DATA COLLECTION SURVEY ON INDUSTRIAL POLICY FORMULATION ASSISTANCE IN CAMBODIA

FINAL REPORT

OCTOBER 2012

JAPAN INTERNATIONAL COOPERATION AGENCY

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Part 1 (Survey and Analysis)

CHAPTER 1 Perspectives of Analyses - Industrial Expansion and Foreign Direct Investment in Cambodia

1.1 Goal of Economic Growth

Cambodia went through a series of rehabilitation and reconstruction and experienced high economic growth under the open market economy system. The high economic growth after 2000 increased GDP per capita from USD 288 in 2000 to USD 830 in 2010, which is 2.9 times higher than that of 2000. Cambodia is aiming to propose a new guideline for the economy and industry in support to the vision of achieving a GDP per capita of USD 1000 level. This study is expected to become a useful tool in the formulation of the strategy, planning, and policy in Cambodia as well as a basis of recommendations on the industrial policy.

1.2 Current Industrial Situation in Cambodia – its Characteristics

The overview of the current industrial situation in Cambodia highlights the following characteristics:

First, the share of manufacturing (secondary industry) in the industrial structure is small. Second, modernization of domestic manufacturing is slow. Third, the key factor of manufacturing is the export-oriented light industry such as garment and footwear. Fourth, more and more foreign invested enterprises (FIEs) of the assembly and processing sectors have made a foreign direct investment (FDI) in special economic zones (SEZs) for the past few years. Fifth, it is the FDI that has been leading industrial development in Cambodia. Sixth, dual industrial structure clearly appeared during the industrial development progress.

1.3 Perspectives of Analysis

It is obvious that FDI is the main factor of the industrial development in Cambodia as there are few domestic industrial investment funds and industrial investors. For the time being, the situation seems to continue that way and if that will be the case, it is vital to diversify the industry by utilizing FDI appropriately and promote manufacturing development with FDI inflows. In other words, it is necessary to strengthen the Cambodian industry by implementing FDI policy at its center and to promote the industrialization of local small and medium enterprises (SMEs) in accordance with it. From such a point of view, this study sets the FDI as a main focus.

CHAPTER 2 Current Situations of Industries and Key Issues in Cambodia

2.1 Economic Development and Industrialization in Cambodia

Industrial Structure and Industrialization

Cambodia started to move towards modernization behind other East Asian countries, and is now tracking

them with its high economic growth. East Asia's fast economic development is attributable to the high rates of economic growth and export of industrial products. In general, with the development of the economy, the ratio reaches its peak at a certain point and then begins to go down, and East Asian countries are no exception.

Cambodia's manufacturing sector ratio in GDP is 14.9% in 2011. Likewise, the ratio of Vietnam is approximately 20%, while that of Indonesia is approximately 26% to 27%, and that of Thailand is more than 30%. In the meantime, while agriculture sector ratio in GDP decreased between 1998 and 2008, the manufacturing sector ratio in GDP remained relatively stable or increased slightly in the same period.

The manufacturing sector ratio of Cambodia may go up to the same level as that of other East Asian countries (Curve A), which is currently in the process of industrialization. On the other hand, there is a possibility that the Cambodian economy will follow the Philippine economy which lagged behind together with other early-comer ASEAN members (e.g. Malaysia and Thailand) (Curve B). There is a possibility that Cambodia will follow the same path of the Philippines, if the country does not make any appropriate industrialization strategies and fail to improve the investment environment.

East Asia has become one of the production bases and known as the "Workshop of the World." In other words, global value chain (GVC) has been strengthened in East Asia. In line with the trend for deepening of GVC, there is a strong need for Cambodian manufacturers to move gradually from relatively low value-added to higher value-added segments. Cambodia is expected to be integrated into production network (or GVC) in East Asia by attracting foreign manufacturers including Japanese firms for location of production fragmentation and establishing an industrial agglomeration with comparative advantages. There is a need to emphasize industrialization with the manufacturing sector at its center, as well as the promotion and development of processing and assembly industry.

Agriculture Sector's Over-Occupation and Modernization

Approximately 80.5% of Cambodians live in rural areas (provinces) in 2008. Modernization of agriculture and rural areas is essential, while strengthening of the industrial sectors (i.e., primary, secondary, and tertiary industries) is crucial, the mainstay of which is industrialization.

In order to promote modernization as well as industrialization, the first important point is to smoothly promote the migration of labor from agricultural to industrial sectors. Therefore, it is important to create employment opportunities in the manufacturing sector and to provide basic education for young working population, which will lead to appropriate matching of supply and demand. Second is to strengthen the linkage between agricultural and industrial sectors through agricultural production. Therefore, it is required to improve agricultural infrastructure to increase the rice productivity and to promote selective expansion of agricultural production for other crops (vegetables, fruits, industrial crops, and livestock). Third is the coordination of land utilization between industries and agriculture along with industrial development. From such point of view, it is required to coordinate land utilization among agriculture, industry, and urbanization, to prevent environmental pollution, and to protect the ecological system.

Industrialization and Small and Medium Sized Enterprises

The supporting layers in the industrial structure in Cambodia are the SMEs along with agriculture. The characteristics of these enterprises with special focus on manufacturing SMEs are shown below.

First, the outstanding characteristic of these registered companies is the share of the commerce and service, which accounted for 48% and 45%, respectively, while that of manufacturing and construction accounted for only five%. These facts represent the high import dependency of final products including consumption goods, while the domestic manufacturing sector is not yet fully developed. Therefore, it can be said that the manufacturing SMEs in Cambodia consists of a wide variety of food processing companies. It is worth noting that the output volumes from other manufacturing sectors (e.g. paper, printing, binding, chemical products, non-metal mining products, metal processing products, and machinery) increase more than that of the food processing sector, although its weight is still small. Third, manufacturing SMEs are concentrated in Phnom Penh Metropolitan Area. Fourth, the linkage between manufacturing SMEs and other sectors is shallow. Moreover, encouraging cooperation between FIEs and domestic SMEs, and development of the supporting industries will become serious issues considering the assumed location of assembly and processing industries in Cambodia. Fifth, technology of the manufacturing SMEs is poor and their productivity is low. Sixth, there is a booming capital demand among SMEs and there is a large investment demand of production equipment in the construction sector. Finally, Cambodian SMEs are not organized either by sector or region.

SMEs are the base of the national economy, a matrix from which new business emerges, and a place to open new operation. It is required to promote a comprehensive SME policy as a base for self-sustaining economic development in Cambodia.

2.2 Global Value Chain and Assembly and Processing Industry

Global Value Chain (GVC)

The Value Chain (VC) is a framework that divides various manufacturing activities (i.e. procurement of raw materials and parts, assembly and production of products, distribution and logistics, sales and marketing, etc.) into main and supporting activities. It also shows how to organize the aforementioned activities. It can be claimed that Cambodia has already been integrated into the automotive sector in the labor-intensive processes of GVC such as precision instruments and parts (small motors) and electrical and electronics (E&E) parts (wire harnesses).

Roles of Distribution and Logistics in GVC

Using GVC in the automotive industry as an example, distribution and logistics methods like milk-run and buyers consolidation are implemented in Thailand to support the Toyota Production System (TPS) system. On the other hand, because both the number of suppliers and the amount of cargo are still small in Cambodia, the country has not reached the level of attempting approaches such as milk run. Also, from the QCDS (Quality, Cost, Delivery, and Service) point of view, many basic issues, such as drivers' attitude and

old trucks, need to be solved.

Supporting Industries

This study organizes a supplier system in the automobile and motorcycle industries and defines supporting industries as "industries which supply parts (including packaging materials) and play a role of intensifying forward/backward linkage effects in industries in Cambodia." On the basis of current industrial situation in Cambodia, it seems that the target supporting industries in this study should be the industrial group of narrow-defined industries and packaging sector. The reason to expand the definition is because of expectation on packaging sector to play a role of intensifying forward/backward linkage effects in industries in Cambodia. The manufacturing sector such as packaging materials seems to have high potential to develop as te supporting industry. Other sectors than the above need to be developed as supporting industries through promoting FDI inflows and establishing industrial linkages between FIEs and domestic SMEs.

2.3 Current Situation and Issues of the Industrial Sectors

Structure of the Industrial Sectors

Based on Economic Census of Cambodia 2011, 122 subjected manufacturing sectors will be narrowed down according to their ranks on value of production (sales scale) and there are six sectors with sales value over USD 100 million/annum. These six sectors are apparel, footwear, plastic products, food products, grain mill products, and animal feeds. Furthermore, there are 27 sectors with sales value over USD 10 million/annum or with value added volume over 1 million/annum, which should be nominated as candidates for priority sectors.

Current Situations and Critical Issues of Key Industrial Sectors

Based on the structure of industrial sectors in Cambodia, this section examines the six following sectors, which are considered important at present or for future industries in Cambodia, with the results of interviews to Japanese FIEs.

(i) Regarding the garment sector, there are more than 300 factories which create more than 300,000 workers in Cambodia as of 2011. The garment sector is required to move from CMT-oriented to higher value-added FOB such as pattern making and sourcing. Close cooperation is necessary between the public and private sectors.

(ii) Roughly 40 footwear factories are currently in operation in Cambodia after the global financial crisis (GFC) in 2008. The footwear sector provides more than 60,000 direct jobs to the Cambodian workers. The development of skilled labor (e.g., skills in design, pattern and sample making, and materials finding) is an issue to be tackled.

(iii) Regarding the motorcycle sector, the import volume was about 190,000 in 2011 and its production volume in Cambodia was approximately 200,000. CKD parts are mainly shipped by truck from

Thailand. Other parts are shipped by sea from Indonesia and assembled in Phnom Penh. With the improvement of physical infrastructure (construction of Neak Loeung Bridge), CKD parts may start to be imported from Vietnam.

(iv) Precision instruments and parts (small motors) are imported from Thailand, Malaysia, and China, and are assembled in Cambodia. Then, assembled parts/products are exported to Thailand. They are used as parts of motor vehicles, digital cameras, mobile phones, etc.

(v) E&E parts (wire harness) are imported from Japan, Thailand, and Vietnam for Japanese FIEs and from Korea for Korean FIEs. The assembled parts are exported to Japan and Korea, respectively. They are used as an accessory for washing machine and automobiles.

(vi) Cassava (agricultural and food processing sector) is one of the highly-valued cash crops for the people living in rural areas. The issues to be tackled are how to reduce the high distribution costs, to prevent illegal trade at borders at Thailand and Vietnam, and to organize processing companies.

In terms of Japanese firms' GVC, there are following four patterns.

(a) Pattern A is seen in the garment and footwear sector in which Japanese firms shifted their manufacturing from China to Cambodia. They import raw materials and parts from neighboring countries. After the assembly in the form of CMT in Cambodia, they export the products to Japan.

(b) In the Pattern B (small motors) the manufacturers import from Thailand, Malaysia, and China and then export products/ parts to Thailand.

(c) In the Pattern C (precision instruments and parts), the manufacturers import from Thailand, Vietnam, and Japan and then export parts to Japan.

(d) In the Pattern D, CKD parts are imported through the three following channels. (d-1) The two motorcycle assemblers import CKD parts by truck (via Poipet) from Thailand through the channel. (d-2) One of the assemblers imports CKD parts from Indonesia by sea. (d-3) Given the completion of Neak Loeung Bridge's construction in 2015, import from Vietnam may begin along the National Road No. 1.

A common point among Patterns B, C, and D is that the Thai affiliate company export raw materials and parts to Cambodia and receives Cambodian workers for the in-house training. It also send engineers and managers to Cambodia.

2.4 Current Situations and Key Issues of Industrial Agglomeration

There are several industrial agglomeration areas around Phnom Penh. Both Koh Kong and Sihanoukville have SEZ. There are already national roads connecting Koh Kong and Sihanoukville and Simple business transactions have already occurred between the two locations. It is important to note that Koh Kong has international border gates and Sihanoukville has an international seaport. In order for the two locations to deepen their linkage, upgrading, maintaining the infrastructure including road network is vital and the better connectivity to Vietnam need to be established. Svay Rieng has international borders with Vietnam.

Svay Rieng and Prey Veng Provinces have 1.5 million labors and they are one of the largest source of labor supply in the country. In Svay Rieng, there are several SEZs where Japanese and other factories have been in operation.

To sum up, Phnom Penh Metropolitan area has potentials that an industrial agglomeration will develop In the three other provinces (i.e. Koh Kong, Sihanoukville, and Svay Rieng), industrial agglomerations are expected to be formed by taking advantage of strengths of each province.

2.5 Comparative Analysis on Industrial Policies: Case of Garment and Motorcycle Sectors

Textile/Garment Sector

It is useful to learn from other countries' experiences of the industrial policy in order to upgrade its Cut, Make and Trim (CMT) type of assembly to FOB-centered production in the future.

Since 1945, the focus of industrialization policy for the textile sector has been on import-substitution. Since many factories were established due to the protective policy in the 1960s, overproduction occurred and preferential import of raw materials (fabric) on the incentive policy for contract manufacturing damaged upper- and middle-stream sectors. Their competitiveness fell due to the aging and degradation of the quality of their equipment. Although the Philippine government laid out a plan to modernize the textile industry in 1981, this plan did not work out due to political unrest. In 1994, a plan for revitalization of the textile industry has been prepared. However, in the expansion of free trade, the Philippines faced a heavy disadvantage in price competition with Vietnam and others, and lost its competition in the market which marked the downturn of the industry.

CMT assembly process is also a major activity in Vietnam's garment sector and Vietnam's CMT contract is rather consigned with Japanese and Korean groups since the 1990s, while Cambodian CMT contract is consigned by Western and Chinese groups. Japanese and Korean groups will bring a higher level of technology transfer unlike Western and Chinese groups. As for the upgrading of value-added products and promotion of exports, taking into consideration the challenging task of original branding in the global competition, it is necessary to have a set of policy measures to facilitate a concrete foothold for the sector to develop and supply products of good quality and brand for the domestic market, and not only pursuing export promotion.

During the 1960s and the 1970s, the Thai Government focused on import substitution by joint ventures, and the transfer of production technology from abroad, as well as the protection of the domestic industry. The characteristics of incoming foreign direct investment in the textile industry was concentrated on the investment on the upper- and middle-stream of the sector, from the "spinning" and "weaving" process to the "dyeing" and "fabrication" process rather than the "sewn products manufacturing" process. As stated above, it is true that the Thai import substitution policies since the 1960s themselves have been successful in localizing Japanese companies to some extent. On the other hand, at the same time, the Japanese textile industry was faced with major challenges and had to develop new markets in Asia. It is to be noted that not only the policies themselves but also exogenous effects altogether contributed to the localization of foreign

investment in this sector and creating major corporate groups consisting of vertical integration of upper- to down-streams which had supported the economy of Thailand.

Motorcycle Sector

In term of industrial policies for motorcycle sector in Vietnam, the two following points are important. First is to ban on import of completed motorcycles in the late 1990s, which resulted in foreign assemblers' entry into the Vietnamese market, and motorcycle production has increased. Second is to introduce tariff system linked with local contents in 2001. One of the lessons learned for Cambodia is the above-mentioned tariff that is linked with local content ratio. It is worth considering its introduction into the country. The other is to encourage FIEs to develop human resources for industries and to shift the import of CKD parts to in-house production.

Lessons Learned for the Case of Cambodia

Participation in GVC would realize localization of production process of parts and increase in the local contents ratio as shown in Vietnam. Noting the experiences in the Philippines, delayed modernization of the upper- and middle-stream processes and the excessive reliance on simple CMT led to a vulnerable and low value-added structure of the textile industry, leaving only the sewn products manufacturing part. In addition, as seen in the case of Thailand, it is also important to consider how the policies can be designed and implemented in order to meet with the economic background on which the corporate behavior was based. Provided that the low labor cost is the current and most of Cambodia's attraction to the FDI, the policy should encourage the FIEs to transfer technology (i.e. through training for workers) in return for their privilege for the low cost. The capacity development of workers can become an alternative incentive for FIEs in the future even after the increase of labor cost when the level of their quality meets FIE's requirement. The provision of incentives to FIEs according to the local contents ratio may be effective for the supporting industry development in the future. In order to diversify the industrial structure of the country, it is crucial for the Royal Government of Cambodia (RGC) to encourage FIEs to increase in-house production for widening their product line, as well as to carry out *kaizen* activities and provide workers with a variety of training courses as shown in the case of Vietnam.

CHAPTER 3 Foreign Direct Investment into Cambodia

3.1 FDI into Cambodia and Japanese Manufacturers

Role of FDI

Foreign direct investment (FDI) has played a vital role in providing funds for domestic investors in East Asia. FDI has been an engine of growth and special economic zones (SEZs) have been FDI's gateway to these host countries.

Savings and Investment in Cambodia, International Balance of Payment and FDI

The savings-investment gap is equivalent to the current balance deficit. There is a large trade deficit in the case of Cambodia because volume of import is much higher than that of export. As a result, the current balance deficit is unavoidable and the capital deficit and financial account is compensated by FDI and by official development assistance (ODA).

Cambodia is currently at the stage of an immature creditor nation and is required to facilitate "quality" FDI. A sharp decrease in FDIs in the country results in the deterioration of the current balance and a decrease in foreign reserves. From the viewpoint of Cambodia's industrial development, it is crucial to attract FDIs in the manufacturing sector, and maintain sound macroeconomic and finanancial management in order to secure sustainable economic development.

Trends and Characteristics of FDI in Cambodia

The characteristics of FDI in Cambodia are as follows:

First, although FDI inflow varies year by year, there is a tendency for FDI to increase continuously not only in terms of its amount but also its GDP ratio. Secondly, the tourism and manufacturing sectors play a leading role in attracting FDIs. The share of the manufacturing sector out of all sectors is 42.7% in 2001-2005, then the share of the tourism sector increased. After that, the share of the manufacturing sector again went up. Thirdly, Japanese manufacturers, assembly and processing sectors, and SEZ have a major role to play in the new phase in attracting FDIs into Cambodia.

In line with the preceding discussions, it is important to focus on Japanese companies' the assembly and processing sector in SEZs for industrialization strategies in Cambodia.

Characteristics of Japanese FDI and Investment Climate

Majority of Japanese FDIs are "quality" FDI which contribute to the development of the Cambodian economy. There are five following characteristics of Japanese FDIs. .

First, it has high manufacturing sector ratio in export and Japanese manufacturing sectors are export-oriented. Second, the intra-industry trade (especially the machinery sector) has been in progress. Third, it helps a host country to enhance its production and export capacities. Fourth, Japanese firms have advanced industrial technologies. Fifth, an increase in Japanese FDI has been accelerated by the appreciation of the yen.

Majority of Japanese FDIs are "quality" FDIs, which contribute to positive development of the Cambodian economy. Considering the current situation in Cambodia, it is necessary to improve its investment climate immediately. Firstly, the conditions of physical infrastructure should be improved. Secondly, human resource development for industry is vital. Thirdly, governance, legal framework, and improvement of enforcement are of much importance. Fourthly, a stable financial market is essential. Fifthly, stable macro economy is also crucial. Part 2 of this report elaborates on the above-stated improvement of investment climate.

Japanese Manufacturers' Views about Cambodia and Selection of Location

In July 2012, the Cambodia Investment Seminar was held in Tokyo and Osaka.

It seemed that, as a whole, most respondents were interested in machinery (assembly and processing) sector. In Osaka, the largest number of respondents were interested in garment, followed by machine processing, and information and communication. On the other hand, in Tokyo, the top three were machinery, agriculture, forestry and fishery, and food processing. The respondents who planned to invest in or considered investing in Cambodia was 30% in Osaka and 35% in Tokyo. These results show high interests in investment in Cambodia.

Both respondents in Osaka and Tokyo chose "establishment of foreign production plant", "development of domestic market in Cambodia," "reduction of production costs", "risk diversification of overseas operation," and "export to the third countries" are selected as main reasons for planning and considering investment in Cambodia. Regarding the most serious constraints of investment in Cambodia for respondents of both Osaka and Tokyo were "finding and developing local human resources," followed by "current situation of logistics" and "labor management."

The JICA Study Team visited more than ten Japanese manufacturers in Cambodia in order to conduct interviews with them. For the improvement of investment and operation environment, Japanese manufacturers made the following requests: (i) physical infrastructure development, stable supply of electricity and reduction of electricity cost and improvement of physical infrastructure conditions and development of highways are requested. (ii) Related with human resource development for industry and employment, improvement of basic education and government assistance in recruiting workers are necessary. (iii) governance, legal framework and improvement of enforcement, consideration of incentives for reinvestment and streamlining of customs procedures, securing transparency are strongly requested by the firms.

Views from existing Japanese firms about Cambodia's investment and business environment are very important for Japanese manufacturers considering FDI in Cambodia in the near future.

For Cambodia's industrial development, the greatest problem is the supply of electricity. Since the nuclear power plant accident caused by the 2011 Great East Japan Earthquake, Japanese firms have been faced with shortage of electricity supply in Japan. Therefore, in a foreign country, too, Japanese firms have been more and more conscious of the capacity of electricity supply.

In Japan, highways were constructed across the country after the postwar rapid growth period. When Japanese firms make a decision on the selection of location, they regard the convenience of logistics/distribution as an important factor. Necessary conditions in the selection of location involve high connectivity with port facilities, etc. in order to secure product quality.

Several Japanese firms pointed out the significance of human resource development for industry. In the coming ten years, the following human resources will be in demand: workshop team leader, tradesman, technician and engineer. The matching mechanisms of the labor market and technical certification systems

should also be developed.

Transparency and accuracy are required for Japanese firms in doing their accounting report. It is important to intensify Cambodia's reputation by broadening the areas of the country's good reputation as well as by abolishing the costs. It must be noted that transparency of administrative procedures are crucial for Japanese firms.

3.2 Investment Trend Research

Trend of Qualified Investment Project (QIP)

Since the middle of the 1990s, the approval of FDI has been on a rising trend. The number of qualified investment projects (QIPs) approved reduced in 2010 due to GFC, although it shows a significant increase after 2011. This may be the result of the risk diversification from China and Thailand due to rapidly rising wages and labor shortages. Moreover, although traditional sectors such as the garment and tourism sectors continue to welcome new investment projects, non-traditional sectors including agro-industry and electronic assembly or manufacturing are gaining momentum. Also, the number of countries investing in Cambodia increases. Although Cambodia's inward FDI was typically dominated by Asian investors, especially Chinese and Vietnamese firms, there was noticeably a huge investment from the U.K.in 2011 and the total value of Japanese FDI made a recovery.

Trend of Investment in SEZ

SEZs in Cambodia were established based on Sub-Decree No. 148 made in 2005. Since then, 22 SEZs have been approved, although only eight SEZs are in operation. However, FDIs in the SEZs keep on increasing. By sector, textile and garment sector and plastic manufacturing was the most attractive for FDI from 2006 to 2009. The composition of FDIs in SEZ has been diversified since 2010: namely, the automobile and electrical and electronics equipment-related sectors. By country, their main source has been Asian investors since 2006 such as Taiwan, Japan, China, Singapore, and Malaysia. After 2010, Thailand, Hong Kong, the Philippines, Ireland, and the U.S. stated to invest in the country. Since 2011, Japanese FDIs in SEZ have increased sharply.

3.3 Comparative Analysis on Promotional Measures for Industrialization through Introduction of Foreign Direct Investment

Industrialization Through Introduction of Foreign Direct Investment in Thailand

The following sections will discuss the overview of development of industrial policies focusing on industrial agglomeration from the aspect of evolution of the Investment Promotion Act. In this section, the issues are to be highlighted in three development stages which are: i) 1960s period where major policy shift occurred due to World Bank's conditionality measures (1st stage), ii) 1970s to mid-80s period where import substantiation and localization progressed (2nd Stage), iii) Mid-80s to late 90s period where the overlapping effect of export promotion policy and Plaza Accord promoted the development of foreign

direct investment (3rd stage).

One of the most important points of industrialization was that the introduction of foreign direct investment recognized the localization policy on FDI that were based on the Investment Promotion Act. The localization policy, in many cases has a regulatory nature by demonstrating disincentives to FDI. However, in the case of Thailand, it has to be noted that localization also contributed in the promotion of technology transfer and industrial agglomeration while domestically established FIEs brought in new parts/raw material suppliers. FIE also assisted domestic manufacturers to become local suppliers as part of the supporting industry. Localization was not limited to the automobile and motorcycle sectors but in other key manufacturing sectors as well, such as the textile sector as mentioned in the previous section.

In Thailand, in order to maintain consistency with the provisions of TRIM (the Agreement on Trade-Related Investment Measures) under the WTO regime, performance requirements have been abolished, and it is important to note that the substitution measures are in place. Also, in order to promote the linkage between FIE and the domestic manufacturing sector, the BOI established a section named "The BOI Unit for Industrial Linkage Development (BUILD)".

Industrialization Through the Introduction of Foreign Direct Investments in Vietnam

In Vietnam, the active policy to attract the foreign direct investment has been developed since 1988 in the context of the Doi Moi Policy which initiated in 1986. It also started developing the foundation of inflow of FDI through participating in the framework of international trade and investment for globalization process.

In addition to the improvement on investment climate, it is essential to take a close attention to the undertakings of the Vietnam-Japan Joint Initiative which started in 2003 between Vietnam and Japan. This is essential in the investment climate in terms of its industrialization through introduction of foreign direct investment. Although the initiative is initially targeted to promote Japanese investment, this undertaking actually brought about further improvement on Vietnam's investment climate as a whole.

Lessons Learned for the Case of Cambodia

For the foreign investors, it was also true that the relatively well-established Thai industrial infrastructure foundation was one of the important criteria for FDI to judge why they chose to move to Thailand as compared to other countries in the region at that time. It should also be noted that that the foundation could not have been recognized without the Thai localization policy in the 1960s and 1970s. Even under such WTO regime, Thai's effort has to be noted as for reference that continues to encourage (but not require) "differentiated level in import duties on materials, parts, and finished products" and "the use of domestic materials or parts in case of a BOI grant for investment promotion benefits (incentives)". It is also important to note that proactive promotion is a very effective way for industrialization through FDI as observed in the activities of linkage programs by BUILD.

As implemented in Vietnam, the dialogues and discussions among private and public sectors are a very

effective way for the RGC and relevant authorities to respond to their messages. This is not only to serve in the improvement of investment climate but also for good reputation-building to appeal the advantage that FIE's requests shall be taken into actions by the authorities.

CHAPTER 4 Cambodia's Business Environment

4.1 Structure of ASEAN plus1 and the effects of economic integration

The strengthened economic integration and physical connectivity regionally and globally has been changing the investment climate for Cambodia: Economic integration has been pushed forward through ASEAN and regional economic integration with bi- and pluri-lateral regional Free Trade Agreements (FTAs) and Economic Partnership Agreements (EPAs) with major economic players such as Japan, China, India, Korea and EU; Transportation infrastructure development is expected to increase the connectivity of Cambodia with Thailand, Vietnam along SEC as well as other countries. While expanded market opportunities and better connectivity with industrial hubs such as Thailand are expected to be beneficial, some difficulties are projected such as the tougher competition where insufficient institutions, regulatory frameworks and administrative capacity in trade- and industry-related issues may hinder the full accession to the benefit of the integrated markets.

On the other hand, econometric projection reveals that Cambodia is expected to be benefitted with largely from the trade liberalization on its real GDP growth. While they are not as large as Vietnam, the GDP growth effects both from ASEAN+6 and ASEAN+3 on Cambodia exceed the volumes for Thailand. At the same time, the impact of global trade liberalization is also larger for Cambodia than for Thailand.

Through transportation infrastructure development along SEC and optimal alignment of the location of core urban centers, Cambodia can be well positioned to enjoy the industrial agglomeration effects both from Thailand and Vietnam as well as the following positive externalities: i) Urban agglomeration effects: Phnom Penh with urban facilities, amenities, and population attracts and generates new industrial agglomeration; ii) Border area agglomeration effects; iii) Port effects of International ports (the Phnom Penh Port and the Sihanoukville Port); and iv) Highway effects through the construction of highways to minimize logistical cost. As a result, cross-border industrial agglomeration will grow as connectivity of SEC will be enhanced, whereby Cambodia, Thailand and Vietnam are expected to develop complementarities and interdependency in the area of economic activities.

4.2 Competitiveness Analysis of Cambodia

Due to the labor wage increase in two countries, Cambodia maintains competitiveness to some extent in terms of the cost of production at least against Thailand and Vietnam. On the other hand, notable differences between these two countries are observed in such areas as infrastructure, higher education and technical and vocational education and training, and the market size. According to the data from international survey and comparison, some factors affecting business environment are perceived as

favorable in such areas as investor protection and paying taxes, some factors received negative evaluation. The time and cost required for trade-related administrative procedures and costs of domestic transportation are higher than two comparators. While the cost incurred through leasing of lands may be less than two countries, the volume of supply of the quality industrial sites does not necessarily meet the demand of investors. The electricity tariff of Cambodia has been is recognized as remarkably high. In terms of the competitiveness of the area relevant to logistics, the costs of transportation are prone to be expensive due to the distance from the main shipping routes. On the other hand, the problems are found also in the trade-related administrative procedures: the efforts to minimize the lead time through simplifying procedures as well as the transparence and accountability are required.

4.3 Comparison with Thailand and Vietnam

Three important issues in Thailand and Vietnam which may influence Cambodia's investment climate are observed: i) Japanese FIEs' awareness in Business Continuity Plans (BCPs) and their risk hedge behaviors; ii) the staged increase of minimum wages in Thailand in 2012 and 2013; and iii) Expanding supporting industries in Vietnam by Japanese FDI including SMEs.

In order to project the probability of expansion of the industrial agglomeration from Thailand and Vietnam, the investment climate of Cambodian cities and the cities in the Northeast region in Thailand and the Southern and Central regions in Vietnam. In the Northeast Thailand, investment is more active in a city with good access to the industrial hubs in Bangkok and the Eastern Seaboards with provision of well-prepared industrial sites through industrial parks. Whereas a city closer to Bangkok accommodates a sizeable number of Japanese FIEs, Khon Kane, the city located in the center of the region with less access with industrial hub has limited number of Japanese FIEs. Cambodia still maintains the competitiveness in terms of labor wage comparing with these cities. On the other hand, investment may not be easy to be transferred from these cities unless Cambodia gains the confidence of investors with well prepared soft- and hard infrastructure specifically by securing sufficient workers, laying out and management of adequate physical and production infrastructure, and improvement in efficiency of trade-related administrative procedures.

In Vietnam, the industrial agglomeration is in the process of expansion in the Ho Chi Minh City (HCMC) metropolitan areas with the transportation infrastructure development. However, it is recognized that Vietnam's business environment is also not necessarily favorable with lack of transparency, cumbersomeness and the time required for obtaining investment-related permissions, taxation and process for paying taxes. On the other hand, Cambodian cities especially those located near the border such as Bavet need to establish the system for recruitment of labors in order to take full advantage of the low labor wage. Sufficient industrial sites with quality infrastructure and efficient trade-related administrative capacity at the border points are also required. Although some factors of the trade-related administrative procedures may be favorable to investors in Cambodia due to the still limited number of investors and exporters. However, the gradual increase in volume and complexity of handled goods at the border points requires greater capacity of administration in order to cope with the trade expansion.

4.4 Comparison of the Institutional Framework of Special Economic Zones with Thailand and Vietnam

The institutional designs of two countries are not necessarily comparable with the type of institutions as SEZs in Cambodia. Thailand and Vietnam do not have the specific and notable incentive schemes granted to specific areas as industrial estates/zones. Apart from these incentives, these two countries have incentives based on the type of industries and businesses. It should be noted that the supply of quality industrial sites of Cambodia is severely limited in comparison with two countries, although the quality of one limited sample SEZ may display the sufficient quality as compared with the equivalent facilities in two comparators.

The current SEZ related regulatory framework is based on the decree without solid basis by a law. Therefore, the binding power for what is stipulated should be ensured through establishing the SEZ law in consistency with existing Law on Investment (LOI), other relevant rules and regulation as well as internationally observed rules. It is necessary to undertake monitoring and legal enforcement to ensure the completion of the projects as well as adequate operation and management of the facilities.

Without target sectors based on the industrial development policy, currently implemented SEZ policy does address sufficiently the needs of specific strategic sectors or strengths of some possible industrial agglomeration sites.

The problem found in Cambodia is the lack of private developers with technical and financial capacity on industrial site development. This, however, does not say that the development should rest entirely on the responsibility of the government including sourcing of finance. The role of the government should be generating the environment for these developers to be attracted and to provide facilities with quality. In terms of the incentive scheme, it should be understood that the current investment scheme has been fully discussed with limitations on the government budget. In addition, the framework of ASEAN Plus 1 may decrease the significance of incentives currently provided for the importation of the raw materials and parts.

Based on Cambodia's current situation, the following should be considered, namely: i) building institutional frameworks and administrative capacity for the management of SEZ scheme; ii) knowledge and understanding on the situation of SEZ operation and provision of necessary guidance as well as perform legal enforcement; and iii) Zoning from optimal land use perspective and measures to secure the implementation of approved projects.

As seen in the example of Vietnam, the design of SEZ development should take full consideration on the synergy and impacts not only within SEZs but also their surrounding areas' regional and urban development. Well-coordinated with various entities in terms of land use and location of other public facilities, it should be positioned as a core for regional industrial development. It is significant to fulfill these requirements to gain the confidence of investors including FDI.

CHAPTER 5 Conclusion-Industries in Cambodia toward the Next Step

5.1 Cambodia's GDP per Capita Over USD 1,000

Once its per capita reaches USD 1,000 level, it will grow out of the list of less developed countries (LLDC) and will become one of the lower middle income countries (LMIC). Therefore, the country needs to strengthen self-help and independence. Therefore, there is a strong need to diversify and upgrade the manufacturing sector in order to strengthen the fragile economy.

Cambodia is facing three traps (one at present, in the short- and medium-term, and in the long-term).

First one is "over-employment trap". The number of the over-employment population has increased. Therefore, there is an urgent need to generate more employment opportunities in the modern formal sectors for the youth in Cambodia.

Second one is "free trade trap". Once the market is liberalized, more foreign products and parts will pour into the Cambodian market making the current industrial structure firmly fixed in which the garment and footwear sectors are centered.

Third one is "middle-income trap". Even after reaching the middle-income level, its economy could remain stagnant for a long time if Cambodia fails to enhance the technological levels of its workers.

5.2 Key Factors - Industrialization and FDI

The one and only way to avoid the aforementioned three traps is industrialization through technological development. More specifically, by diversification and upgrading of the manufacturing sector, the country should (i) encourage the labor migration from rural to urban areas in order to deal with over-employment, (ii) avoid the free trade trap by improving export capacity and obtaining new comparative advantages, and (iii) overcome the middle-income trap by intensifying technological capacity.

