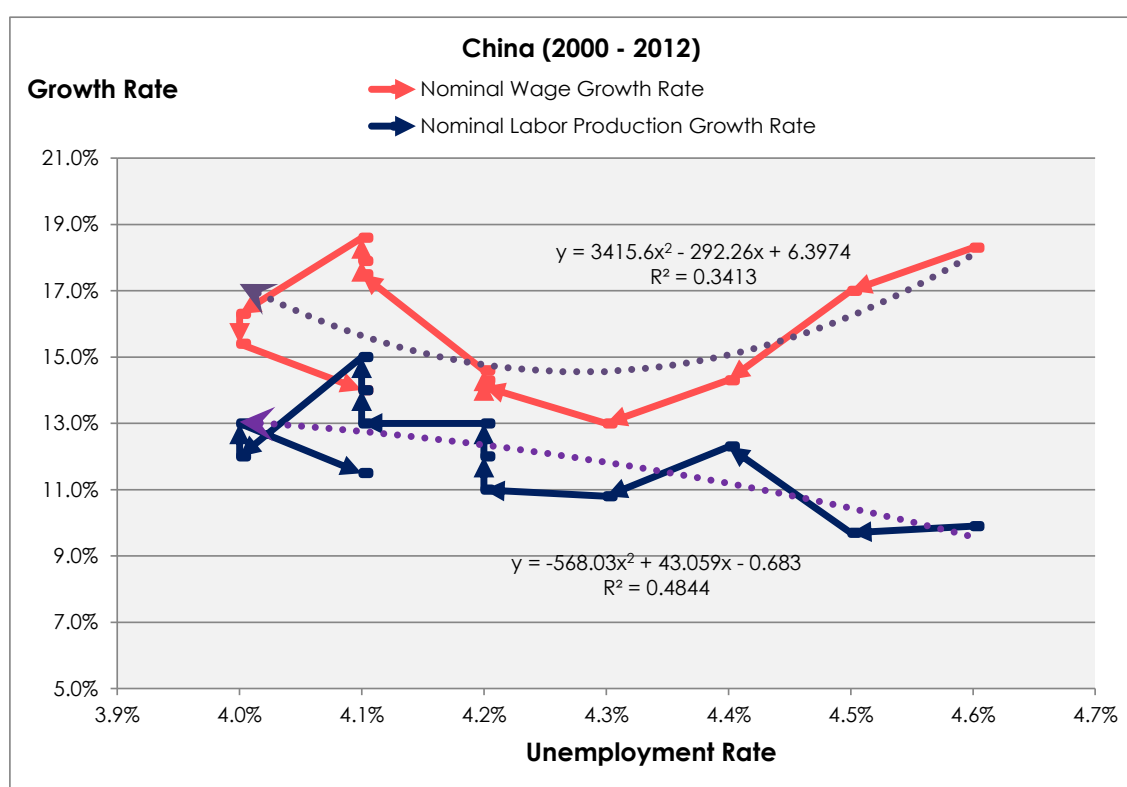
The growth rate of labor productivity in Thailand has been favorable, but it is lower than both Vietnam and China. The demonstrative feature of Thailand is the capital-labor ratio rather than the growth rate of labor productivity. Since the 1970s, there was a great potential of the local automotive industry which led to a basis for their increasing procurement rate of local production after the introduction of foreign capital. In other words, taking the automobile industry as an example, the development of local enterprises expanded from auto parts repair plants and auto parts replacement plants to auto parts production plants. In the 1980s, with the policy of improving local procurement rates by industries that the government asked of foreign companies, technology transfer from foreign companies progressed. Today, local parts companies play a role in supporting industries of foreign companies by complementing foreign parts producing companies. With this background, unlike in Vietnam, the development of supporting industries fueled the expansion of foreign automobile assembly companies in Thailand.