Foreign direct investment (FDI) is one of the key factors of industrial strategy. FDIs of the assembly and processing sectors (especially, labor-intensive processes) are expected. Furthermore, each of these should be upgraded to technology- and knowledge-intensive sectors. Japanese FDI can play a leading role in such development process.

Japanese FDI is characterized by (i) export-oriented, (ii) integration of host country into GVC, and (iii) localization of production through technology transfer and these characteristics meet the requirement of "quality FDI". Therefore, the RGC is required to listen to the views of Japanese companies and to identify their strategies and interests in Cambodia. In coordination with "quality FDI" of Japanese manufacturers, it is crucial to deal with the five following points: (i) improvement of the conditions of physical infrastructure, (ii) human resource development for industry, (iii) enhancement of product quality, (iv) upgrading of technology and managerial capacity, and (v) development of the supporting industry.

Although the industrialization strategies focus on FDI, domestic SMEs are another key factor. On the contrary, the strategies aim to modernize the SMEs by making full use of FDI because they are part of

economic foundations. Their modernization is one of the most important medium- and long-term issues of Cambodia's industrial policy. It is vital to bridge the gap by forming the inter-linkage between FIEs and local SMEs. In this context, from the standpoint of investment management, it is necessary to attract first- and second-tier foreign suppliers. Some local firms are expected to grow into the supporting industry as third-tier suppliers. If technology transfer is carried out through various channels, SMEs can be a solid and firm economic foundation to break through the middle-income trap.

For the purpose of counterbalancing a variety of disadvantages of SMEs, there is also a need to encourage the establishment of industrial associations, to facilitate the standardization of production processes, and to improve access to technology and finance.

5.3 Comprehensive Improvement of Investment Climate

Since the industrial strategies focuses chiefly on FDI, continuous improvement of investment climate is of prime significance. In order to meet foreign manufacturers' requests, it is necessary for RGC to develop not only SEZ *per se* but also its surrounding areas on the use of comprehensive regional development methodology. The service of investment promotion agency (IPA) should be improved to create a "good reputation" among foreign investors.

In coordination with pro-active industrial policies to attract quality FDI, there is a strong need to implement comprehensive policies of SME promotion to address organization, production, technology, finance, etc.

Complementary to direct industrial policies, upgrading and improvement of comprehensive foundations for industrial development are necessary with the aim of attracting "quality FDI". Human resource development for industry is one of the most important conditions. The capacity of electricity supply should be stabilized and intensified and reduction of electricity costs is required. The improvement of the conditions of trunk roads should be prioritized and accelerated. On the other hand, economic system (e.g. finance) should be improved and upgraded for industrial promotion.

Considering the relatively young composition of its population, high potential people, relatively flat and fertile land, and social and political stability, Cambodia has potentials for long-term economic growth. On the basis of the results of this study, it is emphasized that, according to their own developmental stages, low-, middle- and high-income countries should focus on the development of human resource and infrastructure, technology innovation capacity, and human resource and economic institution. In this context, Cambodia should focus on human resource and infrastructure development.

5.4 Challenges Toward the 2010s

In recent years, Cambodia has attracted international attention as one of the investment destinations. There are three reasons; (i) geographically, the extension of the two major industrial agglomerations in Thailand and Vietnam may have a production fragmentation effect upon Cambodia; (ii) Japanese firms' recent attention to Cambodia is attributable to their strategy of "China Plus One" and to the risk

diversification; (iii) The other reason is the evaluation of Cambodia's advantages including lower labor cost, social and political stability. Cambodia needs to strengthen its advantages and to remove the above-stated bottlenecks and obstacles.

It should be noted that, as investment destinations, more attention has lately been paid to Vietnam and Indonesia than Cambodia. Myanmar is one of the prime candidate destinations in the near future. Unless RGC improves its investment climate immediately, a flood of FDIs are likely to go to Myanmar.

The coming few years are of major importance and RGC should improve its investment climate and address other key issues before the establishment of the ASEAN Economic Community (AEC) in 2015.

For Cambodia, 2013 is a turning point for long-term economic development when Vision 2030, new Rectangular Strategy, and the National Strategic Development Plan (NSDP) will be released. It is fully expected that the policy package, including industrial policy formulated by SNEC, will show the direction of FDI-led comprehensive industrial development.

Part 2 (Policy)
Suggestions and Major Items for Industrial Policies in Cambodia

I. Vision

(1). The ultimate goal of Cambodia's industrialization is to bring better life and prosperity to all people through achieving full employment and improved productivity. The industrial development policy should promote Cambodia's economic growth through industrialization and contribute to enhancing the quality of the Cambodian people's lives and the prosperity of the nation.

(2). Industrialization should be realized through effective integration into the regional and global economies. In the year 2020, Cambodia's industries will be a part of the global value chain (GVC), with the Eastern Asian and ASEAN region remaining as one of the cores.

(3). Targeting double per capita real GDP of USD 1700 (USD 830 in 2010) in 2020 through industrialization, the manufacturing sector's share in GDP is expected to reach 25% in the same year (from 14.9% in 2011).

(4). In the targeted year, the goal is to be achieved based on the foundation of self-sustainable economic development where the manufacturing sector plays a major role. This should be realized by strengthening industrial capacity through FDI and fostering the domestic manufacturing sector with global competitiveness.

(5). In the prospect toward the year 2030, the structure of the manufacturing sector will be diversified shifting from simple labor-intensive manufacturing to technology- and labor-intensive, then to knowledge-intensive.[1]

II. Strategy

The essential part of the industrial development strategy is to diversify and upgrade Cambodia's industry strengthening industrial capacity through proactive promotion of FDI and modernization and capacity building domestic small and medium sized enterprises (SME)through forming and strengthening industrial linkages with Foreign Invested Enterprises (FIEs). .

Strategy 1: Strengthening Industrial Capacity by Promoting the Inflow of Quality FDI

FDI is recognized as the initial and major ignition to launch industrial development and the major

[1]Cambodia is expected to maintain its high potential growth rate in the 2020s. The real economic growth rate of the 2020s is forecasted to be as high as those of the 2010s, and per capita GDP of 2030 will double from that of 2020. The manufacturing sector ratio of Cambodia in GDP is expected to be approximately 32% as of 2030.

channels of outside demand, technology, and knowledge. Industrial potentials should be strengthened by establishing the concrete foundation in order to receive the flow of "quality FDI".

Strategy 2: SME Promotion Comprehensive Strategy

SMEs are recognized as a basic foundation of domestic industrial development with predominance in number in the manufacturing enterprises in Cambodia. Upgrading SME's industrial capacity should be pursued through establishing linkages between FIEs and SMEs and implementing comprehensive policy measures to support SMEs to overcome their difficulties such as inadequacy of technology, lack of productivity, and limited access to finance.

The greater impacts can be expected from the direct industrial policy with synergy and complementarity with the cross-cutting basic policies in various areas such as human resource development for industry, physical infrastructure development , and the institutional reforms.

III. Policy Elements and Recommendations

1. Strengthening Industrial Potentials through FDI

(1). SEZ Upgrading

1) Instead of deploying nationwide attempts simultaneously at this stage, implementation concentrating on specific areas should be considered. The locations where SEZs are to be established require to be selected to become model areas for industrial locations with adequate zoning and the infrastructure to manage both the industrial activities and urban development of the area.
2) In order to ensure the efficient operation of the tenant enterprises, SEZs and the surrounding locations should be equipped with necessary infrastructure for electricity, water supply, transportation and logistics, and waste management as well as the other public facilities for proper living environment for workers.
3) As a part of good reputation building; a) the terms and conditions for the establishment of SEZs should be reviewed according to the actual needs of existing tenants, b) the function of the SEZ Trouble Shooting Committee (TSC) should be strengthened, and c) a monitoring scheme should be introduced and strengthened.
4) In order to serve particular needs of specific industries, specialized SEZs with tailored infrastructure and incentives should be considered for establishment
5) A special zone should be designed for potential supporting industries within SEZs or in the areas in the vicinity where the linkages between domestic enterprises including SMEs and FIEs are facilitated.

6) In order for the development and operation of SEZs not to cause environmental pollution in neighboring areas, it is essential to enforce the compliance with the standards of both technical and environmental regulations.
7) It is required to re-start and expedite the process of formulating the SEZ law regarding actual situations and currently observed problems of SEZs by taking into account the issues raised above.

(2). Upgrading Institutional and Administrative Capabilities Related to Trade Facilitation and Streamlining the Administrative Procedures

1) Special attention should be paid to streamlining trade-related administration and increasing their transparency. All the relevant authorities should make any possible efforts to simplifying the relevant procedures. The efforts also include improving transparency and accountability of the procedures through consistent and continuous information dissemination and dialogues with the private sector.
2) Automated System for Customs Data (ASYCUDA) should improve its user-friendliness. . The efforts should realize more efficient international logistic network: For the establishment of the National Single Window, RGC should push forward the necessary preparation with collaboration and adjustment among various authorities of Custom, Immigration and Quarantine (CIQ).
3) The basic and functioning institutional frameworks and administrative capacity regarding standards, metrology and quality certification should be quickly laid out. The effective administrative capacity should be developed through such measures as international accreditation for key national institutions.

(3). Upgrading/Improvement of the Investment Promotion Agency (IPA) Function

1) It is essential to establish functional linkages between the industrial policy and investment promotion. In respect of strengthening “investment management”, such areas of activities as pro-active promotion, service upgrading including one-stop services (OSS) and aftercare services for QIP-certified investors should be strongly embarked on and strengthened.
2) The government–FIE dialogues should also be promoted parallel to the monitoring and exchange of views, utilizing existing frameworks such as the Government-Private Sector Forum. It will build concrete confidence of FIEs in IPA and create a solid foundation for FDI promotion
3) Certain functional entities should be established within or outside of IPA as the focal point of a variety of policies and information relevant to investment. They are to be utilized to attract “quality investment”.

4） Regarding the fact that the law has been in place for 20 years since its enactment, the Law of Investment may be reviewed based on the current situation with due consideration of necessary factors of the industrial development policy.

(4). Technology Transfer and Human Resource Development

1） The FIE's technology transfer (T/T) should be the key element to realize sustainable development of domestic industries. Facilitation for FIE's training programs on production skills, expertise and/or discipline for workers may be possible target areas. The trainings by FIEs are also recognized as part of human resource development through T/T.

2） In the medium term, possible measures should be considered to facilitate linkages between FIEs and domestic industries to formulate supporting sectors.

3） Design, trademark and utility models are initial strategic instruments for the domestic manufacturing sector to be globally competitive. The human resource development for examiners as well as establishment of the institutions for examination should be promoted for fostering intellectual property right (IPR)-enabling environment.

2. SME Promotion Integrated Strategy

(1). Association Formulation, Facilitation, and Clustering

1） In order to form sectoral unities and the manufacturing sector as one "industry", the initial task should be to facilitate the establishment of industry associations in sectors where the considerable volume of economic activities is recognized. The policy objectives through association formation should include improvement of an asymmetry of information, efficient value chain management, and dialogues between private and public sectors.

2） In the areas where constructing the foundations for sectoral scales of economic capacity is the initial task, cluster development should be one of the major approaches to be employed. This is regarded as preparation for the association formation.

(2). Improvement of Production Process and Certification

1） In order to complement production management based on the internationally utilized standards such as ISO, more basic standards and/or guidelines are to be introduced for the process of upgrading assembly for SME.

2） Information on the certified manufacturers should be accumulated. Effective information dissemination measures should also be put into action such as the introduction of a website and an award scheme for good practices.

(3). Access to Technology Scheme

Any information related to technology/expertise/techniques shall be gathered and organized at one window for SMEs. Exchange of the information should be further facilitated through such media as the internet and forums. The introduction of a facilitating body (institute) should be considered in the medium- to long-term to link technology with business.

(4). Access to Finance

The policy credit guarantee scheme should be introduced to complement and/or supplement the collateral scheme along with other policies (incentives). In the medium- to long-term, financial institutions especially targeting for SME development should be considered for establishment.

IV. Supporting Policies

1. Skills and Human Resource Development for Industry

(1). In order for Cambodia to bring about a full-scale transition to an industrialized society, it is necessary to formulate and implement the policies for fostering and allocating a broad spectrum of human resources serving for industrial development. In addition to the basic skills for industrial production activities, medium-level technical personnel should be fostered through improvement of technical and pedagogic capacity of technical and vocational education and training (TVET) institutions and establishment of model schools for industrial and agricultural high schools. It is necessary to enhance the capacity for higher-level human resource development through improvement of the Institute of Technology of Cambodia (ITC) as well as upgrading of TVET institutions.

(2). In order to create the balanced demand and supply mechanism between the increased labor demands of the manufacturing sector and the abundant labor in farming villages, it is fundamental to devise a modern labor market system and to establish a qualification system.

2. Physical Infrastructure

(1) Electricity

1） Following existing development plans, six hydropower plants are to be completed and power grids are to be integrated as soon as possible through upgrading of capacity and quality of transmission. In accordance with the electricity cooperation agreement with neighboring countries, imported electricity should be utilized.

2） The long-term electricity demand estimates and the electric power development plan should be reviewed vis-à-vis the new visions for economic and industrial development.

Subsequently, the options for construction of large-capacity power plants should be considered, if necessary.

3) In order to realize competitive electricity services among neighboring countries, RGC, in collaboration with EDC, needs to take necessary measures to secure financial resources for the improvement of the electricity sector.

(2) Roads

1) The Southern Economic Corridor (SEC) is the principal axis of Cambodia and improving its connectivity requires urgent upgrading. Expand the sections of national roads paved with asphalt concrete in view of completing the Neak Loeung Bridge in 2015.

2) In the long-term prospect, SEC should be expanded into a four-lane road. RGC should construct highways for major national routes as a long-term project to strengthen logistical capacity between Cambodia and other countries.

3) It is essential to upgrade an outer ring road in 2020 in order to secure smooth traffic along SEC linked with the manufacturing sector-agglomerated areas and major transporation facilities such as ports. New small-scale berthing facilities should be installed along the Mekong River to reduce transportation costs.

(3) Regional and Urban Development of Industrial Agglomeration Areas

1) It is important to install a system for development of industrial agglomeration by establishing a single coordinating organization, and promote: (i) land zoning, ii) environmental management, iii) housing development, and iv) infrastructure development based on a long-term development plan. It is vital to coordinate such policies with investment management.

2) In order to deal with further growth of industrial agglomeration in the Phnom Penh Metropolitan Area, proper urban development plans should be introduced. With the coordination with transportation infrastructure (roads, airports, and ports) development, an orderly development of industrial area should be promoted.

(4) Comprehensive National Development and Industrial Agglomeration

1) Industrial agglomeration development including SEZ development is closely connected with the development of basic transportation system and urban development. It is important to formulate the long-term concept (plan) for comprehensive national development which provides directions of development, use and protection of national land and to lead effective industrial location.

2) In order to cope with the competition among cities in GMS, it is necessary to strengthen the

competitiveness of the metropolitan area through formulation of an orderly economic and industrial agglomeration. It is necessary to form regional economic zones with networks of core urban centers and rural agricultural areas surrounding the centers.

3. Financial Sector

(1). It is important to direct commercial banks to keep their financial situation healthy and to improve the availability of providing medium- and long-term funds.

(2). The establishment of a community-based indirect financial system should be considered, in which people save money to provide the financial resources to meet financial requirements of the industries.

(3). Considering the current situation where Cambodia does not have any policy financial institution, policy finance scheme should be established to provide capital for industrial development.

(4). It appears that many FIEs operating in Cambodia undertake mainly dollar-based business transactions. Therefore, thorough evaluation of the impacts on FDI should be conducted before introducing capital regulations and de-dollarization policies.

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List of Abbreviations

ACFTA	ASEAN-China Free Trade Area
ADB	Asian Development Bank
AH	ASEAN Highway/ Asia Highway/
AIFTA	ASEAN-India Free Trade Area
AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Area
AJCEP	ASEAN-Japan Comprehensive Economic Partnership
ASAM	ASEAN Single Aviation Market
ASEAN	Association of Southeast Asian Nations
ASSDP	Agriculture Sector Strategic Development Plan
ASW	ASEAN Single Window
ASYCUDA	Automated System for Customs Data
ATIGA	ASEAN Trade in Goods Agreement
BBC	Brand to Brand Complementation
BDS	Business Development Service
BUILD	BOI Unit for Industrial Linkage Development
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CADP	Comprehensive Asia Development Plan
CBTA	Cross Border Transport Agreement
CBTI	Cross Border Transport Infrastructure
CDC	Council for the Development of Cambodia
CDRI	Cambodia Development Research Institute
CEF	Cambodia Economic Forum
CEPT	Common Effective Preferential Tariff
CIB	Cambodian Investment Board
CIQ	Customs, Immigration, Quarantines
CKD	Complete Knock Down
C/P	Counterpart
CJCC	Cambodia-Japan Cooperation Center
CLMV	Cambodia, Laos, Myanmar, Vietnam
CMT	Cut-Make-Trim
CSEZB	Cambodian Special Economic Zone Board
DF/R	Draft Final Report
DTIS	Diagnostic Trade Integration Study
E&E	Electrical and Electronics

EAC	Electricity Authority of Cambodia
EBA	Everything But Arms
EDC	Electricite Du Cambodge
EH	Early Harvest
ELC	Economic Land Concession
EPZ	Export Processing Zone
ERIA	Economic Research Institute for ASEAN and East Asia
EU	European Union
FASMEC	Federation of Associations of Small and Medium Enterprises of Cambodia
F/R	Final Report
FDI	Foreign Direct Investment
FIE	Foreign Invested Enterprise
FOB	Free on Board
FTA	Free Trade Agreement
GAQSIQ	General Administration of Quality Supervision, Inspection and Quarantine
GCI	Global Competitiveness Index
GDCE	General Directorate of Customs and Excise
GDI	General Department of Industry
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GMAC	Garment Manufacturers Association of Cambodia
GMS	Greater Mekong Sub-Region
GOJ	Government of Japan
GPSF	Government-Private Sector Forum
GSP	Generalized System of Preference
GTAP	Global Trade Analysis Project
GVC	Global Value Chain
HCMC	Ho Chi Minh City
HRD	Human Resource Development
HS	Harmonized Commodity Description and Coding System
IBRD	International Bank for Reconstruction and Development
IC/R	Inception Report
ICOR	Incremental Capital Output Ratio
ICT	Information and Communication Technology
IFC	International Financial Corporation
IMF	International Monetary Fund
IPP	Independent Power Producers
I-S	Investment-Saving

IMF	International Monetary Fund
ISIC	International Standard Industrial Classification
ITC	Institut de Technologie du Cambodge
JBAC	Japanese Business Association of Cambodia
JBIC	Japan Bank for International Cooperation
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JPS	Japanese Production System
JST	JICA Study Team
KRI	Koei Research Institute
LCM	Laos, Cambodia and Myanmar
LDC	Less Developed Country
LMIC	Lower Middle Income Country
LPI	Logistical Performance Index
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MFA	Multi Fiber Agreement
MFN	Most Favored Nation
MIEC	Mekong-India Economic Corridor
MIME	Ministry of Industry, Mines and Energy
MLVT	Ministry of Labor and Vocational Training
MNC	Multinational Corporation
MOC	Ministry of Commerce
MOT	Ministry of Tourism
MPAC	Master Plan on ASEAN Connectivity
MPI	Ministry of Planning and Investment
MPWT	Ministry of Public Works and Transportation
MSME	Micro, Small and Medium Enterprise
MVA	Manufacturing Value Added
NBC	National Bank of Cambodia
NEA	National Employment Agency
NIS	National Institute of Statistics
NR	National Road
NSDP	National Strategic Development Plan
OBM	Original Brand Manufacturing
ODA	Official Development Assistance
ODM	Original Design Manufacturing
OEM	Original Equipment Manufacturing
Off-JT	Off-the-Job-Training
OJT	On-the-Job-Training
PPAP	Phnom Penh Autonomous Port
PPSEZ	Phnom Penh Special Economic Zone
PPSMIA	Phnom Penh Small and Medium Industries

	Association
PR/R	Progress Report
PMIS	Provincial-Municipal Investment Sub-committee
QIP	Qualified Investment Project
R&D	Research and Development
RCA	Revealed Comparative Advantage
RGC	Royal Government of Cambodia
ROO	Rule of Origin
SAD	Single Administrative Document
SC	Supply Chain
SCs	Sub-Contractors
SEC	Southern Economic Corridor
SEZ	Special Economic Zone
SHRM&P	Society for Human Resource Management and Productivity
SKD	Semi-Knock Down
SKRL	Singapore Kunming Railway Link
SITC	Standard International Trade Classification
SME	Small and Medium Enterprise
SNEC	Supreme National Economic Council
SPS	Sanitary and Phytosanitary
SPZ	Special Promotion Zone
SWOT	Strengths, Weaknesses, Opportunity, Threat
T&G	Textile & Garment
TATA	TATA: Trade Agreement on Textile and Apparel
TEU	Twenty-foot Equivalent Unit
TFP	Total Factor Productivity
TLO	Technology Licensing Organization
TOR	Terms of Reference
TPP	Trans-Pacific Strategic Economic Partnership Agreement
TRIM	Trade-Related Investment Measures
UN	United Nations
UNDP	United Nations Development Programme
USD/ US$	US dollar
VC	Value Chain
VMC	Vendors Meet Customers
WB	World Bank
WEO	World Economic Outlook
WG	Working Group
WTO	World Trade Organization

Part 1

Survey and Analysis

INTRODUCTION

0.1 Background of the Study

In Cambodia, the four main industrial sectors (i.e., agriculture, garment, tourism, and construction) play a lead role in economic development. The growth rate of the Cambodian economy was one of the highest among the ASEAN member nations before the global financial crisis (GFC) occurred in 2008. On the other hand, the economy is over dependent on the above-mentioned sectors as proven by their large share in GDP as compared with other sectors. After the 2008 GFC, the demand decreased sharply in the international market and the economy of Cambodia was negatively affected. There was a decrease in the export of garment products, and a decline in the number of tourists. Foreign construction projects were also suspended and postponed in Cambodia. However, some people pointed out that the Cambodian economy is less affected by the GFC because the economy is agricultural-based.

The Royal Government of Cambodia (RGC) is formulating the Rectangular Strategy and the National Strategic Development Plan (NSDP: 2009-2013). The Rectangular Strategy is Cambodia's socio-economic plan and NSDP is the implementation plan of the strategy. The focus is on governance while the international donor agencies provide assistance for RGC in line with the plans.

It was observed that there were no industrial policy measures mentioned in the Rectangular Strategy and NSDP. It is believed that the degree of economic freedom is high and an entry barrier is relatively low when foreign firms invest in Cambodia. Most economic development policies adopted in Cambodia have been based on neo-classical economic thinking. In other words, there has been no interventionist policy which attempts to help the economy to develop its sustainability through industrial diversification, as well as to reallocate resources (i.e., talented people, goods/ services, and capital) from a declining industry to a strategically important industry or a promising industry.

Under these circumstances, RGC is in the process of formulating an industrial policy which includes some interventional measures. A request was made to the Japanese government for assistance in industrial policy formulation. This assistance is also expected to provide inputs into the revision of NSDP when the next administration comes into power in 2013.

In response to the above-mentioned request, the Japan International Cooperation Agency (JICA) dispatched a preliminary study team in early November 2011 and gave a presentation on Japanese experience in industrial policy in the workshop conducted. The team discussed the details of the request, and RGC requested a policy dialogue-type assistance in industrial development (hereinafter referred to as the study), which aims to collect related information to assist in the formulation of industrial policy.

0.2 Purposes of the Study

This study aims to assist in the formulation of industrial policy in Cambodia by examining the following points:

- Examine the current status of the main industry sectors and the current status of the industrial policy formulation by carrying out a comparative analysis on the industrial development policies between Cambodia and its neighboring countries;
- Examine the potentials of Cambodia's industrial development, and collect related information on the priority industries in order to formulate an industrial policy; and
- Collect related information about Japanese and other Asian countries' experiences on industrial development in view of providing RGC with policy dialogue-type assistance.

0.3 Study Area

Although the study area is the entire Kingdom of Cambodia (nationwide), the main area is centered in Phnom Penh and other provinces where related government agencies as well as many foreign and Cambodian private firms are located.

0.4 Stages and Progress of the Study

0.4.1 Stages of the Study

The JICA Study Team (hereinafter referred to as the JICA Study Team) started their preparatory work in Japan last March 2012 and planned to finish at the end of October. The following stages are the schedules and activities done by the JICA Study Team;

- Preparation in Japan (March 2012): Reviewed the literature and prepared the Inception Report (IC/R);
- First survey in Cambodia (March-May 2012): Discussed the IC/R with SNEC and other relevant entities, collected and organized related information, held the first seminar, and prepared the progress report (PR/R);
- First work in Japan (May-June 2012): Reported the first survey in Cambodia to JICA Headquarters, collected and organized necessary information, and completed and submitted the PR/R;
- Second survey in Cambodia (May-July 2012): Discussed the PR/R, held the second seminar, collected and organized related information, discussed with relevant entities, prepared the draft final report (DF/R);
- Second work in Japan (July-August 2012): Reported and discussed the second survey in Cambodia to JICA Headquarters, completed the DF/R;
- Third survey in Cambodia (August 2012): Submitted the DF/R, held the third seminar, collected and organized related information; and
- Third work in Japan (September 2012): Submitted the final report (F/R).

0.4.2 Implementation of the First Survey in Cambodia

(1) First Work in Japan and First Survey in Cambodia

Following the above stages, the 1st seminar was held during the 1st survey in Cambodia. Also, IC/R,

which was written during the preparation in Japan, was discussed with related entities. Meetings with the working group at SNEC were held regularly. Necessary information related to each survey item was collected and organized. During the above activities, the JICA Study Team conducted interviews with related entities and field survey. Procurement of a sub-contract company for the survey on the current status of industrial structure and discussion on the context of the survey were done.

(2) Holding the 1st Seminar

On April 26, 2012, JICA and SNEC organized the 1st seminar at Raffles Hotel Le Royal (see the agenda below). The main purposes of this seminar are as follows; a) to give an overall picture and direction of the industrial policy formulation to various stakeholders including governmental organizations, private sectors, and international organizations and b) to motivate them to participate in the process of the policy formulation in the future. A total of 45 major participants were coming from government organizations, nine from international organizations, several participants from private sectors including the Japan Business Association in Cambodia (JBAC) and other Cambodian associations of the private sector, as well as representative of small and medium enterprises in Cambodia. A total of 78 participants joined the seminar.

Time	Contents
08:00--08:30	Registration
08:30--08:50	Opening Remarks H.E. Dr Hang Chuon Naron (Permanent Vice-chairman, SNEC) H.E. Masafumi Kuroki (Ambassador Extraordinary and Plenipotentiary of Japan to the Kingdom of Cambodia)
08:50--09:30	Keynote Speech by Prof. Shinji Asanuma (Hitotsubashi University) *"Making Industrial Development Strategy for Cambodia"*
09:30--10:15	Presentation by Mr Yoseki Nagase (Team Leader, JICA Study Team) *"Experience of Economic Development and National Periodic Planning in Japan"*
10:15--10:30	*Coffee Break*
10:30--11:00	Moderator: H.E. Dr Hang Chuon Naron Presentation by Mr Yoseki Nagase *"Introduction of JICA Study and its Progress"*
11:00--12:00	Moderator: H.E. Dr Hang Chuon Naron Panel Discussion including Q&A Panelists: Prof. Shinji Asanuma, H.E. Dr Mey Kalyan (Senior Advisor to SNEC), Mr Toru Homma (Senior Advisor to JICA), Mr Yuji Imamura (JICA Expert to CDC), Mr Yoseki Nagase
12:00--12:15	Closing Remarks H.E. Dr Hang Chuon Naron
12:15 --	*Lunch*

0.4.3 Implementation of the 2nd Survey in Cambodia

(1) Second Work in Japan and 2nd Survey in Cambodia

Following the above stages, the 2nd seminar was held during the 2nd survey in Cambodia. Also, PR/R, which was written during the preparation in Japan, was discussed with related entities. The meetings with the working group at SNEC were held regularly. Necessary information related to each survey item was collected and organized. During the above activities, the JICA Study Team conducted interviews with related entities and field survey, and a survey on the current status of industrial structure, and discussion on the context of the survey were also done.

(2) Holding the 2nd Seminar

On June 25, 2012, JICA and SNEC organized the 2nd seminar at Raffles Hotel Le Royal and conducted a follow-up session at the conference room in SNEC the following day (see the agenda below). This seminar was exclusively for JICA, the JICA Study Team, and SNEC, which enabled the participants to deeply discuss the direction of the future industrial policies after seeing SNEC's way to formulate the measures officially.

The Study Team presented the contents of PR/R and suggested hypothetical measures based on the report while SNEC presented the basic concept of industrial policies formulation based on the outline approved by the committee. The follow-up discussion was held based on these presentations. Ten participants from SNEC, seven from JICA Headquarters and JICA Cambodia Office, and seven from the JICA Study Team. The total number of the participants was 24.

Time	Contents (Monday, June 25, 2012)
13:30--14:00	Registration
14:00--15:20	Moderator: Mr Toru Homma, Senior Advisor to JICA Presentation by the JICA Study Team ➢ Mr Yoseki Nagase, Team Leader/Industrial Policy *"Prospects for Cambodia's Economy and Industries and the Directions of Industrial Policy"* ➢ Mr Hiromichi Hara, Deputy Team Leader/Industrial Sector Research *"Key Issues of Major Industry Sectors: from the Viewpoints of GVC and Investment Trends"* ➢ Ms Ryoko Hosono, Competitiveness Analysis *"Understanding the Playing Field: Factors Affecting the Enterprise Location and Possible Strategy"* ➢ Mr Masayuki Ishida, Comparative Analysis on Industrial Development Policies *"Initial Policy Options for Industrial Development in line with Cambodian Version of Localization Strategy: Based on the Observation of Current Situation of the Industry in Cambodia and Experiences of Neighboring Countries"*

15:20--16:20	Q&A Session
16:20--16:35	*Coffee Break*
16:35--17:15	Moderator: Mr Toru Homma, Senior Advisor to JICA Presentation by SNEC ➢ Mr Lay Sokkheang and Mr Chheang Vanarith *"The Concept Note for Industrial Development Policy in Cambodia"*
17:15--18:00	Discussion
	Contents (Tuesday, June 26, 2012)
10:00--12:00	Follow-up Discussion (Commentator: Prof. Shinji Asanuma)

0.4.4 Implementation of the 3rd Survey in Cambodia

(1) Third Work in Japan and 3rd Survey in Cambodia

Following the above stages, the 3rd seminar was held during the 3rd survey works in Cambodia. Also, DF/R (proposed policies), which was written during the preparation in Japan, was discussed with related entities. Meetings with the working group at SNEC were held regularly. Necessary information related to each survey item was collected and organized.

(2) Holding the 3rd Seminar

On September 3, 2012, Monday, JICA and SNEC organized the 3rd seminar at Raffles Hotel Le Royal (see the agenda below). The main purposes of this seminar are as follows; a) to make suggestions on industrial policy formulation in Cambodia to various stakeholders including governmental organizations, private sectors, and international organizations, and b) to discuss future formulation process with participants. There were 70 participants coming from government organizations, 28 from international organizations, and 21 from private sectors including the Japan Business Association in Cambodia (JBAC) and other Cambodian associations of the private sector,. The total number of the participants was 119.

Time	Contents
08:00--08:30	Registration
08:30--08:50	Opening Remarks • H.E. Dr Hang Chuon Naron, Secretary of State of the Ministry of Economy and Finance, and Permanent Vice-chairman of SNEC • H.E. Masafumi Kuroki (Ambassador Extraordinary and Plenipotentiary of Japan to the Kingdom of Cambodia)
08:50--09:30	Moderator: H.E. Dr Hang Chuon Naron Presentation on: "Proposed Elements and Recommendations for Cambodia's Industrial Development Policy" by Mr Yoseki Nagase, Team Leader, JICA Study Team

09:30--9:50	"Comments on the Results of JICA's Study and Presentation on the Direction of Cambodia's Industrial Policy Formulation" by Mr Ung Luyna, Deputy Secretary General, SNEC
9:50--10:10	Coffee Break
10:10--11:30	Plenary Perspectives, Suggestions, Questions, and Discussions
11:30--11:45	Comment from the JICA Cambodia Office by Mr Yasujiro Suzuki, Chief Representative
11:45--12:00	Summing up and Way Forward by H.E. Dr Hang Chuon Naron
12:00--12:50	Lunch

0.4.5 Achievements of This Study

The JICA Study Team submitted the IC/R to JICA in the middle of March, 2012. The IC/R contains the methodology, contents, and schedule of this study, and the JICA Study Team implemented the study within the framework of the IC/R.

At the end of June, the JICA Study Team prepared PR/R in which all the results up to the 1st survey in Cambodia were included. After that, DF/R, which includes findings from 1st to 3rd work in Japan and 1st to 3rd surveys in Cambodia, were prepared and submitted to JICA in the middle of September. This F/R reflects comments from the DF/R and prepares for the submission to JICA in the middle of October.

This Final Report consists of two parts. Part 1 organizes surveys and analyses on current situation of industrial sectors in Cambodia, and Part 2 presents suggestions and major items for Cambodia's industrial policy formulation on the basis of the findings of the Part 1.

0.4.6 Implementation Structure of the Study

Joint Venture of KRI International Corp. and EXeIdea Ltd. organized the JICA Study Team and implemented the study on consignment of JICA.

<Members of JICA Study Team>

Team leader/Industrial Policy	Mr. Yoseki Nagase
Deputy team leader/Industrial Sector Research	Mr. Hiromichi Hara
Comparative Analysis on Industrial Development Policies	Mr. Masayuki Ishida
Competitiveness Analysis	Ms. Ryoko Hosono

CHAPTER 1 Perspectives of Analyses - Industrial Expansion and Foreign Direct Investment in Cambodia

1.1 Goal of Economic Growth

It has been 20 years since the newly-born Kingdom of Cambodia started nation building with the establishment of the Cambodian Constitution in 1993. During the period, the country went through a series of rehabilitation and reconstruction and experienced high economic growth under the open market economy system.

The real economic growth in Cambodia in the 2000s (2001-2010) was 8.1%. Though the country experienced a significant slowdown in 2009. After the global financial crisis (GFC) in 2008, the country achieved a 10.3% annual economic growth between 2004 and 2008. The leading sectors during the five-year high growth period, which can be called as a "take-off" period[1], were garment, tourism, construction, and agriculture. As a result, Cambodia's GDP became approximately 2.2 times larger in the last ten years.

The high economic growth after 2000 increased GDP per capita from USD 288 in 2,000 to USD 830 in 2010, which is 2.9 times higher than that of 2000. According to the estimation made by the Ministry of Economy and Finance (MEF), the GDP per capita will reach at USD 904 in 2011 and USD 984 in 2012[2]. If this trend continues, Cambodia's GDP per capita will reach at USD 1,000 level in the near future.

Cambodia is aiming to propose a new guideline for the economy and industry in support to the vision of achieving a GDP per capita of USD 1000 level. More specifically, SNEC is currently carrying out an industrial policy formulation. This formulation will be utilized by the Rectangular Strategy and the NSDP, which are planning to be designed in 2013. This Report is expected to become a useful tool in the formulation of the strategy, planning, and policy in Cambodia as well as a basis of recommendations on the industrial policy.

1.2 Current Industrial Situation in Cambodia – its Characteristics

The overview of the current industrial situation in Cambodia highlights the following characteristics:

First, the share of manufacturing (secondary industry) in the industrial structure is small. Eighty percent of the population lives in agricultural villages of Cambodia. Although the share of agriculture (primary industry) in GDP has gradually decreased from 37.9% in 2000, the GFC further affected the share which became 36.0% in 2010. Service (tertiary industry), on the other hand, accounted for 41.0% of GDP in 2010. This is attributable to the active transactions in the wholesale and retail services reflected by demands driven by foreign aid, as well as to an increase in the tourism sector to which a complex of Angkorian temples, is a major contributor.

The share of manufacturing (secondary industry) in GDP rapidly increased from 13.0% in 1993 to 23.0%

[1] ADB(2011) "Economic Analysis; Country Partnership Strategy, Cambodia. 2011-2013"
[2] CDC(2012)"Cambodia Investment Guidebook"

in 2000. Although it reached at 26.9% between 2003-2007, the GDP fluctuated approximately 23% after 2008. Export of textile and footwear, and investments in construction are leading the industry, but the share of the secondary industry in GDP has not increased significantly. In other words, Cambodia is still in the early stages of industrialization and the establishment of manufacturing is still vulnerable.

Second, modernization of domestic manufacturing is slow. Traditional manufacturing companies in Cambodia are local industries directly connected to clothing, food, and housing, such as bricks/stones, bamboo products/furniture, silk/cotton cloths, and food processing, which are engaged as micro and small enterprises. The key to domestic manufacturing is food processing, which produces products for domestic demand using local resources such as rice mill, soy sauce/fish sauce, and drinking water. In fact, there are only few enterprises which own equipment meeting the quality and sanitary standards for export. Given such situation, it is worth noting that processed agricultural products using organic crops (e.g. processed marine products, pepper, and palm wine, cashew nuts and rice) have been on trial and contribute to export the products to some extent.[3]

Due to the domestic industry's vulnerability and low competitiveness for domestic demand, Cambodia depends on imports for most of the consumption goods. However, there are companies trying to overcome different obstacles and achieve growth in various locations. It is required to develop approaches to support the development of such companies facing the challenge of modernization.

Third, the key factor of manufacturing is the export-oriented light industry such as textile and footwear. The garment/textile and footwear companies with foreign direct investments (FDIs) were the one who started to change the old-fashioned industrial structure. These so called light industries with over 90% of the manufacturing companies are owned by foreign companies. These foreign companies are favored to establish manufacturing bases for garment and textile in Cambodia because the country obtained the most favored nation (MFN) from the United States (US) and generalized system of preference (GSP) from Europe, which are advantages of exporting apparel products to such markets. However, these manufacturing companies still import raw materials and export final products (secondary processed products by cutting. making and trimming) to U.S. and Europe. As a result, the industry suffers low value-added products, weak technology transformation, and slow spillover to other industries although the size of employment creation is huge as it is a labor-intensive industry. In other words, the industry cannot play a leading role in industrial development in Cambodia if the situation remains the same. Therefore, how to make such sectors as garment and footwear effective and advanced are important issues for industrialization in Cambodia.

Fourth, several manufacturers of the assembly and processing sectors have made an FDI and begun production in special economic zones (SEZs) for the past few years. It has been more than ten years since assembly factories of motorcycle started their operation in Cambodia. The products are only for the

[3] HATSUKANO Naomi, 'Industrialization of Cambodia: The Manufacturing Industry and Its Actors 'Kouhatsu ASEAN shokoku no kogyoka (Industrialization in CLMV countries: The Experiences and Prospects of Late-comer ASEAN Countries), Kenkyu-sosho No.553, 2006.

domestic market, and parts are imported from the neighboring country in the form of complete knock down (CKD) parts. In recent years,, however, manufacturers of precision instruments and parts (small motor), as well as of E&E products and parts (wire harness) for automobiles and other high-tech products (e.g. thin aluminum frames for liquid crystal TV, and speakers for cellphones) have established factories and begun production in Cambodia. Each of these companies serves as a supplier of parts that is engaged in labor-intensive processes in the global value chain (GVC) in East Asia. Moreover, it seems that major companies which assemble final products started to expand their business in the assembly and processing sectors. Although the number of such companies is still small, it is a fact that Japanese companies started to regard Cambodia as an attractive destination for FDI. These sectors (e.g. motorcycle/automobile, electronic, watch, and digital camera) has high potential. If assembly and processing sectors deepen its connection with packaging, plastic products, and metal fabrication, supporting and associated industries will develop, which further leads to the diversification of industrial structure.

Industrialization in East Asia started with light industry such as garment, then transformed to electronic products, transportation equipment, and precision industry as exemplified by the flying geese paradigm. The question to be answered is whether or not Cambodia can smoothly step up to the next level of industrial structure by following other precedent countries in East Asia.

Fifth, it is the FDI that has played a leading role in industrial development in Cambodia. The share of FDI in the total amount of investments in fixed assets approved by the Cambodia Investment Board (CIB) (1994-September 2011) was 62%[4]. Although there is a huge gap between the approved and actual amount of investments, it can be assumed that approximately 60% of private fixed capital formation in Cambodia was made by FDI. According to the data from CDC, the share of manufacturing (secondary industry) and that of tourism was 25% and 50%, respectively. It is easy to imagine that the key investors in manufacturing sector are FDIs.

The FDIs in manufacturing are concentrated in the garment sector. The main investors are from China, Hong Kong, and Taiwan, which means Chinese companies play a principal role in the investments in textile and garment sector. The reason for choosing Cambodia as an investment destination is because under the MFN and GSP, The Royal Government of Cambodia (RGC) sets no entry barriers according to business category and gives preferential treatment in accordance with the Law on Investment.

On the other hand, the recent foreign invested enterprises (FIEs) leading in the assembly and processing sector are Japanese companies. Approximately 39% of the total accumulated amount of investments in manufacturing (2008-2012, actual) came from Japan[5]. The total amount of investment coming from Taiwan, Singapore, China, and Korea was approximately 30% to 60% of the investments from Japan. The expansion of FDI from Japan to Cambodia is mainly due to the increase in labor cost, the worsening business environment (e.g. increasing labor cost) in China, Thailand and Vietnam, and risk diversification (China plus one). It is necessary to improve the investment environment in order to attract FDIs from

[4] CDC(2012)"Cambodia Investment Guidebook"
[5] Estimation using data from CDC

Japanese companies.

Sixth, dual industrial structure clearly appeared during the industrial development progress. Industrial structure in Cambodia by company size shows that it is polarized by major companies based on FDI manufacturing and micro and small domestic enterprises. According to the Economic Census of Cambodia 2011, 963 domestic companies employed only 1 to 10 workers. 69.6% of total employment of domestic firms are company size 1-10. On the other hand, there are 258 foreign companies with more than 101 employees. Most of them are engaged in manufacturing. Regarding the year of establishment, the average number of business start-ups has increased steadily year by year This indicates that the number of manufacturing FIEs has also increased. (see Tables 1-1, 1-2, and 1-3).

Polarization of the industrial structure will be accelerated if Cambodia attracts more FDIs in the future. Therefore, the challenge is how to connect to industrial development using FDI and modernization of domestic small and medium enterprises.

Table 1-1 Number of Employees by Company Size

（Unit：1000 people, %）

Company Size	Domestic Company		Foreign Company		Total	
1~10	963	(69.6)	13	(4.5)	976	(58.2)
11~50	180	(13.0)	12	(4.1)	192	(11.5)
51~100	45	(3.3)	9	(3.1)	54	(3.2)
101~	195	(14.2)	258	(88.4)	454	(27.1)
Total	1,383	(100.0)	292	(100.0)	1,675	(100.0)

Source: JICA Study Team based on “2011 Economic Census”

Table 1-2 Number of Companies by Company Size

Company Size	Domestic Company		Foreign Company		Total	
1~10	448,880	(97.7)	4,630	(82.2)	453,510	(97.5)
11~50	9,489	(2.1)	552	(9.8)	10,041	(2.2)
51~100	673	(0.1)	128	(2.3)	801	(0.2)
101~	456	(0.1)	326	(5.8)	782	(0.2)
Total	459,498	(100.0)	5,636	(100.0)	465,134	(100.0)

Source: JICA Study Team based on “2011 Economic Census”

Table 1-3 Year of Establishement with over 101 Employees

Before 1990	90-98	99-03	04-08	09-11	Total
91	125	129	240	197	782

Remarks: 1. Figure of “Before 1990” includes firms that is not clear about the year of establishment.
2. Figure of 2011 includes only the first three months (January, February and March) of the year.
Source: JICA Study Team based on “2011 Economic Census”

1.3 Perspectives of Analysis and Structure of Chapter 1

1.3.1 Perspectives of Analysis

As mentioned earlier, the Cambodian economy will soon reach a USD 1000 GDP per capita. Currently, domestic small and medium enterprises (SMEs) employ more than half of the employees in the sector and foreign companies in the garment and footwear sectors establish foundations at a certain level and export most of the products. The objective of this study is to discuss an industrial policy, in which a future ideal industrial structure is offered from a viewpoint of current Cambodia's economic achievement.

It is obvious that FDI is the main factor of the industrial development in Cambodia as there are few domestic industrial investment funds and industrial investors. For the time being, the situation seems to continue that way and if that will be the case, it is vital to diversify the industry by utilizing FDI appropriately and promote manufacturing development with FDI inflows. In other words, it is necessary to strengthen the Cambodian industry by implementing FDI policy at its center and to promote the industrialization of small and medium domestic enterprises in accordance with it. From such a point of view, this study sets the FDI as a main focus.

Apparently, industrial development is a dynamic process which is determined by reality happening in and out of the country with future changes in conditions. Therefore, Chapter 1 analyses the trends of industrial sectors and FDI, environment of attracting FDI (or investment environment), and comparison of competitiveness and policies with neighboring countries, prior to making a strategy for industrial development with FDI. Also, the chapter organizes basic information in order to formulate FDI policies and related industrial policies.

1.3.2 Structure of Part 1

Part 1 is composed of five chapters including this one, and describes analyses from the viewpoint explained above.

Chapter 2 is about the "Current Situation of Industry and Issues in Cambodia". This chapter, in response to 1.2 of Chapter 1, reveals the current position of Cambodian industry in the dynamic process of economic development and industrialization in Asia. Also, this chapter organizes information on over occupation in agricultural sector and issues on SMEs from the viewpoint of industrialization (2.1). Then, in order to assess the level of potential major industrial sectors or category, this study analyzes the potentials of major industrial sectors and confirms the position of these sectors in GVC (2.2). After that, the study explains the industrial structure in Cambodia based on statistics, and reveals that the current situations and issues on the value chain of six important sectors (2.3). The JICA Study Team pointed out the current major industrial agglomerations and issues with analyses of geographical expansion of industrial activities and investments (2.4). Finally, the study conducts a comparative analysis of industrial policies in Cambodia and its neighboring countries and identifies "lessons learned" for Cambodia by using garment sector and motorcycle assembling sectors, which are the current major industries as a case study (2.5).

Chapter 3 discusses the "Foreign Direct Investment into Cambodia". Firstly, this chapter outlines the trends of capital formation and FDI from macroeconomic point of view. It also shows the characteristics of Japanese companies, their requests on FDIs, and location choice (3.1). Then, the chapter takes a close look at general trends of qualified investment project (QIP) and investments in FDI by sector and country (3.2). Furthermore, it reviews investment related laws in Cambodia as basic information to consider policies to attract FDIs and identifies "lessons learned" by comparing investment policies in Cambodia to Thailand and Vietnam. Lastly, the third chapter considers how to connect FDI inflow to industrial promotion. In order to do so, the chapter reviews localization policy under the current investment law in Cambodia, and analyzes introduction of an investment incentive law, transition of industrial promotion policy, and contents of localization policy to draw lessons for Cambodia (3.3).

Chapter 4 examines "Cambodia's Business Environment". It is necessary to appropriately assess the impacts of regional integration and conduct comparative analysis on competitiveness. Based on ASEAN economic integration, multilayered framework of multilateral or bilateral free trade agreements (FTA) and economic partnership agreement (EPA) are being established. Therefore, this chapter sorts out the impacts of economic integration and free trade and organizes the current trade structure in ASEAN. Then, after setting up a framework of ASEAN+1 (Japan, China, or India), this chapter captures custom and institutional change and operation in the region. In Greater Mekong Sub-region (GMS), integration of cross-border transport infrastructure is stimulated and its connectivity is improving. Therefore, the study organizes the trends of improvement on the transportation infrastructure in ASEAN +1 (4.1). Next, based on the above information, the trends of FDI and firm location are researched. In this section, fragmentation of production process and determinants of firms' selected location will be analyzed with special focus on recent Japanese companies' activity (4.2). Then, investment and operation environment in Cambodia will be analyzed. That is to say, the study conducts comparative analysis on investment environment and competitiveness and on operation environment and logistics. It also shows what is the strength and weakness of Cambodia, and how the integration of economic and physical infrastructure impacts on opportunity and threats in Cambodia. Based on these analyses, the study considers systems and operations of the special economic zone (SEZ) in which FDI will be concentrated (4.4). Lastly, the study analyzes trade relationship with Thailand and Vietnam, which are the neighboring countries of Cambodia, then compare their investment environment (4.5).

Chapter 5 discusses "Industries in Cambodia toward the Next Step" as conclusion of Part 1, which bridges to Part 2 by summing up its contents.

CHAPTER 2 Current Situations of Industries and Key Issues in Cambodia

2.1 Economic Development and Industrialization in Cambodia

Before analyzing the current situations and key issues of the industrial sectors of Cambodia, this section discusses the economic trends and identifies the issues to promote industrialization in Cambodia from the viewpoint of industrial structure, which connects economic growth (macroeconomics) and each sector.

2.1.1 Industrial Structure and Industrialization

(1) East Asia's Economic Development and Industrialization

Cambodia started to move towards modernization behind other East Asian countries, and is now tracking them with its high economic growth. The question on where is Cambodia located in terms of the economic growth in East Asia posed a big challenge.

Since the East Asian economies grew rapidly for the past decades, there are drastic changes/ transformations on the industrial structure in the course of economic development. Export played a major role in the development of the manufacturing sector. East Asia's fast economic development is attributed to the high rates of economic growth and export of industrial products.

Table 2-1 East Asia's Ratio of Manufacturing Sector in GDP

(%)

	about 15 years before peak		peak		2009
Japan	(1955)	21.9	(1970)	36.0	18.3
Taipei, China	(1970)	29.2	(1986)	39.4	23.7
Korea	(1973)	25.8	(1988)	31.9	25.0
Malaysia	(1987)	19.8	(2000)	32.7	25.5
Thailand	(1988)	25.8	(2003)	35.2	34.1
Singapore	(1987)	25.8	(2002)	28.3	18.5
Indonesia	(1985)	16.0	(1997)	26.8	26.4

Source: Compiled by the JICA Study Team based on ADB "Key Indicators for Asia and the Pacific" and on long-term economic statistics of the Institute of Economic Research of Hitotsubashi University, Economic Planning Agency "National Economic Statistics Annual Report" and Miyohei Shinohara (2006) "Seichyo to Jyunkan de Yomitoku Nihon to Asia"[Analysis of Japan and Asia through the Growth and Cycle]" Nihon keizai Shinbun Sya.

Despite the progress of industrialization, the manufacturing sector ratio in GDP does not grow continuously. In general, with the development of the economy, the ratio reaches its peak at a certain point and then begins to go down. After the ratio of Japan's GDP reached its peak (36.0%) in 1970, as shown in Table 2-1[6], other East Asian economies reached their peak one after another in accordance with the flying geese theory: namely, Taiwan (39.4%) in 1986; South Korea (31.9%) in 1988; Malaysia (32.7%) in 2000; and Thailand (35.2%) in 2003. The ratio of the manufacturing sector in terms of GDP decreases with the progress of industrialization. Technological progress leads to an increase in service expenditure of industrial production as well as relative reduction in prices of industrial products[7].

There was an increase of 10% to 13% in the manufacturing sector ratios in GDP of these East Asian economies for the last 15 years, before such ratios have reached the peak. In particular, Japan got the highest percentage of approximately 14.1% throughout the period. Annual increase ratio was approximately around 1% on the average during the said period.

(2) Current Stage of Cambodia's Industrialization

There was a question about where Cambodia should be placed currently in the context of East Asian economic development and industrialization. As Figure 2-1 indicates, Cambodia's manufacturing sector ratio in GDP is 14.5% (14.9% in 2011). Likewise, the ratio of Vietnam is approximately 20%, while that of Indonesia is approximately 26% to 27%, and that of Thailand is more than 30%. In the meantime, while agriculture sector ratio in GDP decreased between 1998 and 2008, as Figure 2-2 shows, the manufacturing sector ratio in GDP remained relatively stable or increased slightly in the same period. There may be some positive impacts of an increase in the tourism sector ratio in GDP.

Cambodia's manufacturing sector ratio may go up to the same level as that of Thailand (Curve A), which is currently in the process of industrialization, followed by many other East Asian countries. Myanmar seems to follow the same trend. On the other hand, there is a possibility that the Cambodian economy will follow the Philippine economy which lagged behind together with other early comer ASEAN members (e.g., Malaysia and Thailand) (Curve B). There is a possibility that Cambodia will follow the same path of the Philippines, if the country does not make any appropriate industrialization strategies and fail to improve the investment environments.

Cambodia is at the turning point of whether it can achieve promising economic growth based on the development of manufacturing sector or not.

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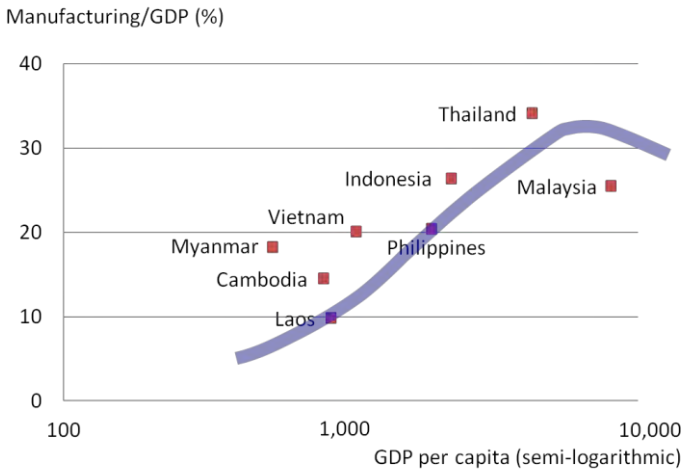
[6] Please refer to Table 1-1.

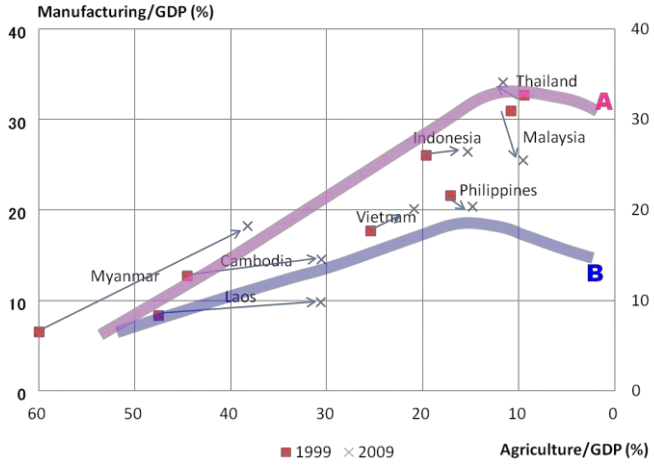
[7] Shinohara, M. (2006) *Seicho to junkan de yomitoku nihon to ajia* (Economic Growth and Cycle of Japan and Asia),Tokyo: Nippon Keizai Shinbunsha)



Note: The data for Cambodia is 2008.

Sources: : Complied by JICA Study Team based on IMF "World Economic Outlook Database, September 2011," & ADB "Key Indicators of Developing Asian and Pacific Countries 2010."

Figure 2-1 Per Capita GDP and Manufacturing Sector Ratio in GDP (2009)



Note: The data for Cambodia is 1998-2008.

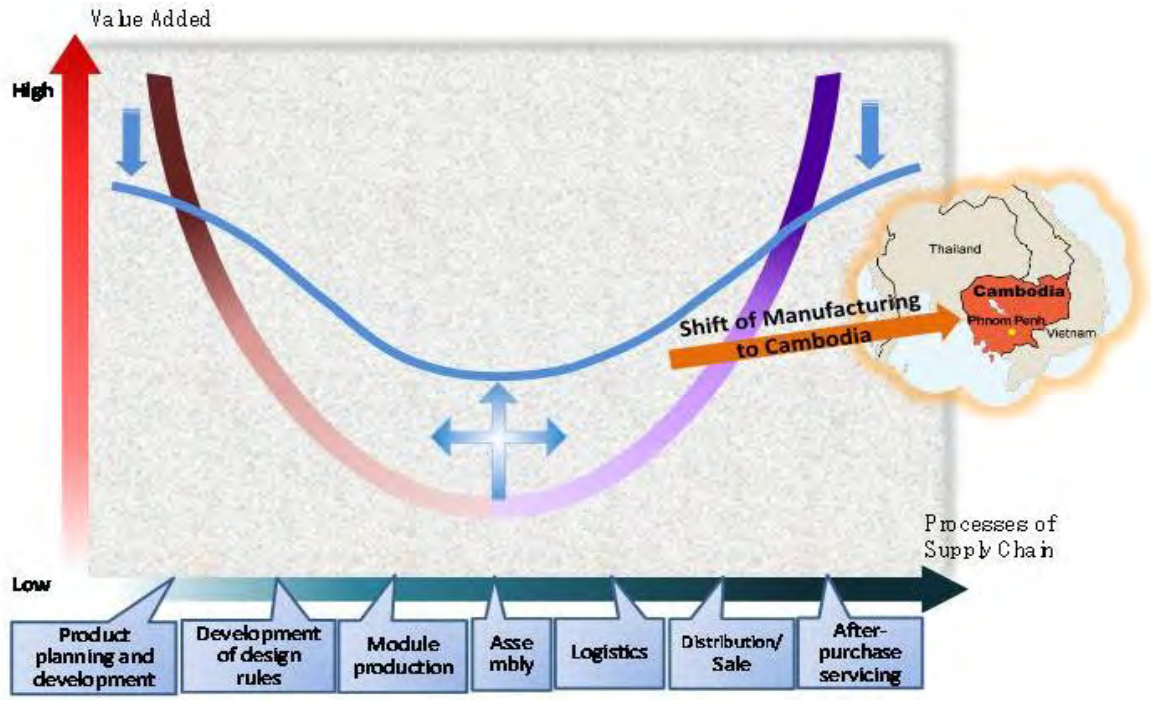
Source: Complied by JICA Study Team based on the ASEAN-Japan Center Database.
(Original Data: ADB "Key Indicators of Developing Asian and Pacific Countries 2010."

Figure 2-2 Ratio of Agriculture and Manufacturing Sectors in GDP (1999-2009)

(3) Participation in the East Asia's Network of Production Fragmentation

1) East Asia's Global Value Chain

The success or failure of Cambodia's industrialization depends on its participation in East Asia's network of production fragmentation (or cross-border production sharing) in the region, by taking advantage of its backwardness.



Source：Zhou Muzhi (2007) "Chinese Economic Theory" Nihon Keizai Hyouonsha Ltd

Figure 2-3 Global Value Chain and Shift of Manufacturing to Cambodia

In East Asia, the network of production fragmentation has been established through trade and investment across the region where there are many countries whose developmental stages are different from one another. A series of transformations/changes in industrial structure took place one after another in the region (i.e., Japan, Asian newly industrialized economies (NIEs), early-comer members of ASEAN [Singapore, Malaysia and Thailand], China, and Vietnam).[8] As a result, East Asia has become one of the production bases and known as the "Workshop of the World."

In other words, global value chain (hereinafter referred to as "GVC") has been strengthened in East Asia. Consequently, vertical specialization is in full progress and intra-industry trade of intermediate goods has become more significant. In line with the trend for deepening of GVC, there is a strong need for Cambodian manufacturers to move gradually from relatively low value-added to higher value-added segments (Figure 2-3).

Cambodia is expected to be integrated into production network (or GVC) in East Asia by attracting foreign manufacturing companies including Japanese firms for location of production fragmentation and establishing industrial agglomeration with comparative advantages.

2) From the Light Industry to the Assembly and Processing Sector

Participation in East Asia's network of production fragmentation means diversification of industrial structure from light industry to processing and assembly industry.

[8] Watanabe, T. (1986; 1996)Kaihatsu Keizaigaku (*Economics and Contemporary Asia*): Tokyo: Nihon Hyoronsha

Table 2-2 Change of Export Structure

Products \ Year	1955	1970	1985	1990
Export Value (%)	100.0	100.0	100.0	100.0
Food	6.3	3.4	0.7	0.6
Textile	37.2	12.5	3.6	2.5
Chemical	5.1	6.4	4.4	5.5
Steel	12.9	14.7	7.7	4.4
Machinery	3.9	46.3	71.8	75.0
Office Equipment	0.0	1.7	4.4	7.2
Semiconductors/Electronic parts	0.0	0.4	2.7	4.7
Automobiles	0.0	6.9	24.2	22.3
Optical instruments	0.0	2.6	4.8	4.0
Home appliances	0.0	7.9	11.6	13.5
Machine tools	0.0	0.6	1.5	1.5
Vessels	3.9	7.3	3.4	1.9

Source: Toshio Sanuki. (1993). Nihonkeizai-Shinron (Japanese Economy-A New Theory): Toyo Keizai Shinpo Sya.

In Japan, the textile sector (i.e yarns and cloths) developed since the turn of the 19th century and played a leading role in exportation until the 1960s. After export/GDP ratio of textile sector decreased, products of the machinery sector have had a major share of export products (Table 2-2). This trend is observable throughout East Asia. In East Asia, the 2007 share of all the machinery products out of total export and import was 57% (parts/components: 29%; final products: 28%).[9]

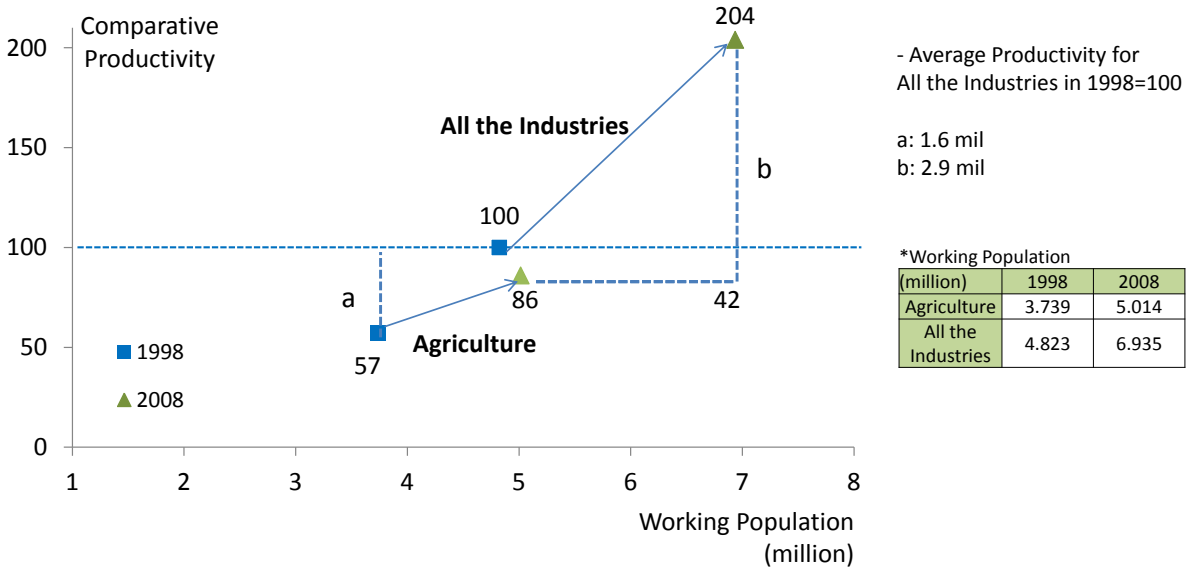
One of Cambodia's challenges for industrialization is the shift of its focus to a more value-added production, in the garment sector, as well as to attracting and developing the assembly and processing sectors. It is necessary to emphasize on industrialization with manufacturing industry at its center, as well as the promotion and development of processing and assembly industry.

2.1.2 Agriculture Sector's over Occupation and Modernization

It is unavoidable that the share of conventional agriculture sector relatively reduces in the process of economic development. Migration of labor forces and other resources from agricultural to industrial (or non-agricultural) sectors bring economic growth and development. However, this does not mean that the agriculture and/or agricultural villages are not important. Around 80.5% of Cambodians live in rural areas (provinces) in 2008. Modernization of agriculture and rural areas is essential, while strengthening of the industrial sectors (i.e., primary, secondary, and tertiary industries) is crucial, the mainstay of which is industrialization. The view of connecting industrial development and modernization of agriculture is important[10].

[9] Tran Van Tho (2010) *Betonamu Keizai Hattenron* (Development and Transition in the Vietnamese Economy), Tokyo: Keisoshobo

[10] "Development of coastal industrial zone of Kashima" in the 1960s introduced "No-Ko Ryozen", which means



Note: For the calculation of agricultural productivity, real GDP in agriculture and the primary industry population are applied.
Source: Complied by JICA Study Team based on General Population Census 2008, Key Indicators of Developing Asia and Pacific Countries 2010 (ADB), and World Bank Database.

Figure 2-4 Comparative Productivity and Over Occupation of Cambodia's Agriculture Sector (1998-2008)

First is to smoothly promote labor movement from agricultural to industrial sectors. Cambodia's rural areas are in the state of over occupation[11]. It seems that with an increase in population, the state of over occupation will become more serious. For instance, a gap of the average labor productivity between all sectors (=100) and the agricultural sectors decreased from 57 in 1998 to 42 in 2008. In the meantime, as Figure 2-4 indicates, working population of the agriculture sector increased from 1.6 million to 2.9 million. According to a survey conducted, the working population of this sector will continue to increase[12]. The growing trend of over occupation in the agricultural sector is unavoidable. Therefore, it is important to create employment opportunities in manufacturing sector and to provide basic education to young labor population, which will lead to appropriate matching of supply and demand.

development of both agriculture and industry together

[11] This is the situation in which the marginal productivity of a particular sector is lower than that of others on a chronic basis. In the trial calculation, for convenience, average productivity is used for comparison. Under employment and disguised unemployment are similar concepts [Okawa, K. (1962) *Nihon Keizaibunseki* (Analysis of Japanese Economy), Tokyo: Shunjusha].

[12] Please refer to JICA/ KRI (2012). The working population of primary industry will increase by 221,000 compared to 2008 on the assumption that the total investment amount of the 1998-2008 period doubles in the next ten years.

Table 2-3 Production Yields of Major Agricultural Products

(unit: million ton)

	2005	2009
Rice	418	759
Corn	26	92
Cassava	36	350
Natural rubber	3	3
Beef	5	6
Pork	12	11

Source: FAO Statistics

Table 2-4 Current Agricultural Land (as of 2009)

	Size（ha）	Ratio（%）
National land	1,810	100.0
Agricultural land	556	30.7
Cultivated land	390	21.5
Perennial crop land	16	0.9
Grazing land	150	8.3

Second is to strengthen the linkage between agricultural and industrial sectors through agricultural production.

Major crops in Cambodia are rice, cassava, and corn (see Table 2-3). However, there is a huge gap between Cambodia and Thailand or Vietnam in terms of production[13]. For example, average rice production volume per ha in Cambodia is 2.46 t/ha, while that of Thailand is 4.0 t/ha and that of Vietnam is 4.6 t/ha. Agricultural land in Cambodia, which is mostly flat, accounts for 30.7% of the national land. There are high potential land areas in agriculture (see Table 2-4). However, the irrigation rate is only about 15%. Therefore, it is required to improve agricultural infrastructure to increase the rice productivity and to promote selective expansion of agricultural production[14] for other crops (vegetables, fruits, industrial crops, and livestock).

Based on the points explained above, it is vital to improve the processing of agricultural products and promote industrial linkage between agricultural and manufacturing/distribution/service sectors[15]. In Japan, food manufacturing, food distribution, and food service are highly developed, and as Figure 2-5 shows, the share of "agriculture, forestry, and fisheries" in food expenses decrease. In 2010, the Royal Government of Cambodia (RGC) released the Policy Paper on the Promotion of Paddy Production and Rice Export (hereinafter referred to as the "Rice Policy"). The policy can be highly evaluated because it aims to integrate rice production, processing, distribution, and export into a series of segments along the value chain (VC) of rice. RGC is advised to consider applying this kind of sector-specific policy instruments/methodologies to other sectors.

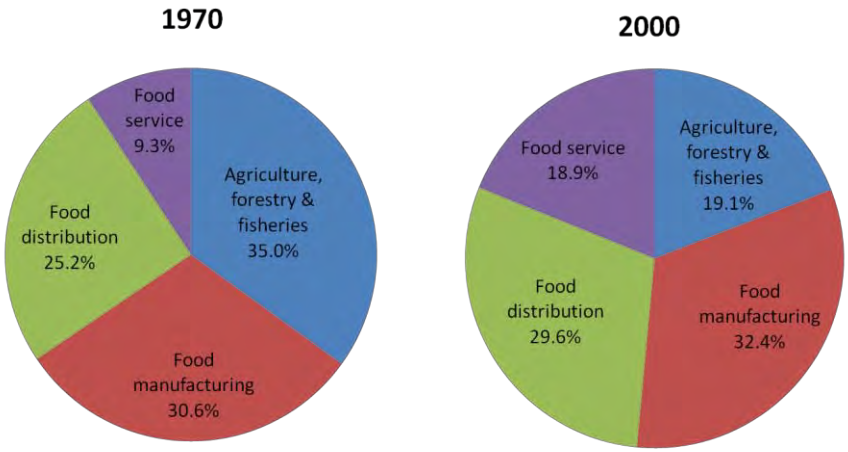
Third is the coordination of land utilization between industries and agriculture along with industrial development. It is expected that the demand of industrial land and urbanization land will

[13] Royal Kingdom of Cambodia Journal " Agriculture in Cambodia (1): Unstable but rapidly growing key industries in Cambodia"

[14] "Agricultural Basic Act" in Japan (1960)

[15] "6th Industrialization Act" (2010) was formulated in Japan and it is strengthening the 6th industrialization, which produces new value-added products by connecting primary, secondary, and tertiary industries.

increase with the economic development in Cambodia. Sprawl expansion of non-agricultural land use must be avoided even in Cambodia where the population density is low and the ratio of flat land is high. Traditional agriculture is still engaged in Cambodia and the amount of agrichemicals used in farmlands is minimal as compared to other neighboring countries. It is important to maintain and inherit this traditional agriculture in harmony with nature. Low or no agrichemical fertilizers used in farmlands produced organic and natural agri-products, and this can be a possibility of agri-business in Cambodia[16]. From such point of view, it is required to coordinate land utilization among agriculture, industry, and urbanization, to prevent environmental pollution, and to protect the ecological system.