Until 2011, the nominal wage growth rate has been a parallel relationship with the labor productivity growth rate. However, in recent years, there were two exceptional cases. One was the flood that occurred from November 2011 to January 2012. The labor productivity growth and the nominal wages diminished at that time. Another was in April 2012, in aiming to

promote high value-added industry by the government, the nominal average wage increased around 30% (around 40% in the nominal minimum wage base). From January 2013, pursuing a goal of a national uniform minimum wage, the nominal average wage was increased about 25% (0% - around 40% by region in average base nominal wage). Since the unemployment rate recorded 0.7% in 2012 as the lowest in Asia, the tight labor supply and demand becomes even more severe. Some Japanese companies have started to relocate labor-intensive processes to neighboring countries such as Cambodia, Laos, Bangladesh and Myanmar. In Thailand, eliminating the bottleneck of labor force has become a major issue in the investment climate rather than completing industrial parks for new companies operating.

In addition, industrial parks in Thailand are more advantageous than Vietnam with fully equipped infrastructure as well as the electronic customs clearance system that industrial park tenants can use. For this reason, in principle, customs officers do not station in industrial parks in Thailand.

(3) China



(Source) Compiled based on various statistical data

China's labor productivity growth rate is the second highest next to that of Vietnam. China is the highest in economic growth in Asia since there is no ceiling of the balance of payments due to the significant surplus of trade balance and current account, although it is at the bottom of a recession at this moment. The economic growth of China at present is driven by the capital

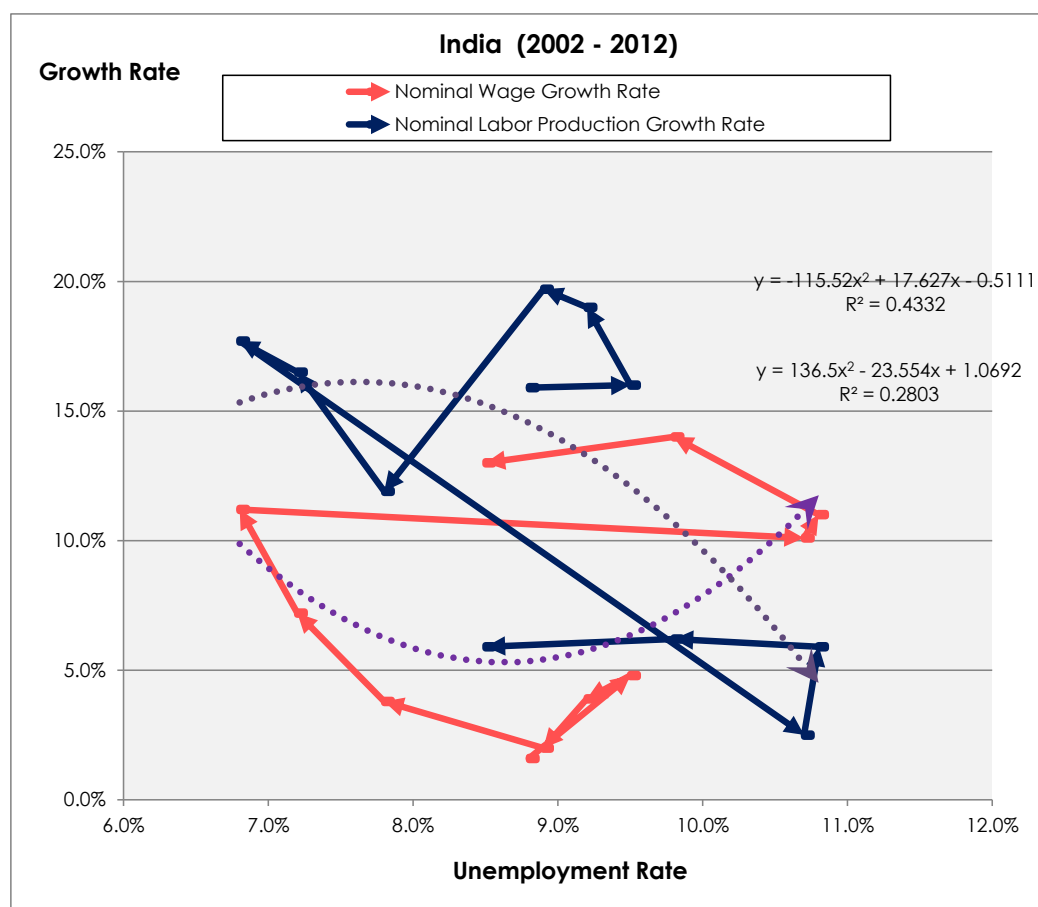
productivity enhanced with the capital-labor ratio rather than the labor productivity more than in Thailand. These points are different from Vietnam's situation.