Source: Complied by JICA Study Team based on Shinichi Syogenji. (2011). Nihon Nogyo no Shinjitsu (A Truth of Japan's Agriculture): Chikuma shobo.

Figure 2-5 Contents of Food Expenses (Japan)

2.1.3 Industrialization and Small and Medium Sized Enterprises

The supporting layers in the industrial structure in Cambodia are the micro, small, and medium sized enterprises along with agriculture. As of March 2011, the number of establishment in Cambodia totaled to 503,000, where the number of large-scale companies was 636 (0.13%) while that of companies with less than 10 employees was 493,000 (98.0%)[17]. The characteristics of these enterprises with special focus on small and medium enterprises (SMEs)[18] in the manufacturing sector are shown below.

First, the outstanding characteristic of these registered companies is the share in the commerce and service, which accounted to 48% and 45%, respectively, while that of manufacturing and

[16] Hironobu Kurata "Possibility of Agri-business in Cambodia" (Materials for Cambodia Investment Seminar by ASEAN-Japan Centre)
[17] National Institute of Statistics of Cambodia "2011 Economic Census of Cambodia"
[18] Following the definition of MINE, large scale companies are defined as the ones with over 100 employees, medium sized companies are defined as the ones with employees between 51 and 100, and micro companies are defined as the ones with employees between 1 and 10.

construction accounted only 5%. For commerce, the share of retail and general merchandise is 64% and 35%, respectively, while that of wholesale is only 1%. In case of service industry, drinking and eating services accounted to 48% and maintenance service accounted to 22%[19]. These facts represent the high import dependency of final products including consumption goods, while the domestic manufacturing sector is not yet fully developed.

Second, the "food, drink, and tobacco" accounts for a significant and large share in manufacturing. Its share in the manufacturing SMEs, employees working at SMEs, and production values of SMEs accounted to 84%, 70%, and 86%, respectively. Therefore, it can be said that Cambodian manufacturing SMEs consist of a wide variety of food processing companies. It is worth noting that the output volumes from other manufacturing sectors (e.g., paper, printing, binding, chemical products, non-metal mining products, metal processing products, and machinery) increase more than that of the food processing sector, although its weight is still small (see Table 2-5, Table 2-6, and Table 2-7).

Table 2-5 Number of SMEs in Manufacturing Sector（2004, 2010）

	2004 (a)	2010 (b)	Composition Ratio (2010)	Ratio (a/b)
Food, drink, tobacco	21,692	31,479	84.1	1.45
Textile, cloths, leather	1,608	1,485	4.0	0.88
Wood, wooden products	16	-	-	-
Paper, printing, binding	27	59	0.2	2.19
Chemical products	121	224	0.6	1.85
Non-metal mining products (excluding oil and coal products)	634	1037	2.8	1.64
Base metal products	0	-	-	-
Metal processing products, machinery	2160	2052	5.5	0.95
Other manufacturing	234	1,086	2.9	4.64
Total	26,564	37,422	100.0	1.41

Table 2-6 Number of Employees in Manufacturing SMEs（2004,2010）

	2004 (a)	2010 (b)	Composition Ratio (2010)	Ratio (a/b)
Food, drink, tobacco	49,383	93,704	70.1	1.90
Textile, cloths, leather	8,118	14,569	10.9	1.79
Wood, wooden products	97	-	-	-
Paper, printing, binding	474	1,207	0.9	2.55
Chemical products	1,018	2,000	1.5	1.96
Non-metal mining products (excluding oil and coal products)	6,702	11,570	8.7	1.73
Base metal products	0	-	-	-
Metal processing products, machinery	6,727	6,722	5.0	1.00
Other manufacturing	3,089	3,909	2.9	1.27
Total	75,608	133,681	100.0	1.77

[19] ADB(2011) "Country Partnership Strategy: Cambodia, 2011-2013" (based on Hang Chuon Naron, 2009. Cambodia Economy: Charting the Course of a Brighter Future. Phnom Penh.)

Table 2-7 Output Volume of Manufacturing SMEs（2004, 2010）

	2004 (a)	2010 (b)	Composition Ratio (2010)	Ratio (a/b)
Food, drink, tobacco	2,000,000	3,119,559	85.6	1.56
Textile, cloths, leather	9,608	260,040	0.7	2.71
Wood, wooden products	977	-	-	-
Paper, printing, binding	1,879	5,211	0.1	2.77
Chemical products	19,766	68,632	1.9	3.47
Non-metal mining products (excluding oil and coal products)	32,349	119,525	3.3	3.69
Base metal products	0	-	-	-
Metal processing products, machinery	30,354	104,965	2.9	3.46
Other manufacturing	24,331	201,501	5.5	8.28
Total (KHR million) (USD million)	2,119,264 (529.8)	3,645,433 (911.3)	100.0	1.72

Source: JICA Study Team based on CDC (2012) "Cambodia Investment Guidebook" (originally from MINE)

Third, manufacturing SMEs are concentrated in Phnom Penh Metropolitan Area including Kandal Province. Especially SMEs involved in paper, metal products, rubber, plastic products, and construction materials such as cements and tin sheets are greatly concentrated in the area. This is because garment and textile sector is over-concentrated in the area, which is also reflected by the booming demand of construction. On the contrary, the shares of food processing, wood processing, pottery, soil, and stone products are high in rural areas and most of them are micro and small sized enterprises. Currently, these enterprises formed the local industries in rural areas and its modernization is the key to industrial development in Cambodia[20].

Fourth, the linkage between manufacturing SMEs and other sectors is shallow. At first, industries in the processing sector using agricultural products and mining resources are underdeveloped. Similar to the promotion of rice processing stated in the Rice Policy, food processing development for other agricultural products is important. Also, the relation between manufacturing and tourism sector is an issue. The leakage multiplier of tourism demand in Cambodia to other countries is 0.4, which is largely significant compared with that of Thailand (0.035). Cambodia needs to establish a solid supply chain between manufacturing and tourism sector.[21] Furthermore, given that more and more manufacturers of assembly and processing sector come to Cambodia, the key question is to facilitate cooperation between foreign invested enterprises (FIEs) and domestic SMEs and to develop the supporting industries..

Fifth, technology of the manufacturing SMEs is poor and their productivity is low. It is vital to provide SMEs with access to technologies in order to bridge the technology and knowledge gaps between Cambodia and neighboring countries, to increase productivity, and to strengthen

[20] Nobuo Hirohata (2004) "Economic Development in Cambodia" Nippon Hyoron Sha Co. Ltd.
[21] General Department of Industry MINE (2010) "Concept Paper for Strategy 2015: The Strategic Framework of the General Department of Industry 2010-2015"

international competitiveness.[22]

Sixth, there is a booming capital demand among SMEs. According to JICA (2010)[23], the highest potential demand is in food manufacturing sector, and there is a large investment demand of production equipment in construction sector including concrete, plastic, and metal products. Also, the result of SMEs analyses revealed the need of investment resources in the field of agriculture related industry (rice milling, fruit juice, tea, and coffee), garment, pulps and paper products, furniture, and assembly metal products. In addition to these, it is required to financially support the SMEs.

Finally, the SMEs in Cambodia are not organized either by sector or region. Institutionalization is an important theme when it comes to sharing knowledge and information on measures among SMEs. Also, opening a path to pursue the scale of profits through cooperatives will become an issue in the future.

Regardless of the country's development stage, SMEs are the base of the national economy, a matrix from which new business emerges, and a place to open new operation. Also, the modernization of micro and small sized enterprises fills up the economic gap between small number of large scale companies and traditional sectors. It is required to promote a comprehensive SME policy as a base for self-sustaining economic development in Cambodia.

2.2 Global Value Chain and Assembly and Processing Industry

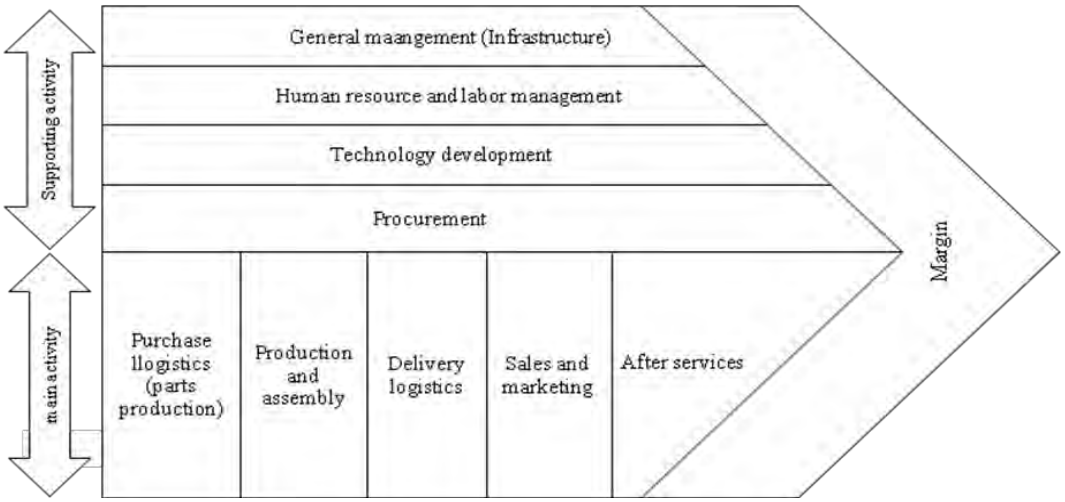
As written in the previous section, how Cambodia will incorporate itself in the network of production division in East Asia is an issue of industrialization. The assembly and processing industry in Cambodia will be the main player to penetrate in the above-mentioned network. As it is important to understand the GVC to be able to support the expansion of assembly and processing industry, this section presents the concept of GVC, reviews the role of distribution, logistics, and the supporting industries in the context of GVC, and consider the current situation in Cambodia.

2.2.1 Global Value Chain (GVC)

The Value Chain (VC) is a theory constructed by Professor M.E. Porter of Harvard University (1985). As shown below, it is a framework that divides production into main and supporting activities. Also, it shows how to organize different processes, such as purchase of parts (or production of parts from the viewpoint of suppliers), assembly and production of products and parts, distribution and logistics, and sales and marketing, in order for companies to increase their value

[22] Same as above GDI
[23] JICA (2010) "Final Report of the Preparatory Survey on the SME Two Step Loan Project in the Kingdom of Cambodia" (KRI/OPMAC)

added[24].



Source: JICA Study Team based on Porter (1985)

Figure 2-6 Concept of the GVC

GVC is an expanded idea of Professor Porter's VC theory. Companies expanding their business to foreign countries are the core of the GVC. Their headquarters are mostly located in developed countries where they take initiatives of organizing and supervising (governance) GVC. GVC is the network of components (companies) based on coordination and continues business transaction among themselves.

With focus on characteristics of core companies in governance of GVC, Gereffi (1994) categorized GVC into two types, i.e., one is buyer-driven and the other manufacturer-driven. As this section focuses on assembly and processing industries, it will observe the automotive sector, a typical type of latter GVC, which constructs a mutually complementary structure in ASEAN region as shown in Table 2-8 below.

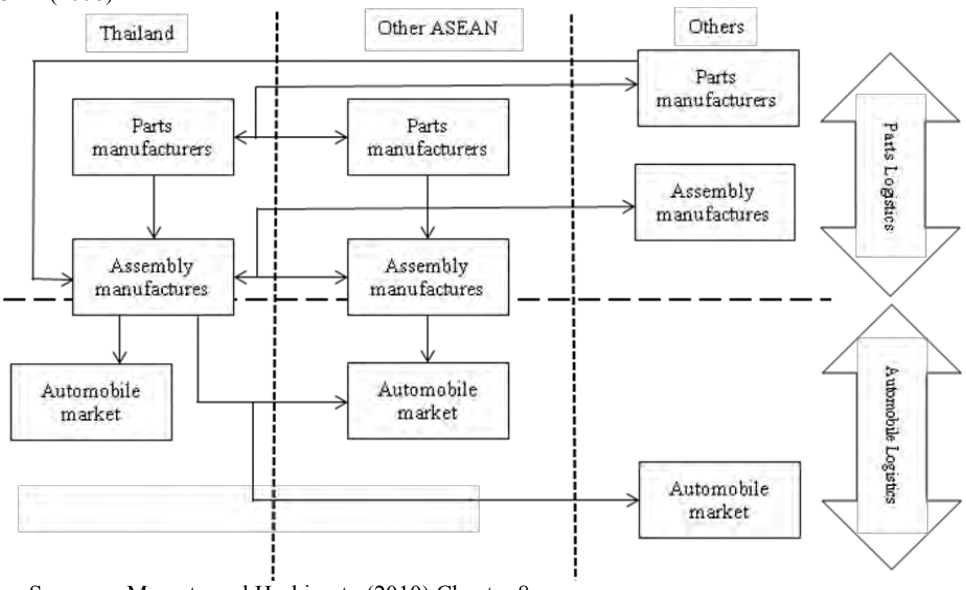
Although details of Cambodian situation is explained in Section 2.3.2, it can be claimed that the country has already been integrated into the GVC of the automotive sector as shown in the case of Company JF and Company JG, which produce precision instruments and parts (motors) and electrical and electronics (E&E) products and parts (wire harnesses).

[24] See Porter, M.E. (1985) *Competitive Advantage: Creating and Sustaining Superior Performance*, NY: Free Press

Table 2-8 Mutually Complementary Structure of Automobile Parts in ASEAN Region

	Thailand	Malaysia	Indonesia	Philippines
Toyota	・Car parts ・Diesel engine ・Steering column	・Steering gear ・Suspension ball joint	・Gasoline engine ・CKD parts for multipurpose vehicles	・Gasoline engine ・Constant velocity joints ・Molding material processing
Honda	・Plastic parts ・Press, Outfitting parts ・Meter ・Cylinder block	・Dashboard ・Constant velocity joints ・Vehicle bumpers	・Engine parts ・Automatic transmission ・Parts for suspension	・Manual transmission ・Inlet and exhaust valves ・Pedals
Nissan	・Press processing parts ・Pump ・Camshaft	・Steering gear ・Suspension	・Meter	

Source: Ohki (2006)[25]



Source: Memoto and Hashimoto (2010) Chapter 8

Figure 2-7 Logistics of Completed Cars and Parts from Thailand

Cambodia was integrated into the GVC of the garment and footwear sectors until a few years ago and there were not many interlinkages of these sectors with other countries. In recent years, however, several foreign manufacturers of other sectors (e.g. precision instruments/ parts and E&E parts) have begun to make an FDI in Cambodia. Most of the foreign manufacturers that invest in this country have their foreign affiliate company (and the production base) in Thailand.[26] The Thai affiliate

[25]See Hiromi, Ohki (2006) "Progress of Production, Research, and Development Conducted by Japanese Companies in ASEAN (Case of Automobiles in Thailand)" JETRO.
[26] Please refer to 2.3.2 o this Chapter.

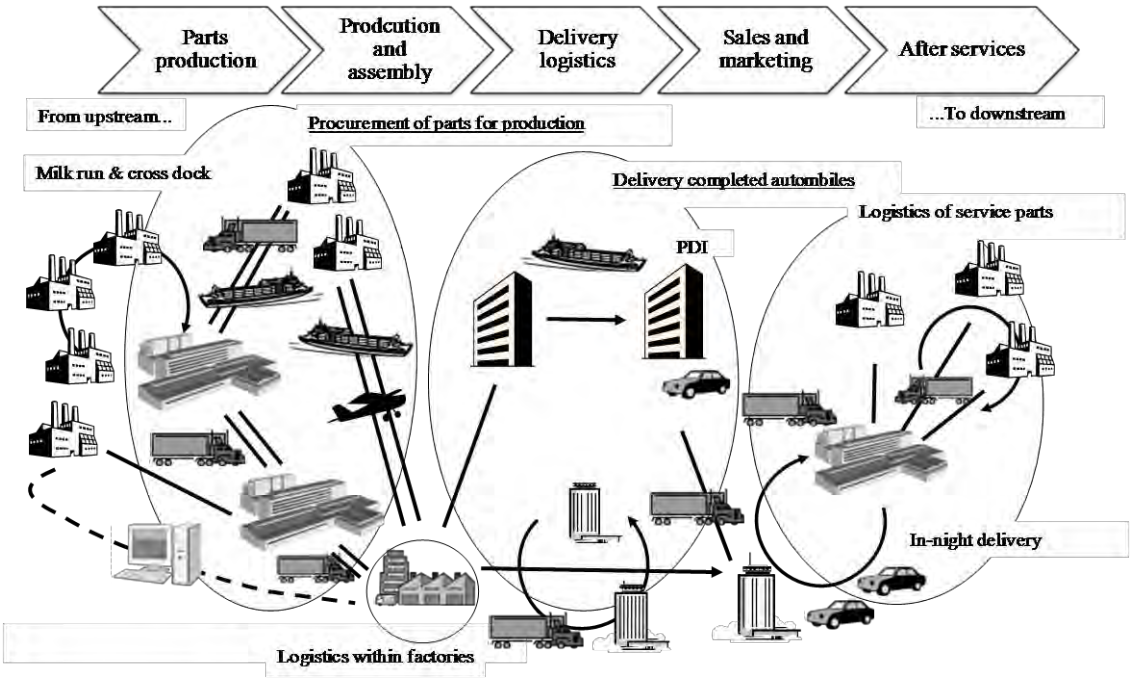
company has a central role in the GVCs of GMS or ASEAN and it exports raw materials and parts to their Cambodian affiliate firm. The Cambodian firm exports finished products to Japan, Thailand and other destinations.

2.2.2 Roles of Distribution and Logistics in GVC

Considering its low birthrate and aging population, the Japanese domestic market may not be expanded in the future, and the market in newly emerging countries is expected to grow, Japanese manufacturers accelerate its business expansion all over the world. It is vital for them to build a strategy for GVC, which will include decision making on market, production, and location. Based on these, this section shows private companies' various activities related to efficiency in distribution and logistics, using GVC in automotive industry as an example. This study also considers the role of government in promoting efficiency.

(1) Momentum of Overseas Production in the Automotive Industry

Improvement in the logistics/distribution network was mainly for selling completed vehicles in foreign markets up to the 1980s when the momentum of overseas production of vehicles was promoted because Japan was exporting completed vehicles. However, logistics is becoming complicated with the rapid increase in overseas production due to the increase in export of automobile parts from Japan, import and export of parts and completed vehicles between countries, and various custom procedures applied for these import and export. Distribution and logistics played an important role in all process from (a) to (e) as shown in the figure below. Distribution and logistics for production and procurement of parts and material flows within factories can be an example of upstream industry in the GVC and transporting completed vehicles to customers and delivery of parts for maintenance can be an example of downstream industry in the GVC. Therefore, efficiency in global logistics is one of the most essential issues from the viewpoint of governance to the overall GVC.



Source: Nemoto and Hashimoto (2010) Chapter 12

Figure 2-8 Roles of Distribution System in Vehicle and Motorcycle Production in GVC

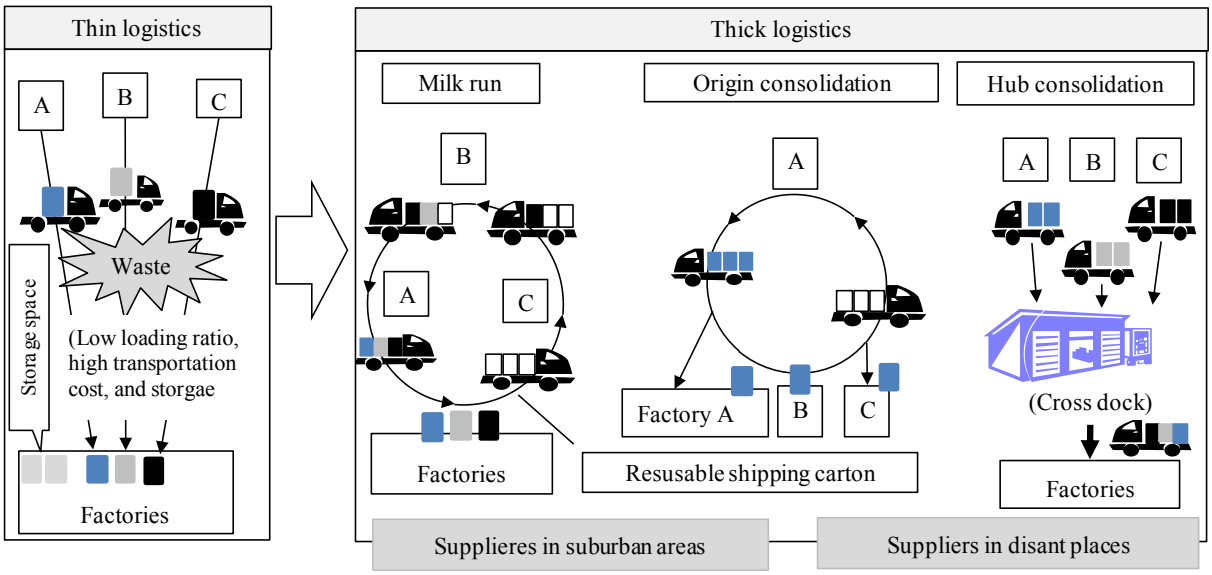
The countries to which FIEs expanded need to transfer production and logistics/distribution systems as well as production factories and lines. In other words, it is required to localize the concepts and systems of production and logistics/distribution implemented in Japan quickly. The important point is to maintain the basic concepts of production and distribution systems used in Japan and to localize and adjust them in production locations at the same time because there are complex combination attributed not only to internal factors, such as production items and amounts, but also to various external factors, i.e., locations of suppliers and supporting industries, situation of related legal systems, levels of transport infrastructure, and business customs.

(2) Logistics Concepts Developed by Toyota

This section grasps the logistics concepts developed by Toyota. The basic concept of supply chain management (SCM) in Toyota is to "produce the cars requested by customers with high quality at reasonable price, and deliver them in the earliest possible date". The Toyota Production System (TPS), which is consisted of "just in time (JIT)" and "automation", is the fundamental system to realize the said concept.

Nemoto and Hashimoto (2010) explained the three ideal logistics in TPS, namely, 1) flexible logistics/distribution to demand fluctuation, 2) shortest lead time, and 3) distribution systems with minimum environmental burden. In order to deal with the logistics, Toyota has attempted to reduce lead time and inventories. Specifically, the company aims to implement JIT distribution by many deliveries of small lots and to introduce trucks with large carrying capacity. A way to achieve the goals is to gather "thin distribution" lines and create a "thick distribution" line. In order to change

"thin logistics/distribution" lines with many deliveries of small lots to a "thick distribution" line, (i) milk run, (ii) consolidated transport at origin, and (iii) consolidated transport at transit (cross dock approach) were utilized. Many Toyota factories add function of a distribution center to transit places (cross dock), and these factories became international procurement offices (IPO)[27].

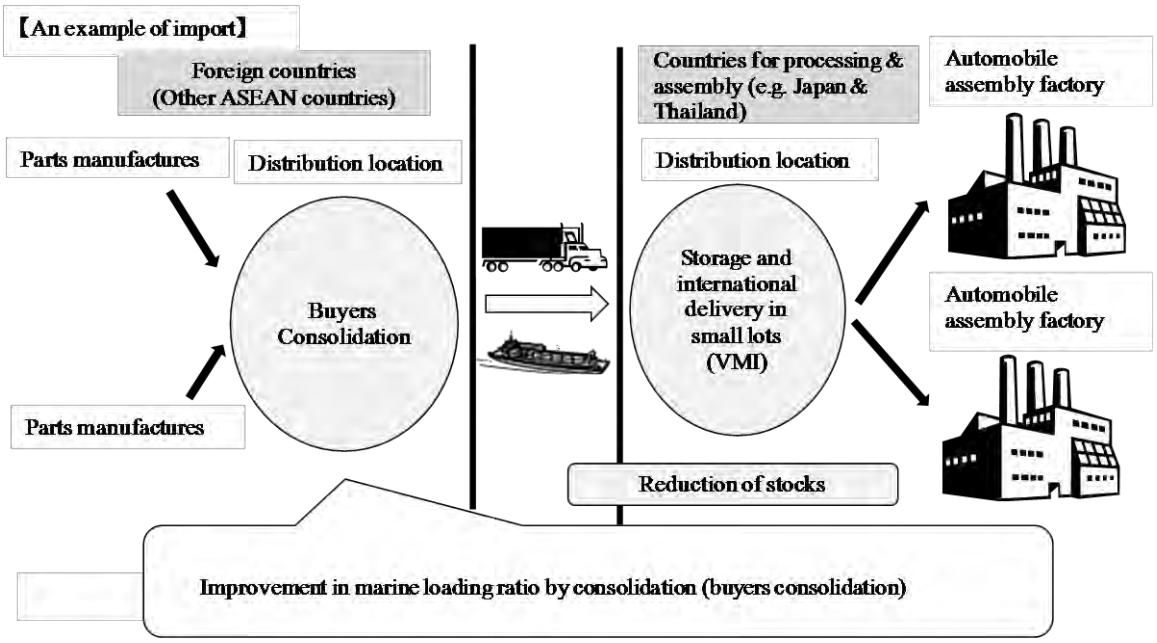


Source: JICA Study Team based on Takamatsu (2009a)

Figure 2-9 Cases of Approaches to Efficient Distribution and Logistics

Recently, FTA and EPA eliminated import tax for parts of automobiles, which requires manufacturing companies to establish high quality logistics with low prices and the companies must focus on quality, cost, delivery, and service (QCDS). The following figure shows an image of export transportation from ASEAN countries to Japan and/or Thailand by sea or inland. Each manufacturing company steps up various efforts in order to reduce logistics/distribution costs. Other than milk run and cross dock explained above, the companies improve the efficiency of carrying cargo and ocean transportation by combining buyers consolidation and vendor managed inventory (VMI).

[27] This system was introduced when horizontal fragmentation system was established in the ASEAN. Multiple locations were set within the ASEAN, and Operational Headquarter (OHQ) were further established in order to control the overall ASEAN level. Not only OHQ responses to issues on payment management and exchange risks due to existence of multiple currencies in the area but also there are merits of cost reduction by procuring parts through OHQ.



Source: Nemoto and Hashimoto (2010) Chapter 11

Figure 2-10 Image Showing Efficiency of International Ocean and Land Transportation

(3) Current Situation of Logistics Companies in Cambodia

What kind of issues does Cambodia face in order to establish a logistics/ distribution system which supports TPS? Based on the interviews conducted with the Japanese companies implemented in July and August 2012, current situations of foreign and local logistics/ distribution companies in Cambodia are as follows:

- Cambodia has only about four to five companies which can serve as agencies in a distribution sector (as of August 2012).
- Because both the number of suppliers and the amount of cargo are still small in Cambodia, the country has not reached the level of attempting approaches such as milk run.

From the QCDS point of view, many issues need to be solved. For example, driver's attitude and manners are poor and many trucks are old. Verbal instructions have to be given to affiliated distribution companies to request improvements on driver's behaviors. It has to start with the very basics, like requesting drivers to wear appropriate shoes and cloths, especially when a client is a Japanese firm.

A Japanese distribution company asks a local truck company (owned by a Singaporean) for custom business and warehouse use. Though the number of warehouses is still small and needs to be increased, there are some ready to be used.

Given with the small amount of cargo, the distribution cost in Cambodia is high. If the number of Japanese companies and infrastructure increases, such as the construction of Neak Loeung Bridge, the amount of cargo increases, which will gradually lead to the reduction of distribution costs.

The Ministry of Commerce introduced tariff in July 2012 and the reduction of unofficial costs is

expected as future custom business that the tariff will follow.

2.2.3 Supporting Industries

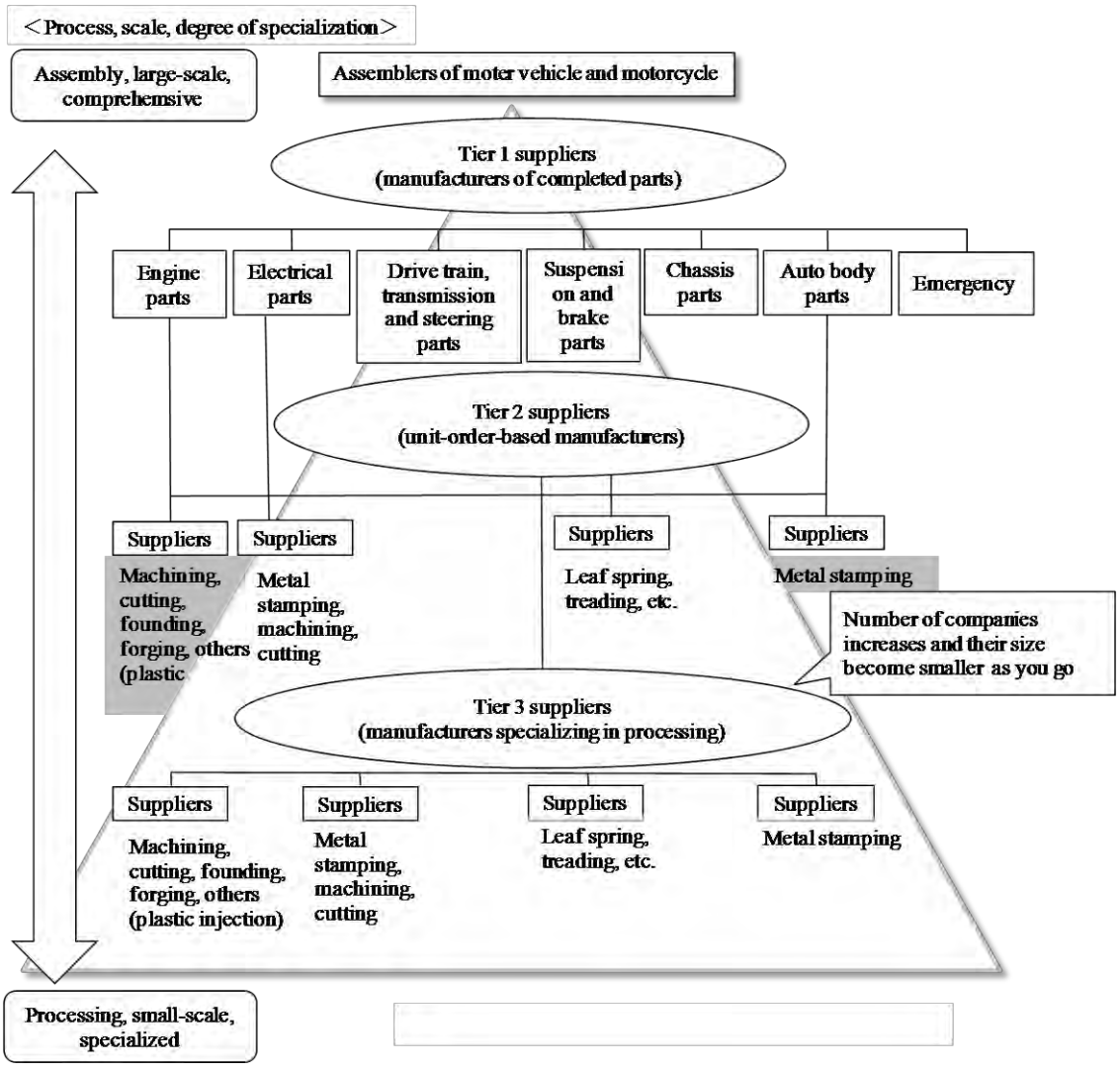
(1) Roles of Supporting Industries

The supporting industries provides various materials and parts for manufacturing industrial products such as automobiles (vehicles), motorcycles, electrical, and electronics (E&E) products. The industry deals with "Parts production" and "Production and assembly" of the figure below.

Figure 2-11 Concept of GVC

In the case of automobile and motorcycle industries, automobile manufacturing companies finally produce an automobile, using more than 20,000 to 30,000 materials and parts produced at various related suppliers at first-, second-, and third-tier levels.

Various materials and parts, including metals, plastics, glass, and rubber, are required to produce an automobile and/or motorcycles, and various techniques, including cutting, casting, forging, heat treatment, welding, painting, and press molding, are required to produce these parts. Therefore, cooperation from sectors is absolutely necessary to finally produce automobiles and motorcycles.



Source: JICA Study Team based on Baba (2005), Chapter 1

Figure 2-12 Concept of Supplier System in Automobile and Motorcycle Industries

It has been discussed that the development of supporting industries is vital for the latecomer economies of East Asia to improve their industrial competitiveness, and some ASEAN countries have formulated measures to develop supporting industries. For example, Indonesia implemented "Foster Parent Programme" in the early 1980s while Malaysia started "Malaysian Sub-contracting Exchange Program" in 1986 and "Vendor Development Programme" in the 1990s. Also, the Board of Investment (BOI) in Thailand has mediated between assembly manufacturing companies and parts suppliers since 1992.

(2) Supporting Industries and Forward/Backward Linkage Effects

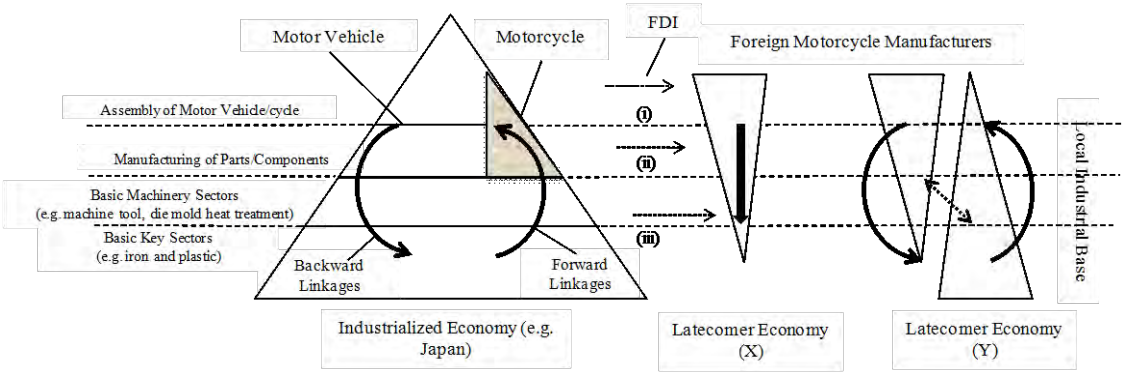
Using a motorcycle industry as an example, this section discusses roles of supporting industries in industrial development. By looking at the motorcycle industry in Japan, Taiwan, China, India, and ASEAN countries, it is revealed that domestic related industries, which mean depth and diversification of supporting industries, are closely related in terms of competitiveness of the

automotive and motorcycle sectors themselves. It is not coincidental that local motorcycle manufacturing companies, which became competitive to Japanese products, emerged in Taiwan, China, and India, where local companies strengthened the foundation of supporting industries.

It is considered that the circulation of strengthening forward and backward linkage effects to each other expands the size of each industrial sector and diversifies its types in a country within a region. The circulation will be stimulated not only by investment attraction through direct business transaction between upstream and downstream sectors, but also by externalities including economies of scale (increasing returns), increase in demand of skilled labor, and technological spillover. This process will cause large dimension, specialization, diversification, and concentration of industry (and labor) from other areas.

When (a) the automobile and motorcycle sectors utilize resources which were generated by other industrial sectors is compared to (b) the industry which increases massive demand on materials and parts such as metals and plastics and stimulates technological development of such sectors, Japan, Taiwan, China, and India fall into category (a), while ASEAN countries with vulnerable industrial foundation falls into category (b). Category (a) shows “forward linkage effects”, which promote development of downstream industry and other industries by utilizing existing industrial resources as inputs for new activities. On the other hand, Category (b) shows “backward linkage effects”, which develops middle and upstream sectors for intermediate products and materials by the inputs induced by the increase in demand on final products and downstream industries.

The following Figure 2-13 illustrates the relationship between the motorcycle sector and industrial foundation in latecomer economies. First, FDI (showed as (i) below) encourages Japanese motorcycle manufacturers to expand their business to latecomer economies. However, because local parts companies (manufacturing, processing, and assembling metals, plastics, and rubber), basic machine industry supporting them (molding, heat treatment, and machine tools), and base industry further supporting them (material industry such as iron and steel and soft industry such as industrial design) are very vulnerable in such countries, Japanese parts companies and companies related to base machine industry need to be attracted by FDI as represented by (ii) and (iii) below, respectively. In case of Thailand, inflow of (i), (ii), and (iii) were stimulated in the 1960s, 1980s, and 1990s, respectively. Except the fact that the number of (iii) is less than that of (ii) because of a large number of SMEs for (iii) in Japan and high dependency of skilled techniques based on experiences, such history in Thailand and Indonesia resulted in an increase in the number of local specialized companies in the field of basic machinery sectors.



Source: JICA Study Team based on Chapter 1 of Sato and Ohara (2006)

Figure 2-13 Relation between Motorcycle Industry and Foundation of Supporting Industries

As shown in the above figure, it is expected that motorcycle industry in latecomer X (e.g., Thailand, Vietnam, and Indonesia) produces backward linkage effects and develop other industries. However, the effects are relatively weak because the number of local companies in downstream industry is small. Also, forward linkage effects will be limited because there are no or only a few local motorcycle manufacturing companies. As a result, the circulation of forward and backward linkage effects may be limited.

On the other hand, Sato and Ohara (2006) showed that many local companies, which acquired technologies in Japan through communication with Japanese companies for parts and basic machines, have emerged as latecomer economy Y (e.g., Taiwan) in the 1970s. It is considered that such companies intensified forward/backward linkage effects, which further strengthens the connection of both effects.

(3) Definition of Supporting Industries

In line with the preceding discussions, a narrow definition of supporting industries is "industries which supply parts and materials for final products,, which describes all the companies below the first-tier related companies (manufacturing sector for final products) in the suppliers system mentioned above.

For the broader definition of supporting industries, Porter (1990) clearly indicated the importance of supporting industries from the viewpoint of national industrial competitiveness by using the word "related/supporting industry" or "suppliers."[28] Porter (1990) defined related/supporting industries as industries which coordinate the activities in VC and/or are in charge of part of them or ones which manufacture complementary products. Also, it is argued that one of the determinants of national industrial competitiveness is the existence of internationally competitive related/ supporting industries or suppliers in a nation and lists the industries as one of the four factors of the diamond model. Related/supporting industries include not only suppliers of parts but also industry

[28] Porter, Michael.E. (1990) *The Competitive Advantage of Nations*, NY: Free Press

organization, research and development (R&D) institutes, and transport companies[29]. The three other factors of the diamond model are "strategies and structures of a company and competition against rivals", "factor conditions", and "demand conditions."

On the basis of the narrow and broad definitions explained above and current industrial situation in Cambodia, it seems that the target supporting industries in this study should be the industrial group of narrow-defined industries and packaging sector. Also, based on the discussion of forward/backward linkage effects, this study defines supporting industries as "industries which supply parts (including packaging materials) and play a role of intensifying forward/backward linkage effects in industries in Cambodia".[30]

(4) Current Situation of Supporting Industries in Cambodia[31]

This section discusses current situations of the three sectors (packaging, plastic products, and screws/nuts/bolts manufacturing) which have potentials to become supporting industries in Cambodia. This section also shows the demand of such products and points out future possibility as the country has few narrowly-defined supporting industries.

1) Packaging

Packaging can be part of the supporting industry for all the companies regardless of size. High quality packaging will be needed especially for large-scale companies.

The packaging company in Cambodia can be categorized into four as presented below. Some companies may be included in more than one category.

- Category 1: Paper industry, which produces package paper from wooden chips and recycled paper. There are four or five companies in and around Phnom Penh which can be considered as business partners to large scale companies.
- Category 2: Corrugators, which produces packaging boxes by mixing recycled paper supplied by local paper factories and imported paper. Some corrugators use only recycled paper to produce boxes whose quality is low. There are seven companies in and around Phnom Penh which can be considered as business partners to large-scale companies.
- Category 3: Converters, which shape boxes into different forms and sizes. There are more than 20 companies in and around Phnom Penh which can be considered as business partners to large

[29] For example, see Chapter 2 of Yoko Ishikura, Masahisa Fujita, Noboru Maeda, Kazuyori Kanai, and Akira Yamasaki (2003) "Industrial Cluster Strategy in Japan" (Yuhikaku)

[30] Since foreign manufacturers of corrugated box have provided their products for FIEs in Cambodia for the past several years, this Report's definition of the "supporting industry" includes corrugated box sector as well as narrow-defined supporting industry,

[31] Based on the interview conducted in August 2012 by the JICA Study Team for package sector and by EIC for plastic products and screws/nuts/bolts sector.

scale companies.

- Category 4: Printing companies, which purchase packaging boxes and print information on the sides of the boxes. There are nine companies in and around Phnom Penh, which can be considered as business partners to large scale companies.

Table 2-9 Categories of Packaging Industry in Cambodia

No	Categories	Number of Operating Firms
1	Mills	4-5
2	Corrugators	7
3	Converters	+20
4	Printing house	9

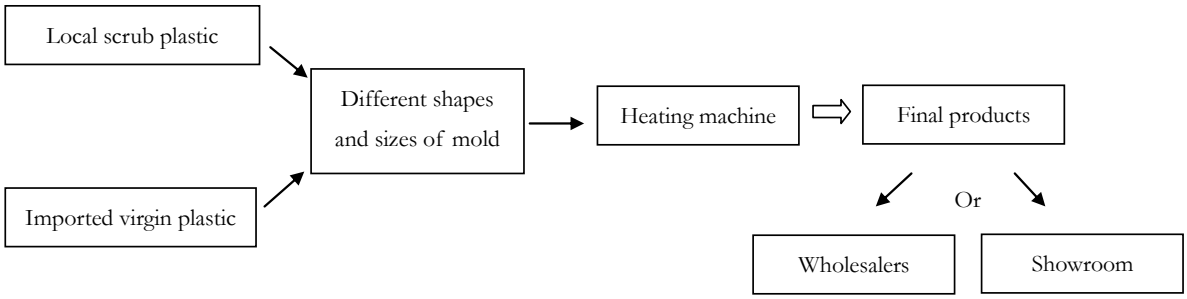
Source: JICA Study Team (EIC) based on MIME (1994-2011) and EIC survey

Most companies are located in Phnom Penh and some are in Kandal Province. Corrugators in Cambodia are either 100% FIEs or partly invested by them. Although packaging products are imported from the neighboring countries like Vietnam, many companies started to use domestic products as their quality has been improving.

2) Manufacturing of plastic products

There are different kinds of plastic products such as water bottle, plastic hanger, plastic bag, and plastic tanks. With the information that there is a demand on plastic products to supply for motorcycle industry in the country, this study analyzed only the manufacturing of plastic tanks. This is because manufacturing of plastic tanks has the highest potential (in terms of capacity) to produce plastic body parts of motorcycle. There are only five manufacturers of plastic tanks. Two were interviewed for this study. One company manufactures small type of plastic tanks i.e., water cooler and plastic bottle for storing beverage (Company CA). The other one is a big type of plastic tanks i.e. plastic container of water use for household and/or firms with storage of more than 1000 liters (Company CB).

The important point for this type of manufacturing is the different shapes and sizes of mold for various types of plastic tanks. This means one type of plastic tanks requires a certain shape and size of mold. Molds are ordered and purchased mostly from Taiwan and China. Capital required on mold is high according to interviewees. For the company CA, competition with imported products from Vietnam and Thailand is the most challenging factor. However, it is not the case for company CB.



Source: JICA Study Team (EIC)

Figure 2-14 Value Chain of Manufacturing of Plastic Tanks

3) Manufacturing of screws/nuts/bolts

All screws/nuts/bolts in Cambodian markets are imported especially from and via the neighboring countries. There are only two manufacturing firms of screws/nuts/bolts, which are located in Mahattan SEZ of Svay Rieng Province; one of which is still located in Vietnam and may start operation in Mahattan SEZ in the near future.

However, their products are for export only. The demand for screws/nuts/bolts in the domestic market is high since these are use by all sizes of firms and for various industry types. Screws/nuts/bolts are used as accessories for machinery and electronics products.

4) Potential of Supporting Industries for Large-Scale Companies in Cambodia

Potential for packaging sector

- Corrugators and converters have already supplied large-scale companies.
- An interviewee representing the corrugators and converters has claimed that the company has established another factory in Sihanoukville to provide their products for FIEs in the province as well as the neighboring provinces (i.e., Kampot and Koh Kong).
- Potential for packaging supporting industry is high.

Potential for manufacturing of plastic products

- Local firms have expressed their intention to manufacture any kind of plastic products for major firms as required.
- In terms of capital and technology to produce plastic products such as plastic bodies of motorbikes, local firms also claimed to be capable of providing.
- It is, however, under the condition that the demand is high enough meaning the order has to be at least 10,000 units per year.

Potential for manufacturing of screws/bolts/nuts

- Demand of screws/bolts/nuts in the country is high. They are used as construction materials as well as accessories for machinery and other products.
- The existing manufacturing firms of screws/bolts/nuts (in Mahattan SEZ) show clearly that such manufacturing is possible to be operated for the domestic market.

- Assuming that the current investors have the intention to supply for local consumption, their potential in terms of capital and technology to produce is not questionable.

Conclusion

- Since the above three sectors have high potential to develop, it is vital to support them by implementing industrial policies (or SME development policies).

It is not exaggerating that quality supporting industries are necessary condition for FDI promotion and, furthermore, other supporting industries other than the three sectors can be promoted by policy FDI inducement.

Table 2-10 Current Status of Supporting Industries and Potential to Supply for Large Scale Companies

Support Industries	Current Status	Potential		
		Intention	Capital	Technology
Packaging	Local consumption (major firms included)	Yes	Yes	Yes
Manufacturing of plastic tanks	Local consumption	Yes	Yes	Yes
Manufacturing of screws/nuts/bolts	Exporting	Unknown	Yes(*)	Yes(*)

Note: (*) Assumption
Source: JICA Study Team (EIC)

2.3 Current Situation and Issues of the Industrial Sectors

2.3.1 Structure of the Industrial Sectors

Before analyzing major manufacturing sectors, this section reviews the overall manufacturing sector in Cambodia using statistics.

The potential target sectors for industrial policies in Cambodia have been identified in Rectangular Strategy, Diversifying the Cambodian Economy by the Suppreme National Economic Council (SNEC). SNEC tries to clearly point out the sectors which should be prioritized in industrial policies. This study does not intend to directly specify the prioritized sectors. For the sake of SNEC's future work, however, organizing objective data for the prioritization seems useful. The prioritized industrial sectors should be defined with comprehensive consideration of industrial situation, trends of FDI, and competitiveness of industries.

(1) Sectors that Serve as Present Driving Force of Cambodia's Economy

Based on the four-digit International Standard Industrial Classification (ISIC) Code, 122 subjected manufacturing sectors will be narrowed down according to their ranks on value of production (sales

scale), value of value-added (sales – expenses), and number of establishments.

(2) Nomination of Candidate Sectors

1) Selection by ISIC code

Based on the Economic Census of Cambodia 2011, Table 2-11 shows re-order of sector ranking on sales volume plotted by breakdown of manufacturing sector to four digits of ISIC code. There are 27 sectors with sales value over USD 10 million/annum of which six sectors with USD 100 million/annum. These six sectors (apparel, footwear, plastic products, food products, grain mill products, and animal feeds) should be nominated as candidates for priority.

As the top 27 sectors fall into either top 30 or bottom ten if they are categorized by the value-added, the number of candidate sectors, which are either with sales value over USD 10 million/annum or with value-added over USD 1 million/annum (about top 30), becomes 37 out of 112 sectors. Although this is rather an automatic selection, it is important to select sectors according to size under the assumption that they will be focused in industrial policies.

These 37 candidate sectors are considered to be priority sector in Cambodia. If there are less prioritized sectors with potential to grow or sectors with policy intention, some of them need to be included as candidates.

Table 2-11 Top 27 Sectors by Sales Volume by ISIC Code

ISIC Code	Class of ISIC Rev.4 1)	Value of Production (USD)
1410	Manufacture of wearing aparel, except fur apparel	50,842,688,867
1520	Manufacture of footwear	3,973,826,464
2220	Manufacture of plastics products	1,311,502,032
1079	Manufacture of other food products n.e.c.	259,756,424
1061	Manufacture of grain mill products	138,866,061
1080	Manufacture of prepared animal feeds	117,956,211
1103	Manufacture of malt liquors and malt	97,134,881
1430	Manufacture of knitted and crocheted apparel	86,457,288
1312	Weaving of textiles	73,092,652
2013	Manufacture of plastics and synthetic rubber in primary forms	71,619,381
1200	Manufacture of tabacco products	50,714,497
1104	Manufacture of soft drinks; production of mineral waters and other bottled waters	48,982,029
3092	Manufacture of bicycles and invalid carriages	45,153,196
2511	Manufacture of structural metal products	38,195,407
1072	Manufacture of sugar	37,309,078
2392	Manufacture of clay building materials	26,609,272
3211	Manufacture of jewellery and related articles	24,077,505
1702	Manufacture of corrugated paper and paperboard and of containers of paper and paperboard	23,554,536
1010	Processing and preserving of meat	19,921,285
2599	Manufacture of other fabricated metal products n.e.c.	17,136,559
1071	Manufacture of bakery products	16,969,186
2395	Manufacture of articles of concrete, cement and plaster	15,113,477
3100	Manufacture of furniture	14,429,664
1101	Distilling, rectifying and blending of spirits	14,113,079
2592	Treatment and coating of metals; machining	11,751,544
1062	Manufacture of starches and starch products	11,366,086
1811	Printing	10,595,408

Source: NIS (2011)[32]

Nominated sectors are categorized into six groups by using three indexes (sales volume, value-added, and number of establishments). The first group is composed of eight sectors in which sales volume is more than USD ten million, value-added is more than USD one million, or the number of establishments is more than 1000. The second group is composed of 11 sectors (e.g. footwear and plastic products) with less than 1000 establishments. The third group is the sector with negative value added and do not fall into the second group. The fourth group is the sector with small number of establishments and has negative value-added. The fifth group is the sector with more than USD one million sales volume and both the amounts of value-added and number of establishments are large. The sixth group is the sector with more than USD one million sales volume and large amount of value added, but with small number of establishments.

[32] NIS (2011) "Economic Census of Cambodia 2011"

Table 2-12 Breakdown of the 37 Sectors

Category	#	ISIC Code	Class of ISIC rev.4.1	Value of Sales (Production) 1000 USD	Value of Sales (per establishmen) 1000USD	Value of Sales - Expenses (Value-added) 1000 USD	Number of Establishment
Group 1	1	1061	Manufacture of grain mill products	138,866	7.1	39,605	19,554
	2	1312	Weaving of textiles	73,093	8.6	5,206	8,471
	3	2511	Manufacture of structural metal products	38,195	12.7	11,182	3,015
	4	2392	Manufacture of clay building materials	26,609	28.2	6,424	945
	5	3211	Manufacture of jewellery and related articles	24,078	13.1	5,202	1,844
	6	1071	Manufacture of bakery products	16,969	11.2	4,359	1,515
	7	2395	Manufacture of articles of concrete, cement and plaster	15,113	9.8	4,518	1,546
	8	1101	Distilling, rectifying and blending of spirits	14,113	3.9	3,514	3,657
Group 2	9	1520	Manufacture of footwear	3,973,826	36,457.1	3,746,686	109
	10	2220	Manufacture of plastics products	1,311,502	31,226.2	1,307,125	42
	11	1080	Manufacture of prepared animal feeds	117,956	8,425.4	11,057	14
	12	1103	Manufacture of malt liquors and malt	97,135	3,736.0	14,424	26
	13	1200	Manufacture of tabacco products	50,714	1,449.0	827	35
	14	1104	Manufacture of soft drinks; production of mineral waters and other bottled waters	48,982	331.0	1,579	148
	15	3092	Manufacture of bicycles and invalid carriages	45,153	7,525.5	17,790	6
	16	1702	Manufacture of corrugated paper and paperboard and of containers of paper and paperboard	23,555	1,570.3	10,973	15
	17	1010	Processing and preserving of meat	19,921	59.5	3,342	335
	18	2599	Manufacture of other fabricated metal products n.e.c.	17,137	129.8	1,251	132
	19	2592	Treatment and coating of metals; machining	11,752	16.2	3,004	727
Group 3	20	1410	Manufacture of wearing aparel, except fur apparel	50,842,689	3,218.3	-1,646,348	15,798
	21	1072	Manufacture of sugar	37,309	6.1	-6,669	6,152
	22	3100	Manufacture of furniture	14,430	13.6	-1,471	1,063
Group 4	23	1079	Manufacture of other food products n.e.c.	259,756	3,206.9	-27,192	81
	24	1430	Manufacture of knitted and crocheted apparel	86,457	298.1	-21,470	290
	25	2013	Manufacture of plastics and synthetic rubber in primary forms	71,619	1,746.8	-54,518	41
	26	1062	Manufacture of starches and starch products	11,366	44.6	-1,735	255
	27	1811	Printing	10,595	50.9	-3,940	208
Group 5	28	1030	Processing and preserving of fruit and vegetables	8,797	5.6	1,952	1,583
Group 6	29	1074	Manufacture of macaroni, noodles, couscous and similar farinaceous products	8,463	9.1	2,397	926
	30	3312	Repair of machinery	8,384	10.5	2,792	799
	31	1621	Manufacture of veneer sheets and wood-based panels	7,930	38.7	1,680	205
	32	1610	Sawmilling and planing of wood	6,268	27.6	2,610	227
	33	3313	Repair of electronic and optical equipment	6,249	135.8	1,891	46
	34	1622	Manufacture of builders' carpentry and joinery	4,903	7.5	1,193	656
	35	2029	Manufacture of other chemical products n.e.c.	4,102	47.1	1,342	87
	36	1512	Manufacture of luggage, handbags and the like, saddlery and harness	3,934	24.6	1,788	160
	37	2593	Manufacture of cutlery, hand tools and general hardware	3,777	5.8	1,301	646

Source: NIS (2011)

2) Sectors that are closely related with major FDI projects milestone

Based on QIP approval, constant or more volume of some USD 100 million/annum is recognized for garment sector. Volume in “other industry”, which presumably resulted by Japanese large scale investment project in electronics parts manufacturing sector by Minebea, is recently increasing. The comparison between the recent investment trends and identified sectors in Table 3-2, however, reveals that the sectors directly related to FDI is not reflected on the nominated sectors, except for the garment sector.

The study reveals that FIEs are not much interested in the procurement of parts and/or raw materials domestically and the companies keep importing products from neighboring countries. Only interest for possible domestic procurement, so far, is on the procurement of products related to

packaging materials and/or products related to daily factory operations, such as palettes of assembly lines and consumable supply for production equipment. There is a possibility for technology progress to develop them with higher value-added as these products are necessary not only for a certain sector but for many sectors.

Also, FIEs started to consider procuring simple plastic products domestically. In Vietnam and Thailand, the same development was observed at an early stage of foreign direct investment booming. Some suppliers and distributors from abroad entered in these countries, but it was confirmed that the technology transfer emerged even in such a case. Although Cambodia still have issues on technology transfer, production and quality management, and standardization, it is vital to consider the possibility of the development of such sectors. It is also noted that this sector, as well as packaging, has the characteristic that can produce versatile parts products for variety of sectors.

Manufacturing of corrugated paper (ISIC1702）and plastic products (ISIC 2220）should also be considered as notable sectors from the viewpoint of industrial policy formation.

2.3.2 Current Situations and Critical Issues of Key Industrial Sectors

This section examines the six following sectors: (1) garment, (2) footwear, (3) motorcycle, (4) precision instruments/ parts, (5) E&E parts, and (6) agricultural and food processing.

In line with the results of the interviews, finally, this section attempts to categorize the five GVCs of the above-stated sectors according to their characteristics.

(1) Garment Sector

1) Overview

The garment sector has entrenched in the Cambodian economy since 1990 due to the increased inflow of FDI. It is the major manufacturing sector and contributes substantially to industrial development. Export quota was apportioned to Cambodia for the U.S. market until the Multi Fiber Agreement (MFA) lost its validity in 2004, although there were preferential measures to give bonus quota according to the result of ILO's survey on the working environment. Since "Everything but Arms" (EBA) for the EU market was applied to Cambodia, there was no quota for the country, although there were limitations on the use of EBA because of the rule of origin (ROO). No quota has been allotted in general since 2005. Since a safeguard is often used against import restrictions after the invalidation of MFA, many garment manufacturers have shifted their production to Cambodia.

This sector is one of key drivers of the annual economic growth over the past decades. The textile and garment sector shared about 17.4% of the Cambodia's GDP in 2011 (NIS, 2012).

Quota-free market access is one of the main reasons for expansion of garment factories in the economy. Many firms of China, Hong Kong, Taiwan, South Korea, and Singapore have relocated

their manufacturing to Cambodia given this advantage as Cambodia can enjoy preferential treatment from the U.S. and EU markets. Moreover, low wages and abundance of low-skilled labors are also a crucial rationale for firms to locate their factories in Cambodia.

100% foreign-owned firms have continuously been approved since 1994 when the Law on Investment came into enforcement. The majority of garment factories in Cambodia are foreign-owned. Based on data provided by the Garment Manufacturers Association of Cambodia (GMAC), only 7% or 26 factories out of the total factories in Cambodia were owned by the Cambodians in 2008, but this number declined to only 6% or 19 factories in 2011.

Table 2-13 Number of Garment Factories in 2008 and 2011

Country of Origin	2008		2011	
	N	Share (%)	N	Share (%)
Taiwan	86	24	86	28
China	65	18	52	17
Hong Kong	68	19	49	16
Singapore	13	4	11	4
Malaysia	18	5	13	4
Cambodia	26	7	19	6
Korea	36	10	42	14
Others	43	12	37	12
Total	**355**	**100**	**309**	**100**

Source JICA Study Team (EIC) [based on GMAC (2008, 2011)]

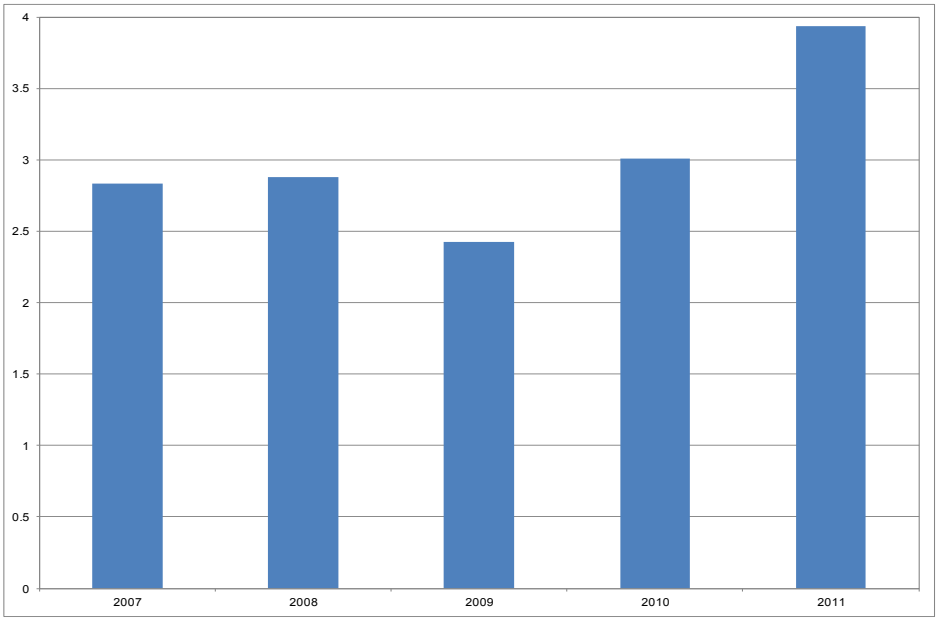
The number of garment factories has increased dramatically from about 20 in 1995 to more than 300 in 2008, and created 327,100 directly employed Cambodians and approximately 270,000 indirect jobs in other sectors such as transportation and trade (Naoru, Goto, &Thoburn, 2009). Although 450 garment factories are currently registered with MoC, only 309 factories are functioning regularly and employing 327,636 workers and 12,619 office staff (in which 37% are foreigners). It is noted that this sector provides approximately 90% of its total employment to rural women laborers.

Table 2-14 Number of Employees in the Garment Industry in 2011

Employment	Foreigner		Local		Total
	N	Share (%)	N	Share (%)	
Office staff	4,700	37.2	7,919	63.8	12,619
Workers	0	0.0	327,636	100.0	327,636
Total	4,700	1.4	335,555	98.6	340,255

Source: JICA Study Team (EIC) [based on GMAC (2011)]

Garment makes the largest contribution to the total exports. Out of the total exports of USD 4,929.5 million in 2011, garment exports shared approximately 80% according to data compiled from the General Department of Customs and Excise (GDCE). Roughly, half of the total garment exports in 2011 were sent to the US market while 30% was bound to the EU market and another 20% was to the rest of the world.



Source: GDCE

Figure 2-15 Garment Exports in 2007-2011 (USD billion)

2) Value chain analysis

Although garment industry has stabilized in Cambodia for more than two decades, it is still at the lowest value-added activity of cut, make, and trim (CMT). The sector functions predominantly at the downstream and mass market end which encompasses cutting and making yarns and fabric into finished garment products and where value-added and profit margins are relatively low. Only about one fourth of the garment production in Cambodia currently moves into free on board (FOB) stage which entails factories to source materials themselves and to obtain a price for complete garment products from buyers or traders.

Table 2-15 Structure of the Garment Industry (estimated)

No.	Business Types	Proportion of Firms (%)
1	Subcontracting	15
2	CMT	60
3	FOB or Full package	25

Source: USAID (2007)

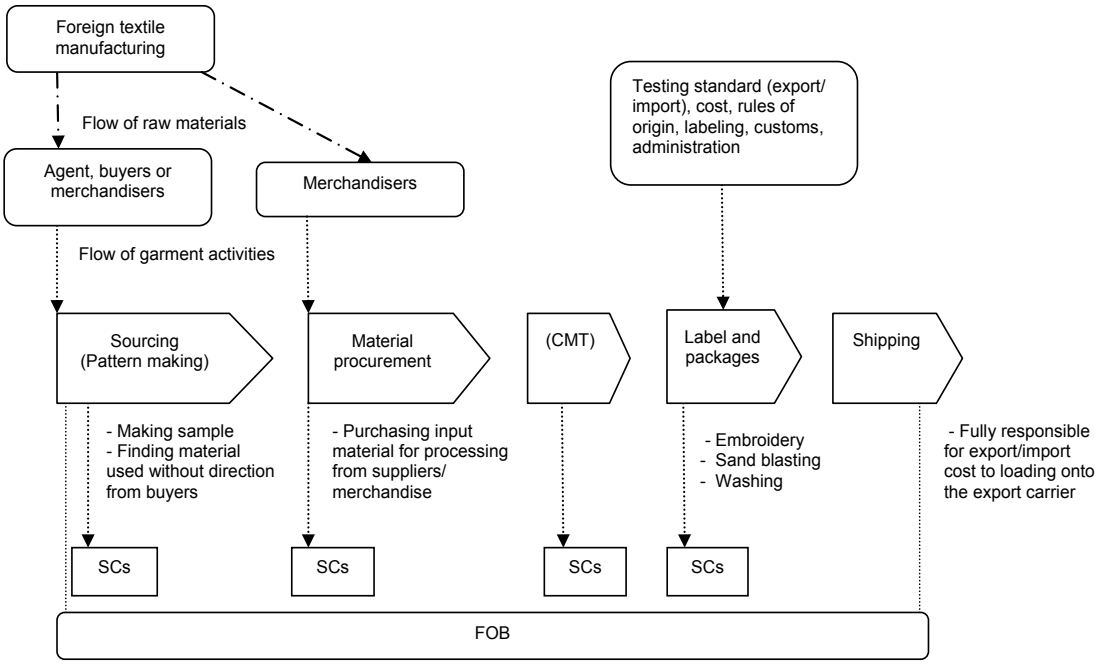
Cambodian garment factories are supplied with raw materials by the factories' customers and are paid only for processing fees for their CMT services (Natsuda, Goto and Thoburn, 2009). In CMT purchasing, suppliers keep the development of garment design and materials under their control and outsource labor-intensive jobs (CMT or final QC and packing). CMT occurs when the fabric is cut and then bundled by style, size, and color before transferring to another step called 'making or sewing'. Trim occurs when the finished products are trimmed, checked once last time, and packed for shipment.

The production line has improved as time goes by, from CMT to FOB, where an intermediary issues an order to a factory or splits into several factories to shipping a garment to the client's specification port. In case, there is a high order volume or when factories want to reduce costs of CMT of unfamiliar fabric, they may hand on the task to other factories known as sub-contracting (SCs).

A remarkable step in the Cambodian garment sector is pattern making which has localized some simple clothes designing. This is attributed to training centers that provide a training course on pattern making in Cambodia. However, this supporting industry is not totally supplied by local market. Besides, there are small scale garment producers, which are family own businesses, scattered around the factory complexes. These small-scale producers play a substituting but important role for garment production during excessive orders.

When it comes to the channels of logistics, company JA, one of the Japanese FIEs, approximately 90% of raw materials and parts are exported from Vietnam and the rest are from China and Japan. Likewise, company JB, another Japanese FIE, imports raw materials and parts mainly from China. In the meantime, both companies normally export their products to Japan via Sihanoukville (partly, via Phnom Penh Port).[33]

[33] Interviews with Japanese FIEs were conducted in July 2012.



Source: JICA Study Team (EIC)

Figure 2-16 Value Chain of the Garment Industry in Cambodia

3) Key issues to be tackled

a. Current Situation（CMT)

Although the Cambodian garment sector has relied heavily on the CMT that has performed well and slowly upgraded itself to a higher value-added activities in the upstream and the downstream from sourcing to shipping, a major threat is likely to hamper the present status of the industry.

According to the study conducted in May and July 2012, the management of the garment firms claimed that it is harder for them to find both skilled and low-skilled workers. Despite the fame of Cambodia with abundant supply of low-skilled labor, they recently have encountered difficulties in hiring more workers to complete the production. After a massive layoff due to the 2008 GFC, those workers who already left the factories for their hometowns or occupied other jobs have little knowledge about the post-GFC demand for labor forces from foreign manufacturers.

The National Employment Agency (NEA), launched by the RGC in 2009, is the only eligible institution that provides employment and labor market service for workers and factories. However, public awareness and usage of this service are still very limited. It is uncertain whether factories have knowledge of NEA's existence or trust its services. Consequently, this creates a mismatch of labor supply and demand.

Therefore, the bottleneck lies, not on insufficient labor supply, but on the lack of mechanism to gather this labor force which scatters throughout the country, especially in the rural areas. As a sole agency of RGC, NEA, having privilege to recruit workers, particularly from rural villages, may not

be able to gather workers to meet the labor demand by the factories. For nstance, major factories have contacted NEA for the demand of around 15,000 low-skilled workers. However, so far NEA could only recruit around 2000 workers.[34]

b. Current and Future Potentials（FOB）

With the current level of FOB in the garment sector, this industry has crucial potential to occupy higher proportion of FOB in the whole garment production in the economy. However, this upgrading process encounters a significant constraint.

Skills required for FOB level consist of designing, pattern making, and computer aided design (CAD). Furthermore, language ability to communicate with customers and supervisors or managers is also needed. These skills are widely available from the workforce in the country. Although there is a pool of graduates from the universities, these skills are hard to find. It is noteworthy that there are few institutions, such as Society for Human Resource Management and Productivity (SHRM&P) and Camabodia-Japan Cooperation Center (CJCC),[35] which provide training courses to undergraduates and graduates for such skills and for supervising and managing level. Nonetheless, this activity is still limited, making labor supply less equipped with necessary skills to perform FOB production line in the garment industry.

According to the survey conducted in May 2012, noticeably, many Cambodian students graduating with some skills undervalue the jobs in the garment industry based on the field survey. Young graduates often prefer to work in other sectors beside the garment or manufacturing sector. This perception may come from the absence of qualification framework for the garment industry, employability improvement, and career pathway that might employ higher skills such as computer aided design (CAD); manufacturing, electrical and mechanical techniques; information technology; and management. According to a study conducted by USAID (2006), education and training in Cambodia do not address the needs of the garment industry, and factories import skilled labor from overseas as pre- and post-production job functions are carried out at designated headquarters. As a result, Cambodian workers' abilities to climb up the learning curve into higher value-added niches of the value chain are precluded.