The nominal wage growth rate is the second highest next to that of Vietnam. Similarly to Vietnam, it has been much higher than the growth rate of labor productivity consistently. The average deviation rate from 2010 to 2012 was 4.0%.

On the other hand, China is disadvantageous for export-oriented firms and advantageous for domestic-oriented firms due to the rising original exchange rate against the dollar. In addition, the rise of the original exchange rate has the effect of pushing up the Yuen-denominated nominal wage growth rate in dollar terms by foreign firms. For this reason, the nominal wage growth rate in respect of the exchange rate has exceeded more than 20% per annum, and remains the highest in the countries compared in the report. As a result, labor-intensive firms in China, regardless of foreign or domestic capital, are experiencing a major trend to relocate production bases out of China. The unemployment rate in 2012 was 4.1% including the vast agricultural villages, and the labor market is tight like in Thailand or Vietnam. Therefore, the relationship between the nominal wage growth and the unemployment rate is less.

Industrial parks in China were pioneered by the Shenzhen Special Economic Zone established in 1980. Then, the Special Economic Zone Policy was expanded to Xiamen, Shantou and Zhuhai, and export-oriented foreign investment was also promoted outside the Special Economic Zones. Initially, only export-oriented foreign investment was allowed in China. After accumulating the foreign currency by the export-oriented firms, domestic-oriented projects were approved within the foreign firms. Eventually, the export-oriented firms began to receive approval to set up a subsidiary implementing domestic-oriented businesses. The approval of domestic-oriented firms for single companies started after the trade surplus, and now, the current account surplus had been stabilized. The strategic foreign policy of China promoting export-oriented investment is different from the foreign policy in India.

(4) India



(Source) Compiled based on various statistical data

According to the government statistics, the labor productivity growth rate has been declining year by year, and has remained at the level of single digit growth since 2009. The reason is that the capital investment by the private sector has been extremely depressed, and recorded a negative growth by year-on-year both in 2011 and 2012. On the contrary, the nominal wage growth rate has increased every year with the increase of the minimum wage by the government, and the double digit growth has continued after 2008. The reason is that the consumer price index has remained high.

This means that the nominal wages are determined by the influence of the consumer price index regardless of the labor productivity. In other words, rather than labor productivity, the nominal wages have to be increased more than the conjunction with the consumer price index to avoid labor disputes. This issue may adversely affect the investment climate for foreign investment.

The government authorities have not adopted the so-called income policy suppressing consumer prices by adapting the nominal wage growth rate with the labor productivity growth rate. For this reason, as the macro economy as a whole, labor intensive industry, small and medium enterprises or subcontractors have been more negatively affected than capital intensive

industries or high profit large firms. Without the income policy by the government, the nominal wage growth is not absorbed by the labor productivity, and the wage cost pressure on inflation will lead to a reduction of export competitiveness in the medium term through the wage and price spiral. On the other hand, the exchange rate depreciation may continue to avoid the deterioration of trade through an increase in import prices in the medium term.

The economic policy to suppress cost-pressured inflation has a different approach by adoption of monetary and fiscal tightening policies to suppress demand-pull inflation. Specifically, the government authorities should not take a policy of pulling the nominal wage and minimum wage as an administrative instruction, and the government authorities, economic associations and labor unions should discuss adapting the nominal wage growth rate to the labor productivity growth rate.

It should be noted that the industrial parks in India have insufficient infrastructure such as electricity, water and sewerage networks, which is one of the factors lowering labor productivity in India compared to ASEAN countries.