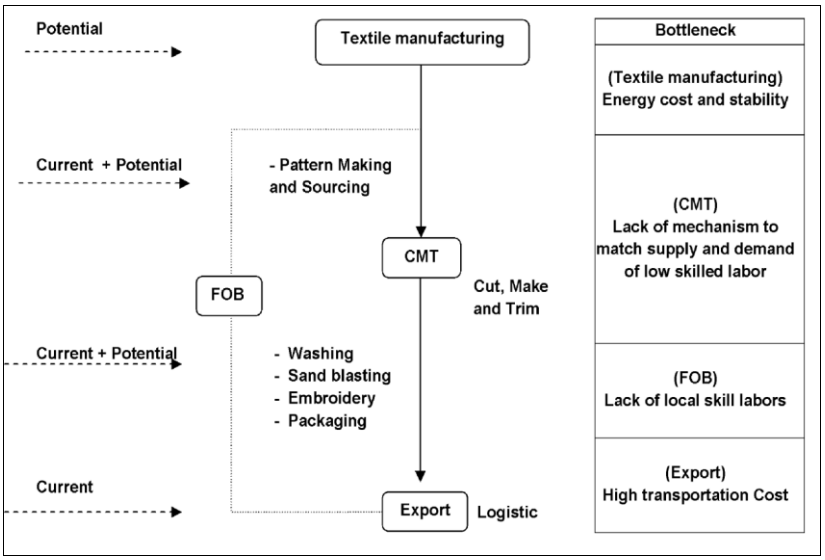
Electricity cost and stability appear as critical obstacles for factories to move up their production line from CMT to FOB. As factories are predominantly concentrated in urban areas, especially in Phnom Penh, where electricity price is significantly higher than in the areas near the borders. Also, electricity price in Cambodia is much higher than that in neighboring countries. More importantly, the unreliability of 24 -hour electricity supply is an additional burden.

[34] Interview with NEA official.
[35] SHRM&P is an NGO and CJCC is an NPO for human resource development for industry.

c. Future Potential (Textile Manufacturing)

Since almost every kind of raw materials is imported, establishing a textile manufacturing to support garment sector will help to reduce local production costs and create new opportunities for both FIEs and labors. However, high electricity cost and its unstable supply are critical constraints preventing investment in textile manufacturing. Textile manufacturing process—twisting , plying, warping, weaving, scouring, heat setting, coating, and lamination—requires stable supply of electricity and high skilled workers. Although, skilled workers can be imported or employed from neighboring countries, high cost and unreliability of electricity may take longer time for Cambodia to be competitive.

The above-mentioned study also revealed that high cost of trade and transportation is also described as a significant bottleneck. Import and export charges and administrative procedures in Cambodia are rather more costly and more complicated than other countries in the GMS (Greater Mekong Sub-region). For example, a container transported via Sihanoukville Autonomous Port (SAP) costs approximately USD 30 higher than other countries' ports. Although the RGC has always supported the garment sector (e.g. tax exemption and administrative reform), complains on bureaucracy and law enforcement are still voiced out as lingering constraints for investors. Investors still criticized the over extra charges on handling fee for import and export document facilitation and other informal commissions, especially to the so-called facilitation fees.



Source: JICA Study Team (EIC)

Figure 2-17 Summary of Bottlenecks in the Garment Industry

4) Concluding remarks

Although trade preference and abundant supply of low-cost labor have fueled the garment industry with annual expansion of investments, the current production line has yet to exhaust the

potential of this sector for economic development unless better policy directions with clear action plans are initiated. The RGC shall be ready to increase value addition by helping the industry to move from CMT to FOB or upgrade this sector by launching the upper-stream industry which produces fabrics locally as important raw materials for garment factories.

However, the establishment of textile manufacturing sector may be hard to pursue due to the high electricity cost and frequent blackout. Furthermore, upgrading could not be done without having qualified local supervisors and managers because this could reduce high salary for foreign expatriate staff higher than local staff, based on a preliminary survey conducted by USAID (2007). Training courses for local middle managers, workshop-level supervisors and team leaders, which have already been conducted by some organizations such as SHRM&P and CJCC, should be encouraged and enlarged.

Due to repetitive experience and proficiency of Cambodian workers, the garment sector has notable potential to upgrade from CMT oriented to higher value-added FOB such as pattern making and sourcing. The easy access to quality logistics and transportation in Cambodia can also be incorporated to the growth of this sector.

(2) Footwear

1) Overview

Footwear sector is the second largest foreign exchange earner after the garment manufacturing sector. Same with the garment sector, easy access to the U.S. and EU markets is the catalyst in attracting FDIs to locate their footwear factories in Cambodia. Moreover, abundance of low-skilled workers and low wages are another important reasons plus considerable incentives provided by the government that is in need of FDIs to develop the economy.

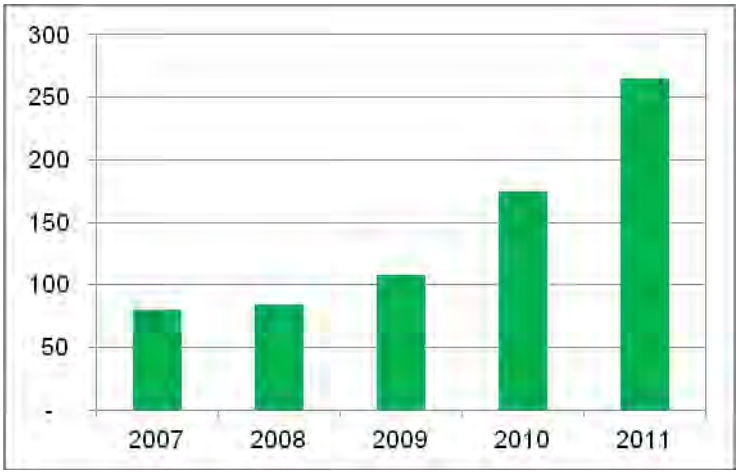
Number of footwear factories has been on the rise. According to data provided by GMAC, roughly 40 footwear factories are currently operating in Cambodia after the 2008 GFC. Footwear industry provides more than 60,000 direct jobs to the Cambodian workers, excluding indirect jobs in local trade, transportation, and logistics. Although 0.8% of the total 63,003 jobs are foreign employees, who are basically supervisors, managers or office staff, 99.2% are local Cambodian workers in which 90% are female (see Table 2-16).

Table 2-16 Number of Employments in the Footwear Industry in 2011

Employment	Foreigner		Local		Total
	N	Share (%)	N	Share (%)	
Office staff	533	19.0	2,272	81.0	2,805
Workers	0	0.0	60,198	100.0	60,198
Total	533	0.8	62,470	99.2	63,003

Source: GMAC (2011)

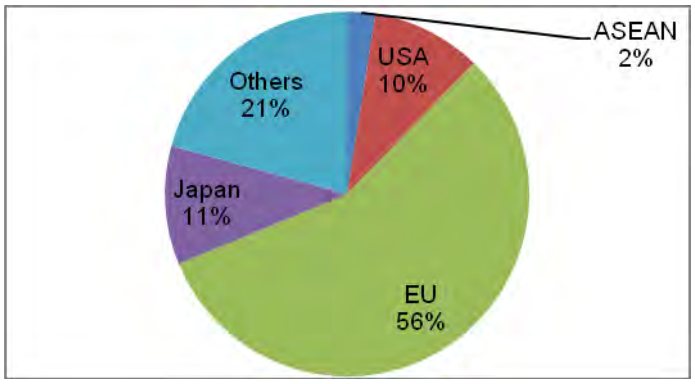
Based on data compiled from GDCE (2012), total value of footwear export in 2011 reached USD 265.5 million which is about 5.4% of total export of all commodities. It increased up to approximately 52% on a year-on-year basis from USD 174.8 million in the previous year. As shown in Figure 2-18, footwear export has edged up drastically since 2009 when the GFC hit the Cambodian economy badly.



Source: GDCE (2012)

Figure 2-18 Footwear Exports from 2007-2011 (USD million)

Europe is one of the main export destinations of Cambodia's footwear products. Total export for Europe amounted to USD 149.9 million and its share was approximately 56% of the total amount. Other main destinations include US and Japanese markets and the shares were approximately 10% and 11%, respectively. Meanwhile, the share of ASEAN was only 2%.



Source: GDCE (2012)

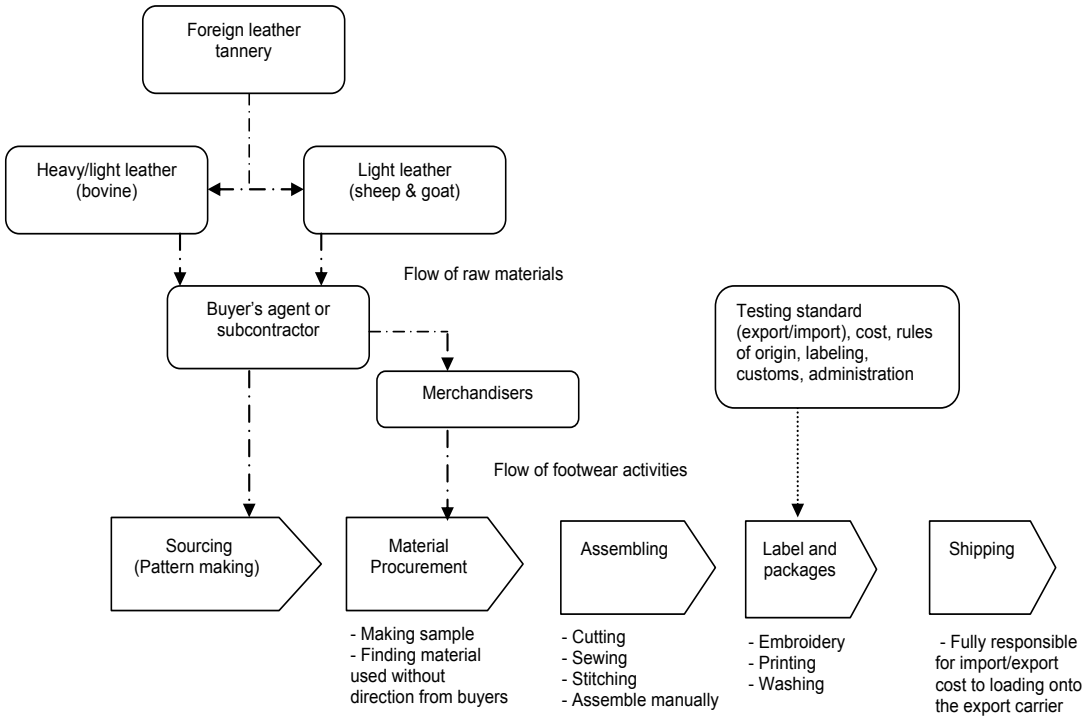
Figure 2-19 Footwear exports by market destination in 2011

2) Value chain analysis

Most footwear factories assemble parts of the shoes such as outer leather, sole, inner sole, and some other accessories based on orders from the buyers. Not much different from the apparel industry, footwear firms receive orders from parent firms or other contractors as a sub-contracting firm and assemble parts of shoes through cutting, sewing, and stitching.

Raw materials used in footwear industry include synthetic leather, synthetic fiber, plastic, glue, stitching material, and others. They are mostly imported from neighboring countries or its parent firms including China, Hong Kong, Korea, India, and Spain.

Based on the survey conducted to a footwear factory, whose buyer carries a very famous sportswear brand named Puma, mentioned that buyers or sub-contractors have already decided which merchandise companies will supply raw materials suitable to their orders. Once the products are checked by the quality control (QC) team from buyer side and ready to be exported, buyers are usually in charge of transporting products from factories to destination port.



Source: JICA Study Team (EIC)

Figure 2-20 Value Chain of Footwear Sector

3) Key issues to be tackled

With the abundant supply of young labor force coupled with accumulated know-how and experience, the footwear industry has significant room to expand its production along the value chain. Sourcing and material procurement are the upper stream activities where Cambodia's footwear factories can penetrate to further diffuse value addition into the economy. However, this upgrading process is hampered by several key constraints which are discussed in the following section.

Bottlenecks in the footwear industry are not much different from the garment industry. It is mainly the lack of mechanism to match labor supply and demand resulting from ineffective collaboration between line ministries or stakeholders and factories, and other barriers. NEA has played this role as

a coordinator between labor demand and supply. However, it is still at a slow pace. As a sole agency operated by the RGC, there is still much work needed to be done to gather enough labor supply to meet the increasing demand.

It is worth noting that sourcing and material procurement niche of the value chain require skilled labor (e.g. skills in design, pattern and sample making, and materials finding). Yet, this skill is hard to find in the current labor market. This reality may be due to lack of technical and vocational training programs in the country and weaknesses in educational programs in universities or colleges. Moreover, lack of Cambodian staff in the supervising and management level is also costly for factories as these positions are presently occupied by foreign expatriates who earn higher salaries than local staff (USAID, 2007). Only recently, a few organizations (e.g. SHRM&P and CJCC) have provided training courses for middle management level. However, it is still insufficient.

4) Concluding remarks

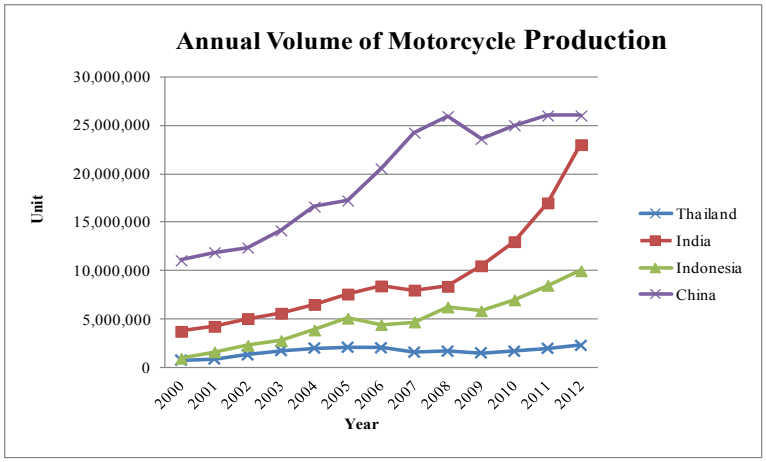
Footwear remains one of the internationally competitive sectors of the Cambodian economy. However, issues of labor (especially, human resource development) are complicated and must be resolved and coordinated by and between all stakeholders. Labor market should be refined or redeployed by an efficient collaboration between NEA, NGOs, and the manufacturers in order to meet market equilibrium. Training courses should be increased and improved for skilled workers and middle management level so that the labor market may be sufficiently supplied by competent domestic workers.

As pattern design may be more complicated and demanding than that of apparels, the footwear sector has more possibilities to step into the material procurement niche (i.e. raw materials and parts) of the VC. However, bottlenecks need to be addressed to keep the industry competitive in the long run.

(3) Motorcycle

1) Overview

Currently, it is said that more than 90% of motorcycles are manufactured in Asia. In China, 27.5 million motorcycles, which accounted for over 50% of world's total production (50 million), are manufactured in China (The Boss 2011). As shown in Figure 2-21, other than China, India, Indonesia, and Thailand are major producers of motorcycles in the world. In the meantime, the share of Cambodia in the world market is very small. For example, its production volume was approximately 200,000. It accounted for approximately 0.7% of China and approximately 8.6% of Thailand.



Remarks: Figures of 2010-2012 estimates.
Source: JICA Study Team based on the statistics of the automotive association of each country

Figure 2-21 Annual Volume of Motorcycle Production in Four Asian Countries (2000-2012)

According to GDCE (2012), the number of imported motorcycles has increased steadily. Despite the sharp fall in 2009 after the GFC, the growth recovered in 2010 and 2011.With the growth of the Cambodian economy, personal income has also increased. Since public transportation is in poor condition, people depend mostly on automobiles and motorcycles as a means of transportation in their daily life.

Table 2-17 Import of Motorcycle (2002-2011)

Year	Motorcycle	
	Import Unit ('000)	Import Value (USD million)
2002	75	29.1
2003	88	34.3
2004	102	46.3
2005	121	55.5
2006	175	93.5
2007	203	87.1
2008	282	126.2
2009	135	48.5
2010	215	80.3
2011	191	94.7

Source: GDCE (2012) and JICA Study Team (EIC)

With the expansion of the domestic market, several foreign manufacturers (e.g. Japan and China) established a joint-venture company with local partners. As indicated in Table 2-18, five factories of motorcycle were built in the late 1990s and in the early 2000s.

Table 2-18 Import of Motorcycle (2002-2011)

Activities	Country of Origins			Total
	Japan	China	Joint venture with Cambodia	
Motorcycle assembly	1	2	2	5

Source: MIME and CIB (2012)

2) Value chain analysis

This value chain analysis is based on the interviews conducted with two Japanese firms (companies JD and JE) in July and August 2012.

Both firms entered into the Cambodian market in 1999. Since there was no SEZ in this country, their factories are located outside SEZ in Phnom Penh. Their purpose of entry into the market was to manufacture and sell motorcycles in the country. In general, it is important to manufacture motorcycles near the market. As of July 2012, the two firms employ more than 750 workers in total.

Currently, there are two channels of import of CKD parts, i.e., (a) the parts are shipped by truck via Poipet and assembled in Phnom Penh. It takes approximately three to four days including customs procedures to get to Phnom Penh from Thailand. The truck comes to Phnom Penh a few times a week and the freight is reloaded at the Thai border (Poipet); and (b) other parts are shipped by sea from Indonesia up to Sihanoukville and by truck from Sihanoukville to Phnom Penh. This channel takes approximately two weeks or one month.

With the expansion of production in Indonesia, the function of ASEAN's mother factory has been shifted from Thailand to Indonesia. Because of the shift, importation from Indonesia began to use the channel (b). In recent years, income level has been raised in Thailand where motorcycles are used as luxury goods, instead of necessities. On the other hand, Indonesia has a population of more than 200 million and the motorcycles are being utilized as necessities.

Completed motorcycles are sold to customers through dealers' stores. There are approximately 50 to 100 stores across the country. Channel (c) may be used after the completion of Neak Loeung Bridge in 2015.

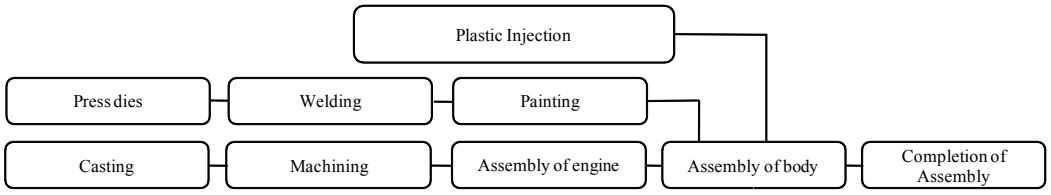
Table 2-19 Channel of Import of Motorcycle's CKD Parts

	Channel	Remarks
(a)	Thailand ⇒Poipet ⇒Phnom Penh	The freight is reloaded at the Thai border (Poipet).
(b)	Indonesia⇒Singapore⇒Sihanoukville⇒Phnom Penh	After arrival at Sihnoukville, parts are carried by truck up to Phnom Penh.
(c)	Vietnam⇒Svay Rien⇒Phnom Penh	This channel is likely to be used after the completion of the construction of Neak Loeung Bridge in 2015. If this channel is more cost-effective, some of CKD parts import from Thailand may be shifted.

Source: JICA Study Team

Figure 2-22 shows the flow of motorcycle assembly. In-house production of welding (of frame, etc.), painting, and assembly of motorcycle body began in 2010. Since the shift of importing parts to in-house production generates employment, RGC provides the investors with incentives.

Although company JD currently does not procure local parts and raw materials from local suppliers, they may consider local procurement of some raw materials (e.g. paint). On the other hand, Company JE conducted a survey on local suppliers for local procurement. It turned out in their survey that no local suppliers can meet their requirements of quality, cost and delivery (QCD). Company JE plans to purchase some parts at a large scale from the Thai supplier which may begin production in Cambodia in the near future.



Source: JICA Study Team

Figure 2-22 Flow of Japanese Firm's Motorcycle Production

When in-house production begins and new equipment is introduced, in-house training for workers will be conducted in the Thai affiliated firm in order to learn new techniques and production skills. Japanese engineers and technicians will also come to Cambodia on a regular basis.

As for human resource development, production management division should be strengthened like the engineering staff. The knowledge on 5S or *kaizen* is essential. It is also important for the sector to nurture management personnel (i.e. group leaders, managers, and foremen).

3) Key issues to be tackled

Regarding operation and investment environment, requests from the motorcycle assemblers are as follows:

- Since sudden power failure causes damage to equipment and machines, supply of electricity should be stabilized.
- From the viewpoint of cost reduction, electricity costs should be reduced.
- Customs procedures are complicated and time-consuming. They should be streamlined through computerization.

4) Concluding remarks

From the view point of employment generation and technology transfer, RGC should encourage foreign assemblers of motorcycle to shift of importing parts to in-house production.

Regarding the shift to in-house production, it is necessary to identify technological needs (e.g., press molding and metal casting) through interviews with foreign manufacturers and to promote the shift according to the needs, for instance, by providing incentives.

As for training of workers, since the contents of the training are specific for the motorcycle sector, the training is conducted in cooperation with their head office in Japan and their affiliate firm in Thailand. However, basic knowledge about 5S and *kaizen* can be provided at the CJCC and universities.

(4) Precision Instruments and Parts[36]

1) Overview

The Company JF, a Japanese manufacturer, decided to establish its production base in Cambodia mainly because there is a labor shortage and a hike in labor cost in China and Thailand. In April 2011, the company began to manufacture precision parts (e.g., micro actuator and brush DC motor) in a rental factory of Phnom Penh SEZ (PPSEZ). In December 2011, the construction of a new factory was completed. As of March 2012, there were approximately 1300 employees in the company. There was a plan to employ approximately 5000 employees in 2013 or 2014. Precision instruments and parts are exported to an affiliate company in Thailand and further to Japan, US, and European markets, and are also used as parts of motor vehicles, digital cameras, mobile phones, etc.

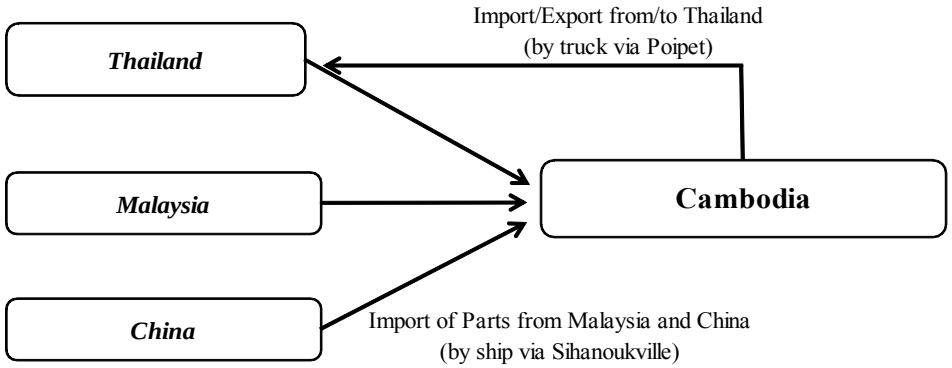
According to the company, the advantages having a manufacturing industry in Cambodia can be summed up in three-fold; (i) proximity to its Thai affiliate company, (ii) lower labor cost, and (iii) diversification of risks (risk management). On the other hand, its disadvantages include (i) poor condition of the physical infrastructure, (ii) poor condition of the legal framework, (iii) relatively low human resources capacity (e.g. low literacy rate and lack of management personnel), and (iv) difficulty in recruiting workers.

[36] The description of this section is based on the handouts of the "Outbound Investment Mission of ASEAN 6 to Cambodia" held in March 2012, as well as on JST's interview conducted in July 2012.

The company's business model, by making full use of its GVC, is to import parts from its affiliate firms in Thailand, Malaysia, and China, as shown in Figure 2-23, and to export completed (assembled) parts/ products from Cambodia to Thailand. As part of its in-house training, Cambodian workers are sent to Thai and Malaysian affiliate firms. Likewise, Thai and Malaysian senior engineers and managers come to Cambodia to offer advisory services.

2) Value chain analysis

As stated above, parts of precision instruments are imported from other Asian affiliate firms and are then assembled in Cambodia. The completed (assembled) parts/products are exported to Thailand and further to the Japan, US, and European markets. When it comes to logistics, parts are imported by sea (via Sihanoukville) and the truck is used to carry parts/products via Poipet between Cambodia and Thailand. As for local procurement, a Malaysian-Japanese firm provides corrugated board for Company JF.



Source: JICA Study Team

Figure 2-23 Value Chain of Precision Instruments Parts (and Small Motors)

3) Key issues to be tackled

The key issues to be tackled are as follows:

- To secure factory workers;
- To stabilize electricity supply and lower electricity cost;
- To improve the condition of the physical infrastructure (especially, road network); and
- To maintain transparency of administrative procedures.

4) Concluding remarks

Precision instruments/parts manufactured by Company JF include LED light and micro actuator (for digital camera), LED light (mobile phones), brush DC motors, and fan motors (motor vehicles).

If the manufacturers of the above-mentioned final products are attracted to Cambodia through proactive FDI facilitation (e.g. high government official's direct visit to a specific company), as part of the supporting industry, the precision instruments and parts sector can contribute to the country's industrial development. However, there is a strong need to tackle not only the above-stated key issues but also other important issues and challenges in order to develop the Cambodian economy.

(5) Electric/Electronics Parts

1) Overview

E&E parts sector is newly developed in Cambodia. It is in its infant stage as only several major companies have been established since 2011. Presently, several firms have started their operation (See Table 2-20). The other firms have just opened their offices while their factories are still under construction. The companies intend to run their activities in the middle or end of 2012. These firms are from Japan and Korea. The analysis of this section is based on interviews conducted with Korean (KA) and Japanese (JG) firms.[37]

Table 2-20 Number of Firms Operating in E&E Sector

Year of Establishment	Country of Origin		Activities
	Japan	Korea	
2011	4	1	Assembly of wire harness
2012	0	1	Assembly of electronics components
Total	4	2	

Source: CIB (2012)

According to JICA (2007),[38] Cambodia has the potential to attract FDI, especially from Japan, in simple electronics assembly such as wire harness, coils and transformers, small electronic products, half-finished goods, and information-communications equipment. At the very initial stage of its kind, Cambodia's electronics sector presently consists of only assembly of wire harness. Cambodia is not yet capable of attracting investment in higher valued art of electronic products such as package assembly components, materials components such as resistor, capacitor and connector, refrigerator, and electronic devices. These products require large scale of investment and high technology advancement.

Company KA was enticed to invest in assembly of wire harness in Cambodia due mainly to the abundant supply of low-skilled labor force. There are approximately 220 staffs in the company, comprising of 200 workers, 15 middle managers/supervisors and several office staff members. All of

[37] Information on Company JG is based on the handout of the Cambodia Investment Seminar held in July 2012, Japan and on interview conducted by the JICA Study Team in July 2012.

[38] Please refer to JICA (2007) "Final Report on the Study on Economic Policy Support in the Kingdom of Cambodia."

them are Cambodians, except for one Korean as the general manager.

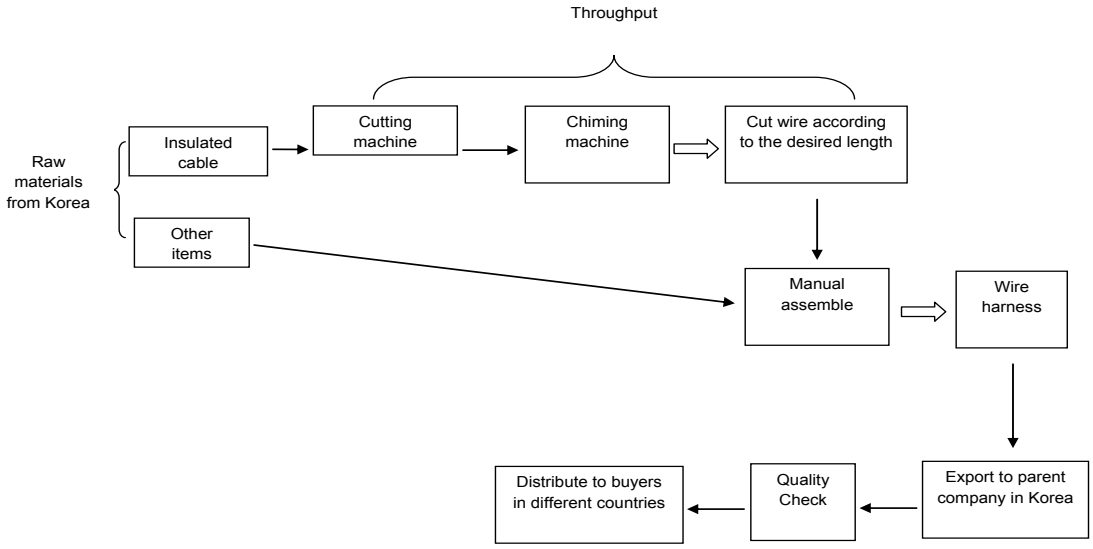
On the other hand, considering labor shortage and a rapid increase in labor cost in China, Company JG began to manufacture in 2011 at Phnom Penh SEZ (PPSEZ) from the viewpoint of risk diversification. Another reason was its affiliate companies of ASEAN are in full capacity. There are approximately 700 workers as of July 2012. According to Company JG, the advantages of productive operations in Cambodia is summed up to three-fold as follows; (i) since labor cost is low, Cambodia is an appropriate location for labor-intensive industry; (ii) SEZ operators and RGC are supportive for private firms' investment projects. There are also favorable incentives available for foreign investors and manufacturers; and (iii) because of its proximity to Thailand and Vietnam, assistance of Thai and Vietnamese affiliate firms are available.

2) Value chain analysis

The JICA Study Team interviewed companies KA and JG in May and July 2012, and the value chain is based on the interview with them (assembly of wire harness). To assemble wire harness, insulated cable with voltage below 66,000 V is used as main raw materials. In addition, terminal connectors and other items (totaled to 15) are also used to assemble the insulated cable. These raw materials are all imported from Korea and Japan. There are approximately 220 staffs in the company, comprising of 200 workers, 15 middle managers/ supervisors and several office staffs. All of them are Cambodians, except for one Korean as the general manager.

Regarding Company KA, the assembly of wire harness is rather simple. In the production line, insulated cable is cut and then chimed, according to the desired length. The main machine is the cutting machine which is also imported from Korea. The cut cable is then assembled with other items. The assembly is done manually. The final product is an electronics harness, as an accessory for washing machine.

Wire harness is exported back to Korea. Means of transportation for importing raw materials and exporting wire harness is via Phnom Penh Autonomous Port (PPAP). When wire harness arrives at its parent company in Korea, quality check is conducted before sending to respective buyers, namely Korea, Japan, Mexico, Thailand, and Hungary.



Source: JICA Study Team (EIC)

Figure 2-24 Value Chain of Assembly of Wire Harness of Company KA

3) Key issues to be tackled

As for this sector, key issues to be tackled are as follows;

- Administrative procedures are complicated and time-consuming. It took more than three months when the company obtained approval of the master list. The administrative process should be shortened. It is also difficult for foreigners to negotiate when they import parts that are not in the master list. This point should also be improved.
- Interpretation of the related law is difficult and unclear. According to the Law on Investment, imported parts for the use of production in the factory are exempted from tax after approval as QIP. However, when Company JG imported an air conditioner to be installed in the factory's restaurant, the import duty was imposed on it. This is because its installation in the factory's restaurant was interpreted as outside factory. Likewise, regarding Company KA, it took more than six months to obtain QIP approval and the company incurred unofficial cost.
- It is necessary to develop housing facilities near SEZ and improve public transportation.
- Company KA encountered difficulty in recruiting workers. As of May 2012, there are approximately 200 workers employed in the company, although it planned to recruit 400 workers.

4) Concluding remarks

As of July 2012, Company JG has so far steadily employed the necessary number of workers, while Company KA has difficulty in recruiting workers. It is necessary to deal with the key issues including housing development for workers and improvement of public transportation in order to expand the scale of production and of employment. Despite the steady increase in the production of

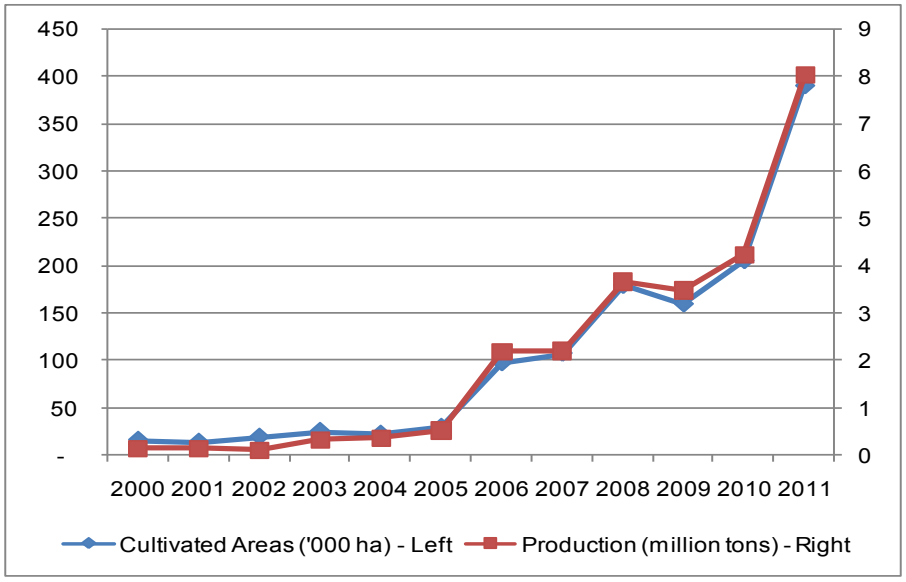
motor vehicles and motorcycles, currently, they import wire harness from foreign countries. There is a possibility that Cambodia's electric/electronics parts sector may provide their products/parts for these assemblers in the near future.

(6) Agricultural and Food Processing Sector (Cassava)

1) Overview

Cassava is one of the highly-valued cash crops for the Cambodian economy and especially raising income of the people living in rural areas. The gross value added in 2010 was estimated at USD 50.7 million or 2.4% of the gross value-added of the agriculture sector (NIS, 2011). This crop has considerable potential in diversifying export and industrial base of the Cambodian economy through increased processing.

Cassava production has increased sharply during the past few years, according to data compiled from the Ministry of Agriculture, Forestry, and Fisheries (MAFF). The total harvested output edged up almost 54-folds from 0.15 million tons in 2000 to 8.03 million tons in 2011. Cultivated areas have also expanded considerably year after year. It soared to 24 folds from 16,279 hectares (ha) in 2000 to 391,714 ha in 2011. Massive increase of cassava production in the recent years was due to increasing demand with higher price.



Source: MAFF(2012)

Figure 2-25 Cassava's Cultivated Area and Production (2000-11)

Cassava's production sites are located near the Thai and Vietnamese borders because these two countries are the main market. Cross-border transactions have been conducted on an individual basis. Cambodian producers and buyers can sell the products to Thai and Vietnamese buyers. Regarding cassava's production volume (2011), the top five provinces are Battambang, Kampong Cham, Pailin, Banteay Meanchey, and Kratie.

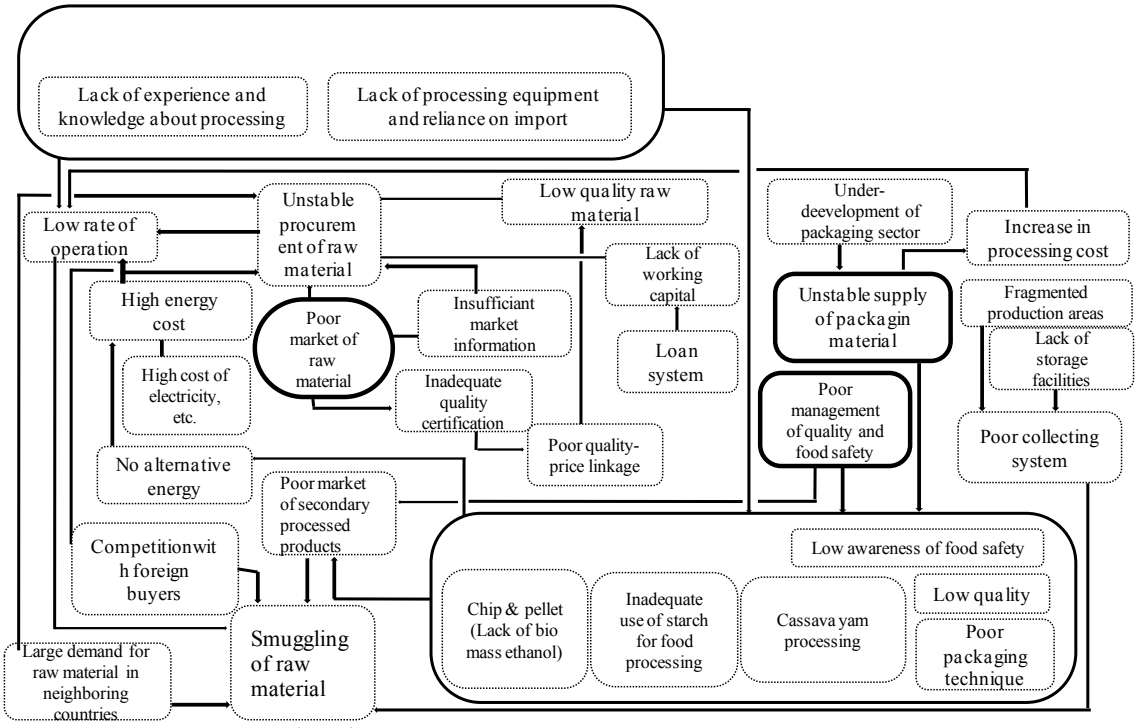
Table 2-21 Production Volume of Cassava (by Province) (2011)

No.	Province	Production (tons)	Share (%)
1	Battambang	2,331,575	29.0
2	Kampong Cham	1,147,954	14.3
3	Pailin	811,000	10.1
4	Banteay Meanchey	795,329	9.9
5	Kratie	705,586	8.8
6	Kampong Thom	406,239	5.1
7	Ratanakiri	322,847	4.0
8	Oddar Meanchey	308,460	3.8
9	Steung Treng	269,010	3.3
10	Svay Rieng	252,116	3.1
11	Others	684,177	8.5
Total		8,034,293	100.0

Source: MAFF(2012)

Cambodian traders serve between local producers (farmers) and Thai/Vietnamese buyers. Aside from exported cassava, the rest are processed in Cambodia, and are sold in the domestic market or exported. Foreign firms (Korea, Thailand, etc.) have factories in Cambodia. It is said that the share of Thai agri-businesses is large in the local market, while there are small-scale local processing firms, most of which are self-owned, across the country. As for Cambodia's cassava, approximately 50% of it is processed (primary processing) in the country and it is sold to secondary processing firms for bio fuel and animal feeds. The other half is processed (processed starch) for various kinds of foods such as snacks and noodles. There are many foreign and local cassava processing firms throughout the country. In Kampong Cham Province, there is an agglomeration of cassava and starch processing firms. For the promotion of cassava processing, it should be noted that Thailand is an "advanced country" of cassava processing.

Stakeholders of cassava processing include Cambodian farmers, Thai buyers, Vietnamese buyers, foreign and local processing firms, local traders, etc. Traders purchase harvested cassava yam from farmers or local collectors, and then sell (dried) yams to foreign buyers and foreign/local processing firms.



Source: Chapter 4 of JICA（2012）

Figure 2-26 Problem Analysis for Cassava Processing

2) Value chain analysis

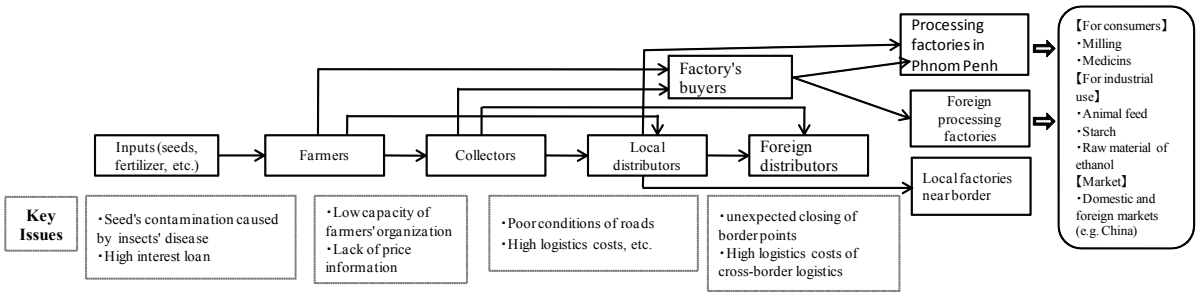
The following Figure 2-22 shows main provinces of the domestic market. With the increase in cassava's demand at the international market, raw cassavas are illegally exported to these neighboring countries.

Table 2-22 Market of Cassava

Province	Local Market	Thailand	Vietnam
Battambang	30%	30%	30%
Banteay Meanchey	60%	40%	-
Kampong Cham	10%	-	90%
All Provinces	15%	35%	50%

Source: Chapter 4 of JICA（2012）

Most Cambodian producers (farmers) sell raw cassavas to collectors and distributors, while some producers provide dried cassava. Collectors provide the cassavas for local and foreign distributors as well as buyers of the factory (processing firms). Most of the cassava transactions are cross-border trade in the form of raw cassava. In line with the above-mentioned problem analysis of cassava processing, cassava's value chain is as follows.



Source: Chapter 6 of JICA (2012)[39]

Figure 2-27 Value Chain of Cassava

3) Key issues to be tackled

Regarding cassava sector, the key issues to be tackled are as follows.

At the producers (farmers) level, problems encountered are the contaminated seeds caused by insects carrying disease germs, the shortage of working capital, high interest rate, labor shortage during the harvesting season, and low capacity of farmers' organizations.

One of the logistics issues is that buyers and collectors have the initiative to decide the price because there is information asymmetry when they negotiate with farmers. Other issues include high logistics cost and poor access to processing factories due to poor road conditions.

4) Concluding remarks

It is necessary to facilitate legal trade and to export "made-in-Cambodia" products of good quality by stopping smuggling. Considering that the majority of processors are small-scale, from the viewpoint of SME promotion, it is important to establish farmers' associations and to strengthen such organizations.

Considering that Thailand is an "advanced country" on production, primary processing and export, there is a need for Cambodian farmers and processors to be integrated into Thai firms' GVC.

(7) Analysis on the Results of Interviews with Japanese Manufacturers

1) Results of interviews with Japanese manufacturers

The results of interviews with seven Japanese manufacturers are outlined in the following Table 2-22. Table 2-23 also summarizes the results by question (Companies JA and JB: garment, JC: footwear, JD and JE: motorcycle, JF: precision instruments/parts (motors), and JG: E&E parts (wire harness).

[39] Please refer to JICA (2012).

Table 2-23 Outline of Interview Results with Japanese Firms (General)

	Location	Sub-sector	Reason for Enty into Cambodian Market	Source of import	Main Market & export	VC	Local Procurement
JA	TSSEZ	Garment	Before decision-making, compared with Laos, Indonesia, Bangladesh. Established factory in Svay Rien and export via HCMC	Vietnam: 90%, China and Japan: 20%	Japan	It takes 10 days to get to Kobe, Japan (via HCMC).	Corrugated board (Malaysian firm) and tags and plastic bags (Taiwanese firm)
JB	TSSEZ	Garment	Before decision-making, compared with Myanmar, Indonesia, Bangladesh.	Thailand, Vietnam, China, Japan, & Taiwan	Japan	Bavet (1 day), HCMC (3 days for loading), Japan (10 days)	Paper and label
JC	PPSEZ	Footwear	Favorable incentives for foreign investors. Before decision-making, compared with Myanmar & Bangladesh.	Thailand & China	Japan	China (Shenzen)-Sihanoukville-Phnom Penh (7 days), From Thailand by truck (3 days)	Box for final products. Plan to increase local procurement up to 30% in a few years
JD	Outside SEZ (PNP)	Motorcycle	Production & sales for domestic market	Thailand & Indonesia	Cambodia	From Thailand by truck (via Poipet) (3-4 days), From Jakarta by sea (via Singapore) (2-4 weeks). Welding & painting processes shifted to in-house production	None.But consider buying paint in the future.
JE	Outside SEZ (PNP)	Motorcycle	Production & sales for domestic market	Thailand & Laos	Cambodia	From Thailand by truck (via Poipet) (3 days)	Only sticker. Waiting for Thai supplier come to Cambodia in the near future.
JF	PPSEZ	Presicion Instruments/ Parts	Before decision-making, compared with Vietnam, Laos & Myanmar. Labor shortage & increasing labor costs in Thailand & China	Thailand, Malaysia & China	Thailand	(1) With RGCand Thai govt's licenses, no reloading at the border. (2) Trying to shift of plastic products to in-house production	Corrugagted board
JG	PPSEZ	Electric/Electronics Parts	Increasing labor costs in China	Japan: 80%, Thailand: 10%, Vietnam: 10%	Japan	Export to japan (via HCMC) (15-16 days)	Corrugagted board
	Location	Sub-sector	Reason for Enty into Cambodian Market	Source of import	Main Market & export destination	VC	Local Procurement

Source: JICA Study Team

Table 2-24 Summary of Interview Results (by Question)

Questions	Summary
Reasons for (Purpose of) Entry into Cambodian Market	➢ Japanese motorcycle assemblers (companies JD and JE) aimed to provide and sell the products for domestic market. ➢ Other Japanese firms entered into the Cambodian market because there is a labor shortage and increase in labor cost in China and Thailand.
Sources of Import of Raw Materials	➢ Garment and footwear manufacturers (JA, JB, and JC) import parts from China, Thailand, Vietnam, Japan, etc. ➢ All the manufacturers of motorcycles, precision instruments/parts, electric/ electronics parts (JD, JE, JF, and JG) have their affiliate firms in Thailand that play a central role in the GVC in ASEAN. The Thai firm exports parts, and sends technological and managerial advisors to Cambodian counterpart. The Thai counterpart also receives Cambodian trainees.
Main Market and Export Destinations	➢ All the three firms of garment and footwear export to Japan. ➢ The two motorcycle-makers do not export and sell the products in the domestic market. ➢ Japan is the export destination of JF (precision instruments) as well as that of JG (electric/electronics parts).
VC	➢ Garment and footwear firms import parts and raw materials from China, Thailand, and Japan, and assemble them in the form of CMT. Then, they export to Japan by sea via Sihanoukville and Ho Chi Minh City (HCMC).. ➢ The two motorcycle assemblers import majority of parts from Thailand through the channel (a). But one of them also imports from Indonesia through the channel (b) because the functions of ASEAN's mother factory has been relocated from Thailand to Indonesia. The import from Indonesia began in the middle of 2012. In the meantime, if the construction of Neak Loeung Bridge is completed in 2015, import from Vietnam through channel (c) may begin. ➢ Manufacturer of precision instruments and parts import from Thailand, Malaysia, and China by sea and by inland, assemble in Phnom Penh, and export to Thailand by inland. ➢ Manufacturers of E&E parts import from Japan and Thailand, assemble in Phnom Penh, and export to Japan by sea via HCMC.

Local Procurement	➢ Garment and footwear firms purchase corrugated board, plastic bag, etc., in Cambodia. ➢ Although assemblers of motorcycles import all the parts, they have considered local procurement (company JE purchases only sticker from a local supplier). ➢ Manufacturers of precision instruments/parts and of electric/electronics procure only packaging materials such as corrugated board in Cambodia.

Source: JICA Study Team

2) Patterns of Japanese firms' GVC

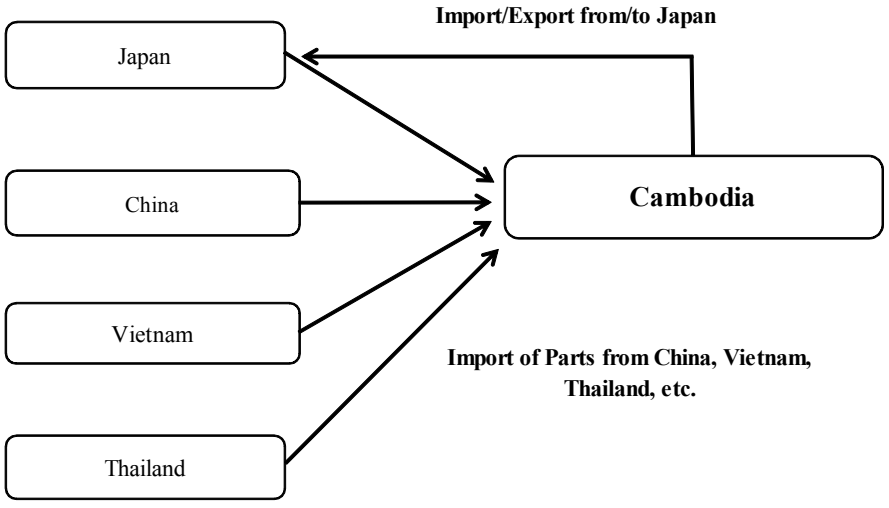
In terms of Japanese firms' GVC, there are two patterns, namely, i) Pattern A (garment and footwear) and ii) Pattern B (machinery/ processing and assembly sectors).

In Section 3.1.5 of Chapter 3 (in Part 1) of this report, according to the results of the questionnaire survey conducted in July 2012 during the Cambodia Investment Seminar, many Japanese firms considered exporting their products from Cambodia to Japan and other Asian countries. Therefore, this trend (Japanese FIEs in Cambodia export to Japan and other Asian nations) will continue for the coming years ahead.

i) Garment and footwear sectors

Pattern A

The characteristics of the garment and footwear sector is that Japanese firms shifted (or expanded) their manufacturing from China to Cambodia. They import raw materials and parts from neighboring countries, e.g., China and Japan. After the assembly in the form of CMT in Cambodia, they export the products to Japan.



Source: JICA Study Team

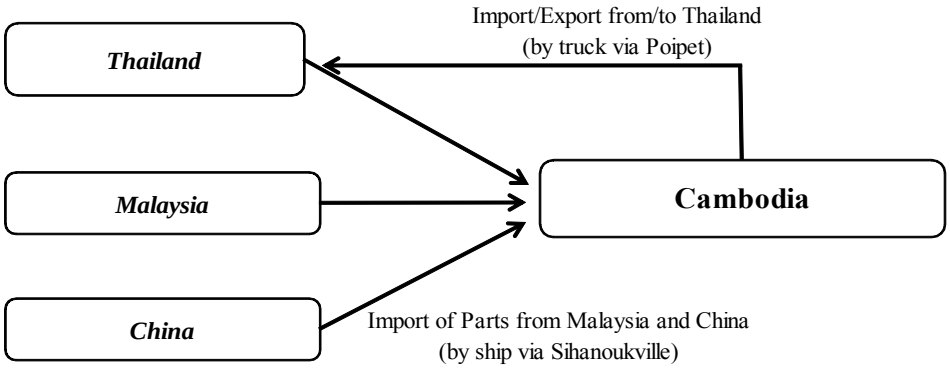
Figure 2-28 Value Chain of Garment and Footwear

ii) Machinery/processing and assembly sectors

Although the GVCs of the three sectors (i.e. motorcycle, precision instruments, and E&E parts) have different characteristics, a common point is that their Thai affiliate company plays a central role in the GVCs. In other words, the Thai company export raw materials and parts to Cambodia and receives Cambodian workers for the in-house training. They also send engineers and managers to Cambodia.

Pattern B

In this pattern, the manufacturers import from Thailand, Malaysia, and China and then export to Thailand.

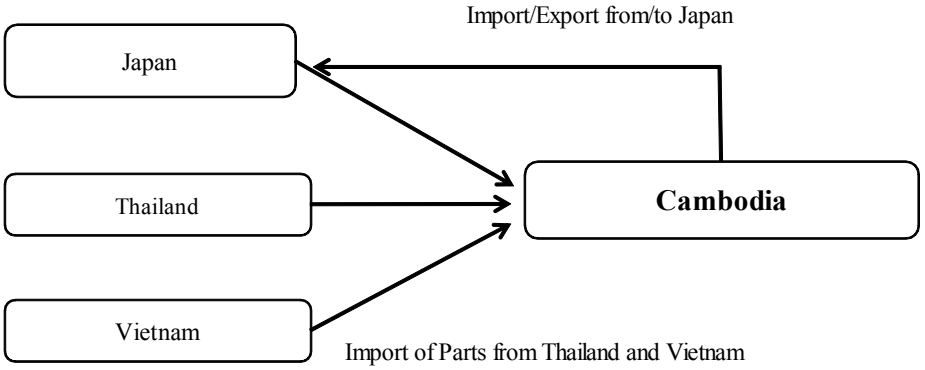


Source: JICA Study Team

Figure 2-29 Value Chain of Precision Instruments/Parts (Small Motors)

Pattern C

In this pattern, the manufacturers import from Thailand, Vietnam, and Japan and then export to Japan.

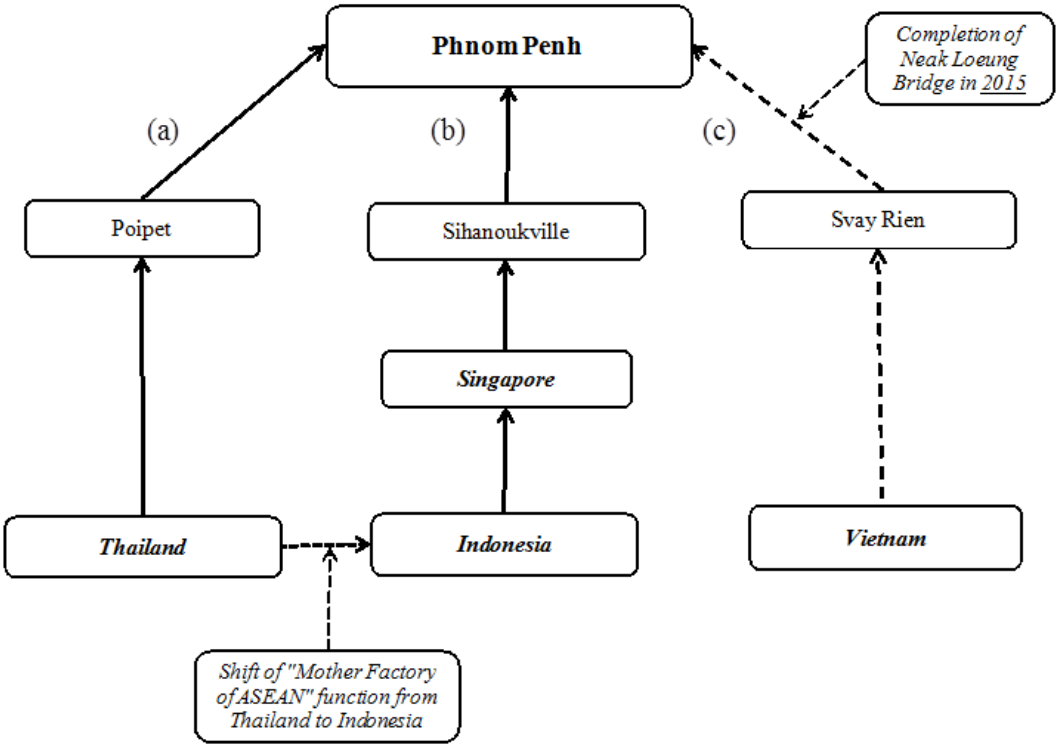


Source: JICA Study Team

Figure 2-30 Value Chain of Electrical and Electronics Parts (Wire Harness)

Pattern D

In this pattern, there are three channels: i.e, (a), (b), and (c). The two motorcycle assemblers import CKD parts by truck (via Poipet) from Thailand through the channel (a). One of them also imports from Indonesia through the channel (b) which began in the middle of 2012. This is because the functions of ASEAN's mother factory have been shifted from Thailand to Indonesia. On the other hand, given the construction of Neak Loeung Bridge is completed in 2015, import from Vietnam through channel (c) may begin along the National Road No. 1. It is worth noting that this is a typical example on the improvement of physical infrastructure conditions impacts positively to foreign manufacturers' decision-making on GVC.



Source: JICA Study Team

Figure 2-31 Value Chain of Motorcycle Assembly

2.4 Current Situations and Key Issues of Industrial Agglomeration

In the previous section, the current situations and important issues of key industrial sectors were discussed. From a geographical point of view, this section examines the current situations and critical issues of industrial agglomerations in the provinces/city of Phnom Penh, Sihanoukville, Koh Kong, and Svay Rieng in order to explore the potential of forming industrial agglomerations in these four areas.

2.4.1 Overview of Research Areas

(1) Overview

Phnom Penh, the capital of the country, is the heart of Cambodia where main business activities take place. It is also where the core government administration is situated. The city is one of the densest locations in Cambodia. The coastal areas of Sihanoukville and Koh Kong are located next to each other. Koh Kong also borders with Thailand. Geographically however, Koh Kong is distant from other locations of Cambodia and has a fewer population and labor force. Svay Rieng, together with Prey Veng, has the highest number of labor force in the country.[40]

Table 2-25 Overview of the Four Locations

Locations	Land (km^2)	Population (persons)	No. of Households	Labor Force (persons)	Neighboring Areas
Phnom Penh (2010)	678.46	1,501,725	295,358	693,000	Kandal and Kampong Speu
Sihanoukville (2011)	2,536.68	(*)247,355	45,237	139,497	Kampong Speu, Koh Kong and Kampot
Koh Kong (2011)	10,045.58	(*)133,047	24,311	69,803	Kampong Speu, Sihanoukville, and Thailand
Svay Rieng (2008)	2,966.00	563,582	115,253	n/a	Prey Veng and Vietnam

Note: (*) 2011 projection

Source: Phnom Penh Capital Hall (2012), Cambodia Investment Guidebook (2012), Commune Database Online (2010), Cambodia Socio-Economic Survey (2010), General Population Census of Cambodia (2008)

1) Electricity Use and Costs

- Phnom Penh: supplied by EDC and imported from Vietnam and Thailand.
- Sihanoukville: supplied by EDC. Coal power plants are under construction and are expected to supply electricity in Sihanoukville and other provinces starting 2014.
- Koh Kong: imported from Thailand and supplied by private firms.
- Svay Rieng: imported from Thailand and supplied by private firms.
- Svay Rieng has the lowest cost of electricity.

[40] According to JETRO, the labor force from the two provinces combined is around 1.5 million.

Table 2-26 Electricity Cost for Industrial Sectors in the Four Locations as of 2011

Locations	All Customers (/kWh)	Small Customers (USD/kWh)	Medium Customers (USD/kWh)	Large Customers (USD/kWh)	MV Customers (USD/kWh)
Phnom Penh	720R	MA+0.036	MA+0.028	MA+0.024	MA+0.020
Sihanoukville	720R	MA+0.046	MA+0.038	MA+0.034	MA+(0.015to0.025)
Koh Kong	6.5B	-	-	-	-
Svay Rieng	650R	-	-	-	0.1150

Note: MA = IPP's monthly average price in the month before last
MV = Medium voltage
Source: Cambodia Investment Guidebook (2012), EIC interview (2012)

(2) Current Situations of Physical Infrastructures in the Area

1) Road

- Phnom Penh is connected to all provinces in Cambodia via national roads.
- Phnom Penh to Svay Rieng: transportation via Nak Loeung ferry is required to cross the river. A bridge was said to be built, however, it is unknown when its construction will be finished.
- Sihanoukville is located in between Koh Kong and Kampot. There are national roads connecting these three provinces.

Table 2-27 Distances and Travel Times Between Provinces

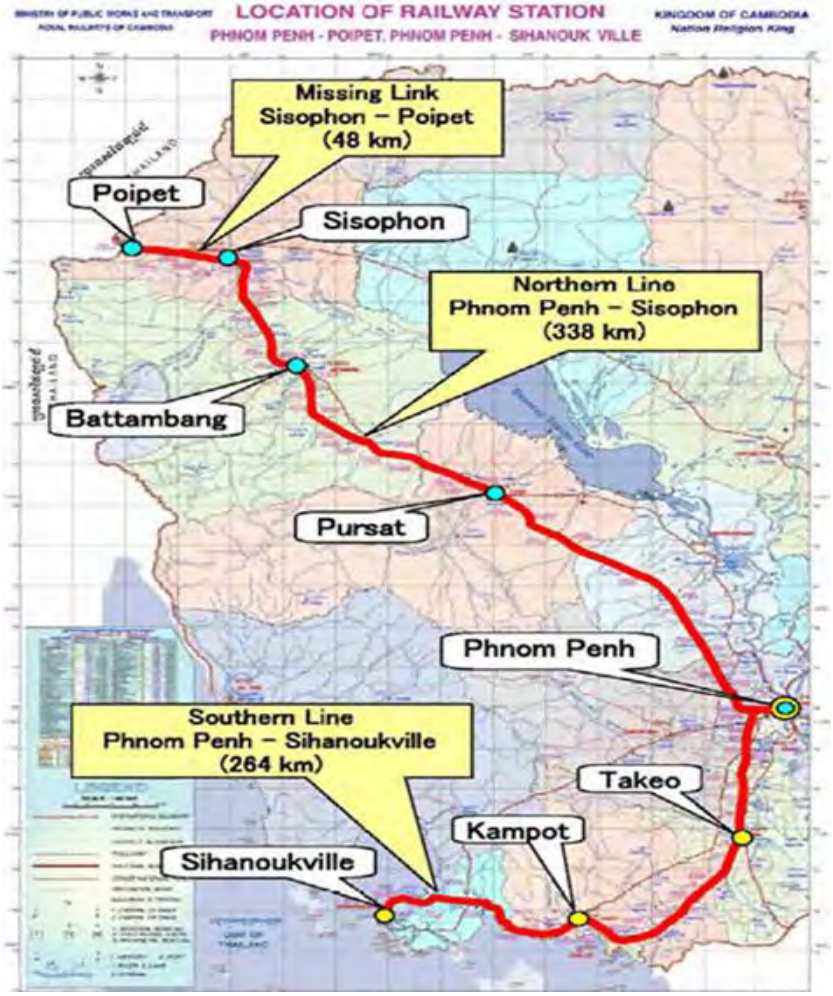
No	Province	Distance (km)	National Road	Duration for Vans (hours)*	Duration for Trucks (hours)*
1	Phnom Penh – Sihanoukville	230	4	3-4	5-6
2	Phnom Penh – Svay Rieng	122	1	2-3	4-5
3	Phnom Penh – Koh Kong	271	4, 48	4-5	6-7
4	Phnom Penh – Kampot	148	3	2-3	4-5
5	Sihanoukville – Koh Kong	230	4, 48	3-4	5-6
6	Sihanoukville – Kampot	105	4, 3	1-2	3-4

Note: * Estimation
Source: Phnom Penh Capital Hall (2012), GIS Data (2010)

2) Railroad

- From Phnom Penh, there are two lines, namely, the southern and northern lines.
- Southern line: Phnom Penh to Sihanoukville, across Takeo and Kampot provinces, with a distance of 264 km.
- Northern line: Phnom Penh to Poipet, across Pursat and Battambong provinces and Sisophon downtown, with a distance of 386 km.

- The railroad is under reconstruction. However, due to recent conflicts between the construction company, NGOs and people in the local area, it is unclear when the construction will be finished.



Source: Toll Royal Cambodia Railways (2012)

Figure 2-32 Railway Lines in Cambodia

3) Ports

- The new Phnom Penh Autonomous Port (PPAP) is located in Kien Svay and its construction is expected to finish in 2015.
- The old PPAP is currently operated manually, unlike the Sihanoukville Autonomous Port (SAP) which carry out computerized system operations. Once the new PPAP starts its operations, all major business activities will take place at the new port. The old port will be used for transportation activities of smaller businesses.
- There are also private ports in Phnom Penh connected to various provinces and to Vietnam. However, quality control is not conducted by the government agencies for such private ports.

- Koh Kong has three ports. One is operated by the RGC and the other two by private companies. These ports are small and used for transporting goods between Thailand and Koh Kong.

Table 2-28 Ports in the Four Locations

Location	Port	Destination	Duration (days)	Capacity (TEU/year)
Phnom Penh	Phnom Penh Autonomous Port (old)	HCMC (Vietnam)	2	80,000
	Phnom Penh Autonomous Port (new)	Cai Map (Vietnam)	1.5	120,000
	Private ports	-	-	-
Sihanoukville	Sihanoukville Autonomous Port	Singapore	3	250,000
		Malaysia	7	
		Vietnam	4	
		Hong Kong	6	
Koh Kong	Government port (small)	Thailand Sihanoukville	-	-
	Private port (small)		-	-
Svay Rieng	None			

Source: Phnom Penh Autonomous Port (2012), Sihanoukville Autonomous Port (2012), EIC interview (2012)

- Transportation through Cai Map Port of Vietnam is both more cost and time saving as compared to HCMC and Sihanoukville ports.
- This is because the Cai Map Port has a direct delivery route to USA and other countries. HCM and Sihanoukville Port have to transit in other countries first before proceeding to their final destinations (i.e., USA, Europe, Japan, etc.).

Table 2-29 Comparison Between Two International Ports Based on Cost and Time

Comparison		Cost Saved	Time Saved
PNP - Cai Map - USA	PNP - HCM - Singapore - USA	At least USD 200/container	Two days shorter lead time
	PNP - SHV - Singapore - USA	At least USD 100/container	Three days shorter lead time

Source: Phnom Penh Autonomous Port (2012)

(3) Review of SEZs

- Phnom Penh SEZ is considered to be the most active SEZ as it has the most number of investors at 36.
- It is followed by Mahattan SEZ with 18 investors, and then Sihanoukville SEZ 2 with 16 investors.
- Although there are five SEZs in Koh Kong, only one is active (with only three investors).

Table 2-30 SEZs in the Four Locations

Location	Number of SEZs	Number and Name of Active SEZs		Land Area (ha)	Number of Investors
Phnom Penh	1	1	Phnom Penh SEZ	467.00	36
Sihanoukville	6	2	Sihanoukville SEZ	178.00	3
			Sihanoukville Port SEZ	1,688.00	16
Koh Kong	5	1	Neang Kok Koh Kong SEZ	335.43	3
Svay Rieng	5	2	Mahattan (Svay Rieng) SEZ	180.00	18
			Tai Seng Bavet SEZ	125.00	11

Source: Cambodia Investment Guidebook (2012), Phnom Penh SEZ (2012), Sihanoukville Port SEZ (2012)

Table 2-31 shows the types of industry present in the active SEZs. These include garment and textile, footwear, assembly (vehicle and bicycle), electronics (wire harness, wire mesh, electronics equipment, etc.), manufacturing of screws/bolts/nuts, packaging (carton box, packaging), plastic products, food processing and others (construction, comic reuse, wood, candle, etc.).

Among the 87 firms in the six SEZs, garment and textile type firms exceeded 35 other firms. There are two supporting industries in these SEZs, one is into manufacturing of screws/bolts/nuts and the other into packaging. It is worth mentioning that the packaging industry also operates outside the SEZs. On the other hand, the manufacturing of screws/bolts/nuts is present only in the Mahattan SEZ in Svay Rieng.

Table 2-31 Number and Type of Industry Present in the Active SEZs in the Four Locations

Industry	Phnom Penh	Sihanoukville		Koh Kong	Svay Rieng		Total
	Phnom Penh SEZ	Sihanoukville SEZ	Sihanoukville Port SEZ	Neang Kok Koh Kong SEZ	Mahattan SEZ	Tai Seng Bavet SEZ	
Garment	12	-	8	1	7	7	35
Footwear	3	-	1	-	2	1	7
Assembly	1	-	1	1	1	3	7
Electronics	7	-	2	1	1	-	11
Screws/Bolts	-	-	-	-	2	-	2
Packaging	4	1	-	-	4	-	9
Plastics	1	-	-	-	1	-	2
Food Processing	3	-	-	-	-	-	3
Others	5	2	4	-	-	-	11
Total	36	3	16	3	18	11	87

Source: Cambodia Investment Guidebook (2012), Phnom Penh SEZ (2012), Sihanoukville SEZ 2 (2012)

2.4.2 Current Industrial Distributions and Economic Activities in the Four Locations

(1) Current Economic Activities in the Four Areas

1) Manufacturing Establishments

- Table 2-32 below illustrates the number of economic establishments by manufacturing activity in each of the four locations.
- Phnom Penh has the largest number of establishments among the four areas. Being so, it shows that it is the centerof business activities and transactions in the country.
- Koh Kong has the lowest number of establishments.

Table 2-32 Distribution of Number of Establishments by Manufacturing Activity Aggregated by Two-Digit Code

C	Manufacturing	Koh Kong	Phnom Penh	Sihanouk ville	Svay Rieng	Sub-total	Other Provinces	Total
10	Manufacture of food products	51	808	147	1,383	2,389	28,426	30,815
11	Manufacture of beverages	21	139	48	393	601	3,687	4,288
12	Manufacture of tobacco products	0	3	0	0	3	23	26
13	Manufacture of textiles	0	1,243	2	3	1,248	7,685	8,933
14	Manufacture of wearing apparel	126	4,106	274	402	4,908	11,188	16,096
15	Manufacture of leather and related products	1	126	6	3	136	150	286
16	Manufacture of wood and of products made of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	11	107	6	49	173	1,963	2,136
17	Manufacture of paper and paper products	0	24	2	0	26	8	34

18	Printing and reproduction of recorded media	0	173	7	3	183	124	307
19	Manufacture of coke and refined petroleum products	0	1	0	0	1	2	3
20	Manufacture of chemicals and chemical products	0	20	0	2	22	132	154
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	0	3	1	6	10	3	13
22	Manufacture of rubber and plastics products	0	32	1	2	35	18	53
23	Manufacture of other nonmetallic mineral products	6	340	23	25	394	2,309	2,703
24	Manufacture of basic metals	0	15	0	0	15	30	45
25	Manufacture of fabricated metal products, except machinery and equipment	25	1,124	117	118	1,384	3,534	4,918
26	Manufacture of computers, electronics and optical products	0	2	0	0	2	14	16
27	Manufacture of electrical equipment	0	3	1	2	6	24	30
28	Manufacture of machinery and equipment n.e.c.	0	2	0	1	3	21	24

29	Manufacture of motor vehicles, trailers and semi-trailers	0	0	1	0	1	3	4
30	Manufacture of other transport equipment	4	16	11	4	35	45	80
31	Manufacture of furniture	4	157	39	12	212	839	1,051
32	Other manufacturing	15	454	55	28	552	1,306	1,858
33	Repair and installation of machinery and equipment	20	192	24	28	264	894	1,158
	Total	284	9,090	765	2,464	12,603	62,428	75,031

Source: Compiled from NIS (2011)

2) Major Firms/Factories in the Four Areas

This section reviews the number of firms/factories in the four locations. This section also states the current situation of each location (See sub-sections 3)-6)).

- The number of major firms outside the SEZ in Phnom Penh was not obtained, thus, it is not shown in Table 2-33 below.
- Among the three provinces, Sihanoukville consists of the highest number of firms outside SEZs. Most of these firms were established years before the establishment of SEZs in the current location.
- A significant number of firms are already located inside SEZs in Svay Rieng, but there are still three firms which are operating outside SEZs.
- It should be noted that all firms outside SEZs in the three provinces are located along the national roads.

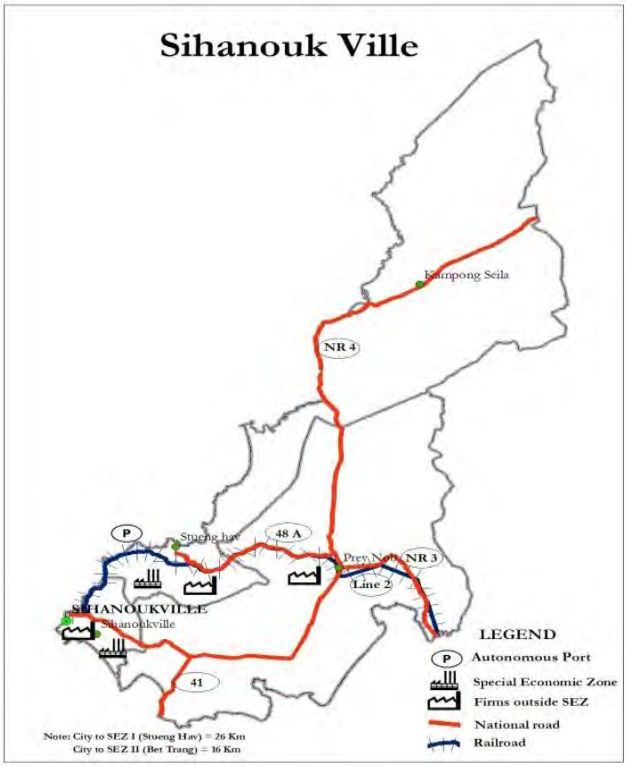
Table 2-33 Major Firms/Factories in the Four Locations

Locations	Firms in Active SEZs	Firms Outside SEZs	Total
Phnom Penh	36	-	-
Sihanoukville	19	13	32
Koh Kong	3	1	4
Svay Rieng	29	3	32
Total	87	-	-

Source: Cambodia Investment Guidebook (2012), Phnom Penh SEZ (2012), Sihanoukville SEZ 2 (2012), Department of Industry, Mine and Energy of Sihanoukville, Koh Kong and Svay Rieng (2012)

3) Sihanoukville

- There are 21 factories outside SEZs, but only 13 are currently in operation.
- Most of these firms/factories are garment and textile firms. Other than such, there are a few engaged in different industries such as footwear, food processing, steel, and tissue paper.
- They are located in three districts, namely Mittapheap, Stung Hav and Prey Nob.
- The same pattern of industry types is applied to firms inside SEZs.
- Firms both inside and outside SEZs (except one) all export their products to various countries via SAP.
- Two coal fire factories are being built. Electricity in the province will be supplied by these once their operations start.
- Besides these major firms/factories, current economic activities in Sihanoukville consist of tourism services such as restaurants, accommodations and travel, crude oil exploration; and agriculture.
- Aside from transportation through national roads and ports, a railway from Phnom Penh to Sihanoukville is under construction. It is expected that once the operation of the railway starts in the near future, it will improve transportation between Phnom Penh and Sihanoukville. The railway will also connect Sihanoukville with Kampot Provinces. The rehabilitation construction will be over in the near future and the whole line will be restored.

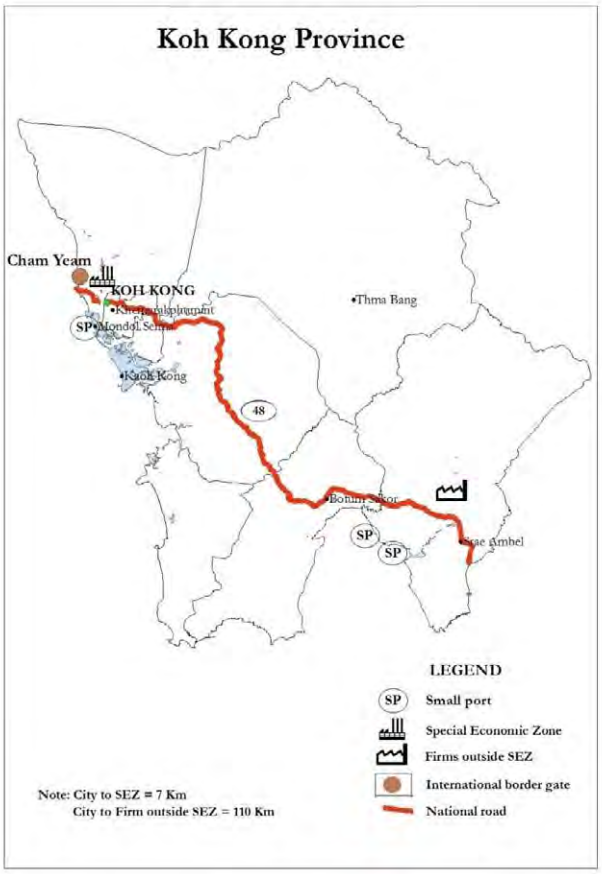


Source: EIC (2012)

Figure 2-33 Map of Sihanoukville

4) Koh Kong

- There is only one large-scale firm outside the SEZs of Koh Kong. It is a sugar factory which manufactures a semi-final product of sugar and then exports to Europe via Thailand for final production. Sugar canes have been planted around the factory.
- Three firms are located in the Neak Kok SEZ. Two are also for exportation via the Thailand border, while the other firm (vehicle assembly) conducts local market business. However, most of the raw materials are imported via the Thailand border. For the discussed sugar factory, transportation to Thailand is via the company's own private port.
- Besides the sugar company's port, there are two more small ports in Koh Kong. The ports are used mostly for transporting goods from Thailand. Through one of these ports, a large quantity of cement and a broad range of daily necessities are imported and carried to Phnom Penh.
- Besides these industrial firms, other economic activities include planting of rubber trees and other agricultural plantations; tourism services such as restaurants, hotel accommodations, travel and casinos.
- There is an international border gate located at Koh Kong (Cham Yeam).

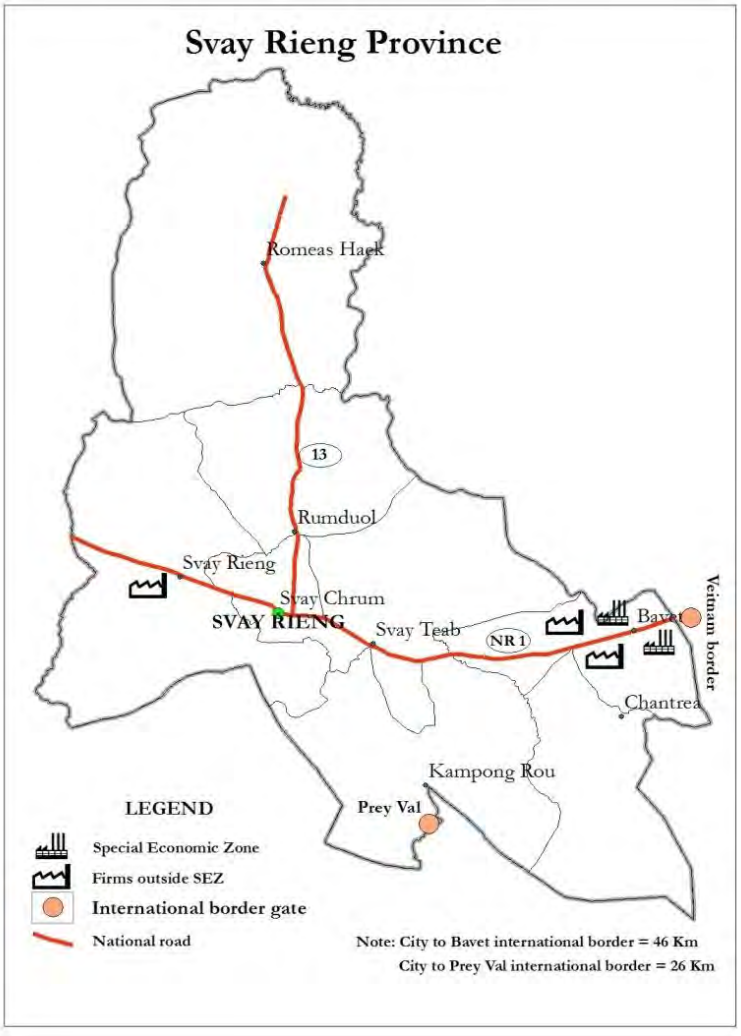


Source: EIC (2012)

Figure 2-34 Map of Koh Kong

5) Svay Rieng

- In Svay Rieng, three firms outside SEZs are manufacturers of garment and textile. Two of them are located in Bavet, and the other is in the town of Svay Rieng.
- There are 29 firms inside SEZs. Firms both outside and inside SEZs all export their products via the Vietnam border.
- There are two international border gates, Bavet and Prey Val. Bavet is actively used by the two SEZs located nearby, usually by tourists travelling between Cambodia and Vietnam. Everyday goods are also traded from Vietnam to Cambodia via this international gate. On the other hand, Prey Val is much less active and its road network is not yet fully developed.
- Besides these industrial firms, current economic activities include casinos and agriculture.



Source: JICA Study Team (EIC)

Figure 2-35 Map of Svay Rieng

(2) Transactions Within and Between SEZs

1) Within the SEZ

Sihanoukville

- Among the industrial firms aforementioned, transactions within the province are almost non-existent. Raw materials and final products are imported and exported via SAP between Cambodia and various countries.
- Except for one steel processing firm in which its products are used for construction within the SEZ (Sihanoukville Port SEZ), it is unknown whether or not the products are sold to other firms for construction in other SEZs and in the province. Yet, it can be assumed that such transactions are possible if there is demand.

Koh Kong

- There are no transactions of major industrial firms within Koh Kong currently.

Svay Rieng

- There are no transactions of major industrial firms within Svay Rieng currently.
- Although some types of industries within the SEZs can support other industry types like packaging and label clothing for garments, such industries aim at exporting only.
- There are several SEZs in operation in Svay Rieng (e.g. Manhattan) and others are now under construction. This province is located between Phnom Penh and HCMC. Given that the improvement of physical infrastructure (e.g. Neak Loueng Bridge) is in progress, there is a potential that an industrial agglomeration is formed in the province.

2) Transactions between SEZs

Phnom Penh and Sihanoukville

- Although most raw materials are imported via SAP, few transactions are done between firms in Phnom Penh and Sihanoukville.
- These transactions include the packaging business in which packaging firms in Phnom Penh supply cardboard boxes and other packaging materials to firms in Sihanoukville.

Phnom Penh and Koh Kong

- Some products are being supplied by firms in Phnom Penh to vehicle assembly firms in Neak Kok SEZ.
- Assembled vehicles are also transported to Phnom Penh for sales.

Phnom Penh and Svay Rieng

- Similar to the transactions between Phnom Penh and Sihanoukville, packaging firms in Phnom Penh supply their products to firms in Svay Rieng.

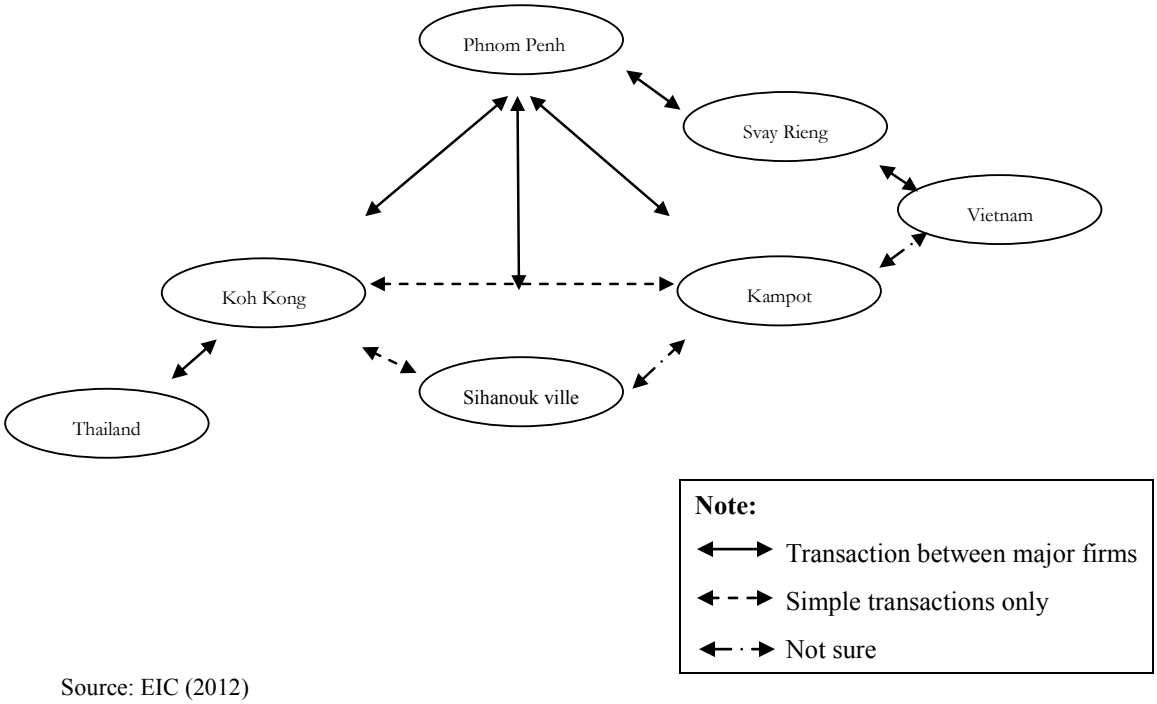
- Besides transactions between major firms in these locations, simple business transactions do occur. These transactions are even much more frequent.

Sihanoukville and Kampot

- Due to time constraints, such transactions are not carried out between Sihanoukville and Kampot. However, there is potential between these two provinces.

Koh Kong, Sihanoukville, and Kampot

- Simple business transactions do occur between these three locations.
- Koh Kong is considered to be a transit area. In particular, goods are transported from Thailand to Sihanoukville, Kampot and Phnom Penh via Koh Kong.



Source: EIC (2012)

Figure 2-36 Transactions Between Locations

(3) Key Challenges of the Four Areas

1) Supporting Industries[41]

- Almost all supporting industries are located in Phnom Penh and its surrounding areas. Since the demand for supporting industries at each location is still low, it is not economical to establish supporting industries outside Phnom Penh.
- The demand for some supporting industries, such as packaging, and labeling of clothes, in certain locations seems high. In addition, firms within the location also provide products for such demand. However, they do not supply to other firms within the same location but rather

[41] Regarding the definition of the supporting industry of this report, please refer to 2.2.3 of this Chapter (in Part 1).

export their products to other countries. One reason could be that the profit margin for exporting is higher than for local consumption.

2) Labor Force

- Koh Kong has not enough labor force. With only four major firms in the province, Koh Kong has already faced a labor force shortage. This is one of the factors that pushinvestors away from Koh Kong even though it borders with Thailand and has an easier transportation route between the two locations.
- Phnom Penh and Sihanoukville also face labor force shortage. Especially in Sihanoukville, both skilled and low-skilled laborers are insufficient. Although Svay Rieng has the most number of low-skilled laborers in the country, it may face labor force shortage as well if the number of firms in the province increases significantly.

3) Physical Infrastructure

Road Construction

- Although national roads have been constructed and are already operational, road maintenance is needed to ensure smooth operations.
- Transactions between Phnom Penh and Svay Rieng may meet constraints in transportation. From Phnom Penh to Svay Rieng, one has to use the Nak Loeung ferry in order to cross the river. This is time-consuming and costly. The problem will be solved once a bridge is built and its operation starts.
- The road from Prey Val international border gate to Svay Rieng town is unusable to trucks. A concrete road is needed for it to be usable to trucks.

Railroad Construction

- With railway, the transportation costs will lower. However, there is delay in reconstruction of the railroad.

2.4.3 Potential of Formation of Industrial Agglomeration

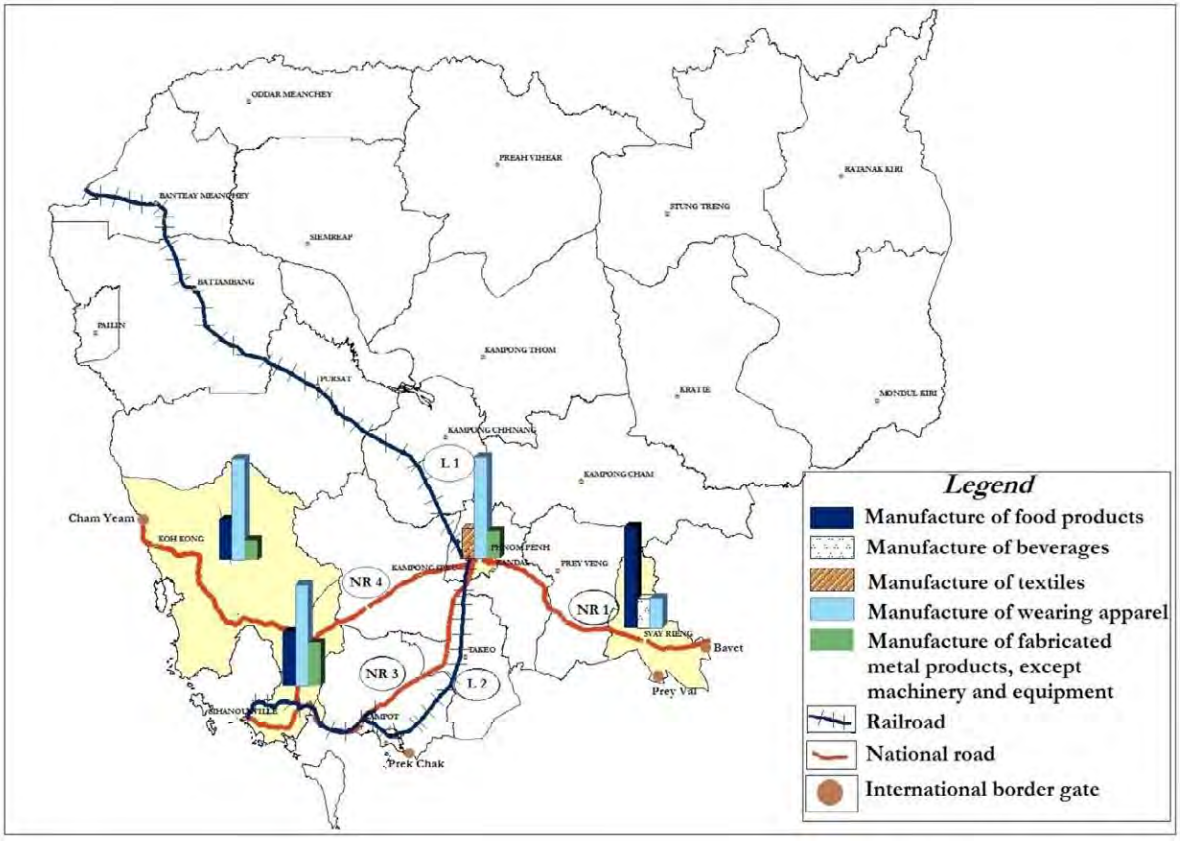
This section will look in to the three supporting industries and their potential to support the demand of Japanese firms. This section will also assess the potential of forming industrial agglomerations in the four locations.

(1) Potential of Formation of Industrial Agglomeration

1) Formation of Industrial Agglomeration of Koh Kong, Sihanoukville and Svay Rieng

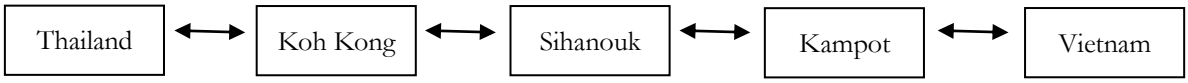
- Geographically the three provinces are located next to each other. Sihanoukville is sandwiched between Koh Kong and Kampot.

- All three provinces have existing SEZs.
- Simple business transactions have already occurred between the three locations.
- There are already national roads connecting Koh Kong, Sihanoukville and Kampot.
- Railroad reconstruction will connect Kampot and Sihanoukville.
- Koh Kong and Kampot have international border gates, namely, Koh Kong, Cham Yeam and Kampot, Prey Chak. Sihanoukville, on the other hand, has an international seaport.
- With all these being considered, there is a high potential for industrial agglomeration in the three above-stated provinces.
- There is a potential that an industrial agglomeration is formed in Svay Rieng, because several SEZs have been in operation and the province borders Vietnam. In particular, the potential increases if the improvement of physical infrastructure makes progress.



Source: JICA Study Team (EIC)

Figure 2-37 Map of the Four Locations



Source: JICA Study Team (EIC)

Figure 2-38 Diagram Showing the Possible Formation of Industrial Agglomeration

(2) Future Issues on Formation of Industrial Agglomeration

1) Potential of Formation of Industrial Agglomeration of Koh Kong, Sihanoukville and Svay Rieng

- The current road network connecting Koh Kong and Sihanoukville is usable but maintenance is highly needed.
- Railroad reconstruction is unclear when it would be finished and be able to start its railway operations. Conflicts between different stakeholders may prolong the construction even longer.
- Although there is potential in terms of their geographic locations, the demand for business transactions of major firms between Koh Kong and Sihanoukville may not be high enough for certain types of industry.
- As for Svay Rien, the improvement of physical infrastructure (i.e. construction of Neak Loueng Bridge) is one of the key issues.

(3) Concluding Remarks

1) There is potential of forming an industrial agglomeration among the three locations in Cambodia, namely Koh Kong, Sihanoukville, and Svay Rieng based on their geography and existing simple business transactions.

2) The three provinces also have existing SEZs and carry out transactions with neighboring countries.

3) Therefore, the connection can be made between the above-stated three provinces and neighboring countries such as Thailand and Vietnam.

4) However, the road network and railway have to be maintained and reconstructed on time.

2.5 Comparative Analysis on Industrial Policies: Case of Garment/Textile and Motorcycle Sectors

2.5.1 Textile/Garment Sector

Getting an overview of the key issues of Cambodia's garment sector, and the outlook of transferring CMT to FOB or introducing the possibility of upper- and middle-streams assembly in Cambodia, it is worth referring to lessons learned from experiences regarding policies on the promotion of textile/garment industries adopted by neighboring countries. The following sections will highlight some of the key elements related to such.

(1) Promotion Policies in the Philippines

The apparel industry in the Philippines rapidly grew under the import-substitution policies during

the early 1960s, advanced to export orientation later in the 1970s, and has then become one of the major export industries. In 1975, apparel products accounted for only 4.8% of the country's total export value. Its share in export expanded to 10.8% in the early 1980s and maintained a two digit share until the late 1980s. In the 1970s, the apparel industry became one of the major industries in the country; engaging about 600,000 laborers/employees.

The characteristics of the apparel industry in the Philippines showed a relatively high ratio of contract manufacturing at that time. As for export products, 40% to 50% of the apparel exports were under contract manufacturing from the middle of 1970s through the 1980s. These products were mainly mass-produced products and woven fabric products.

As contract manufacturing in general at the time was in the simple form with the flow of process being not so much subdivided. It was the common business practice that the parent contractor provided all the design, the specification of supplies and raw materials. Therefore, in terms of the industrial policy for contract manufacturing, there was no great concern if there was any possible initiatives on designs and/or supplies by domestic industry allowed in the later stage. Even if contract manufacturing does not have close linkage with the domestic industry, in terms of policy, a secured and stable supply of raw materials from consigners tend to be more encouraged. The Investment Incentive Act of 1967 set forth exemption on import duties for materials to be used for exporting industries in favor of contract manufacturing. This trend has been further developed in the 1970 Export Incentives Law.

Since 1945, the textile industry in the Philippines has enjoyed import-substituting industrialization policy and material compensation after the World War II. Initially, the industry was based on an integrated manufacturing process from upper-stream (spinning) to middle- and down-stream (dyeing, garment). However, in the 1960s, many factories have been established due to the protective policy, therefore, overproduction occurred. On top of high tariffs to protect contract manufacturing, preferential import of raw materials (fabric) on the incentive policy (e.g. tax exemption) for contract manufacturing damaged upper- and middle-stream sectors. Their competitiveness fell due to the aging and degradation of the quality of their equipment since they have no linkage with the contract manufacturing process of the same industry.

In 1981, the Philippine government laid out a plan to modernize the textile industry. A loan from the World Bank amounting to USD 150 million was planned for updating and improving the productivity of old equipment. However, due to political unrest stemming from the incident of the Aquino assassination (1983), this plan did not work out. Then in 1994, a plan for revitalization of the textile industry has been developed. However, in the expansion of free trade, the Philippines faced a heavy disadvantage in price competition with Vietnam, Bangladesh, Honduras, and Costa Rica, and lost its competition in the market which marked the downturn of the industry.

Currently, the government is developing the textile and apparel industry through a five year plan aimed at revitalization in order to attract new entrants in the industry and to create more jobs through the increase of production and exports. However, the question remains if actual revitalization can be realized as the industry structure had once been divided at one end from the upper-stream. In the same industry, the "Save Act Bill" of the US has gathered public attention with utmost interest at interest. This act will provide preferable incentives for exemption of tariffs on garment produced in the Philippines when using yarn and fiber produced in the US. However, again, the question remains if the recovery of export volume from contract manufacturing itself could result in the actual revitalization of the industry while the collapse of linkage between the upper-stream and down-steam is left unresolved.

(2) Promotion Policies in Vietnam

CMT assembly process is also a major activity in Vietnam's garment sector. However, unlike the Cambodian garment sector where the CMT contract is dominated by a group of Chinese consigners, Vietnam's CMT contract is rather consigned with Japanese and Korean groups since the 1990s. It is said that unlike the groups of Western and Chinese consigners, Japanese and Korean groups will bring a higher level of technology transfer.

Two industrial master plans on the textile and garment sector have been introduced since 2000, namely the "Accelerated Investment for Vietnam's Textile and Garment Industry during 2001 to 2010"[42], and the "Strategy for Textile and Garment Industry Development up to 2015 towards 2020"[43]. These two policies were aimed at: i) enhancing the local contents ratio and promotion of industry through import substitution in the area of upper- and middle-stream, and ii) promotion of exports and higher value-added through expanding opportunities in domestic procurement of raw materials and introduction of original design. The former objective is more focused on export promotion and increase of employment, while the latter objective tries to include the upgrading and strengthening of the fundamental competitiveness of the sector.

More specifically, the "Strategy up to 2015" states its major strategic objectives as the following: i) to develop the textile/garment sector as a major exporting sector, and ii) to strengthen the sector and steadily integrate it into the global economy. The plan also points out the significance of the development of domestic investment, trade facilitation, human resources development, and R&D.

i) Development of the textile/garment sector in collaboration with international donors, optimization of the advantages of it in bearing the major demands of developed countries, and

[42] ""Speed-up" Development Strategy for Vietnam's Garment and Textile Industry up to 2010 for Job Promotion and Increase of Export Turnover", the Prime Minister in Decision No 55/2001/QD-TTG (April 23, 2001)

[43] "Strategy on Development of Vietnam's Textile and Garment Industry to 2015, and Orientation Towards 2020", the Prime Minister in Decision No. 36/2008/QD-TTG (March 10, 2008)

promotion of domestic investment;

ii) Establishment of supply hubs of raw materials and/or accessories in major cities such as Hanoi and Ho Chi Minh, and promotion of final products supply to the domestic market;

iii) Expansion of the export market through improvement and facilitation of administrative procedures regarding customs, tariff management, importation process, provision of assistance to exporting companies such as consulting services;

iv) Establishment of a training program for workers in the textile/garment sector, coordination of training authorities/institutes related to VITA S and VINATEX as focal points;

v) Promotion and introduction of new technology and new materials: improvement of functions on designing, technology transfer, applied research, and consulting in R&D institutions;

vi) Preservation of the environment;

vii) Securing budget for R&D, human resources development, etc.

In order to achieve these objectives for the promotion of the upper- and middle-steams, a higher degree of concentration of capital and technology is required to promote the apparatus industry. The focus should be put to upgrade the quality of the products which should meet the requirements of global standards rather than just enhance productivity in terms of efficiency. Without competitiveness in quality, actual import substitution will not be realized. The promotion and introduction of new technology and new materials will be effective policy measures to this end.

Considering the global cost competition climate, the speed needed to implement other policy measures as well as to minimize the cost after FIE's local production begins will be the key to the successful achievement of the strategy in a competitive market after removal of the quota system. As for the upgrading of value-added products and promotion of exports, taking into account the challenging task of original branding in the global competition, it is necessary to have a set of policy measures first to facilitate a concrete foothold for the sector to develop and supply products of good quality and brand for the domestic market, and not only pursuing export promotion.

(3) Promotion Policies in Thailand

In Thailand after the Sarit's *coup d'etat* in 1958, a major industrialization policy was initiated by promoting FDI for import substitution. The Board of Investment (BOI) was established in 1959. The textile industry, although it was small-scale, was targeted to be protected and developed as the core of the domestic manufacturing industry. The BOI actively promoted import substitution in the textile industry as a whole. The textile industry was once excluded in the promotion in 1965; however, it was revived to be included in the scope from 1968 upon the increase of domestic market demand. The import duty of nylon was increased from 40% to 60%. "Promoted persons" are those granted

with a promotion certificate under the Investment Promotion Act. Their number reached 680 from 1960 to 1973, out of which 128 (approximately 20%) were in the textile industry.

In this process, the Government of Thailand focused on the promotion of import substitution by joint ventures, and the transfer of production technology from foreign contries, as well as the protection of the domestic industry. In the textile industry, out of the 89 "promoted persons" registered from 1960 to 1976, 56 of them (approximately 60%) were joint ventures. The registered joint ventures' number of employees was about 60,000 out of the 73,000 in total, and their capital amounted to THB (Thai Baht) 15 billion out of approximately THB 18 billion total. The number of joint ventures of Japanese companies is approximately one-third of the 30 companies, and about one-half of the total number of employees and capital amount. The role of Japanese companies was recognized to be of significant scale.

The characteristics of incoming FDI in the textile industry was concentrated on the investment on the upper- and middle-stream of the sector, from the "spinning" and "weaving" process to the "dyeing" and "fabrication" process rather than the "sewn products manufacturing" process. There was a reason for that tendency especially for the Japanese FDI in the textile sector. The so-called "Synthetic Recession" started in 1963 due to technological innovation in the textile industry. The innovation of long-fiber nylon improved its production capacity dramatically, from 150 ton/day in 1962 to 220 ton/day in 1963, and then reached 287 ton/day in 1964. This showed an annual growth rate of about 40%. Actual production also increased and excessive production occurred. It caused an oversupply and a drop in the price of products from the textile sector. The Japanese textile industry did not have further choice but to move into Asian countries for new market opportunities. Thailand was one of the preferred destinations of the Japanese textile sector as there were relatively decent infrastructure and legal enabling environment therein as compared with other countries at that time. As the synthetic production sector is the apparatus industry, the investment was rather preceding and weighted on the upper- and middle-stream of the textile industry. The major localization process of the textile industry was initiated since then with the BOI's investment promotion policy responding to its development.

As stated above, it is true that the Thai import substitution policies since the 1960s themselves have been successful in localizing Japanese FIEs to some extent. On the other hand, at the same time, the Japanese textile industry was faced with major challenges and had to develop new markets in Asia. This resulted in conducting on-site productions as an answer for the "Synthetic Recession" in Japan. It is to be noted that not only the policies themselves but also exogenous effects altogether contributed to the localization of foreign investment in this sector and creating major corporate groups consisting of vertical integration of upper- to down-streams which had supported the economy of Thailand.

Between Cambodia and Thailand, the structures and business operations of the textile industries vary among each other. The Cambodian garment sector has been limited to down-stream process, assembly on CMT contract, whereas a full range of manufacturing processes is being enjoyed in Thailand. In this regard, the Thai promotion policies may not serve as a direct reference for Cambodia. However, the experiences of Thailand clearly suggest that policies can be effective once they are implemented to meet with the economic background on which the corporate behavior was based. Provided that the incentive policy was behind and followed after the establishment of FIEs, it should be welcomed by them to enjoy and develop their operations. Once this is realized, termination and/or reduction of incentives could provide opportunities for FIE to explore further domestic procurement and/or to invite suppliers to where the FIE is located.

2.5.2 Motorcycle Sector

(1) Case of Vietnam

This section examines the development process of Vietnam's motorcycle sector in the following periods: 1) 1986-1999, 2) 2000-2001, and 3) 2002-present.

1) 1986-1999

In this period, import substitution of motorcycles began in which a large number of local manufacturers and foreign assemblers entered into the local market. However, the local manufacturers specialized in the assembly of Thai motorcycles by importing complete knock-down (CKD) parts. As a result, suppliers were not developed.

On the other hand, FIE's production for import substitution was followed by the entry of Japanese and Taiwanese suppliers into the local market. Japanese suppliers manufactured large and heavy parts such as mufflers and tires, while Taiwanese suppliers produced functional parts. Therefore, this period can be called as the initial stage of supplier development in Vietnam. Foreign assemblers could not secure sufficient production volume because their local competitors are more competitive in terms of price and brand. As shown in Table 2-34 below, foreign manufacturers however attempted to promote import substitution gradually through *kaizen* activities, various training courses for workers, local procurement, etc. in order to catch up with the quality, cost and delivery (QCD) level of motorcycles imported from Thailand.[44]

[44] CKD parts of these motorcycles were imported from Thailand and assembled in Vietnam.

Table 2-34 Japanese Firms' Localization of Production Process and Parts Production (in Vietnam)

	Honda Vietnam	Machino Auto Parts (MAP)
1999 and before	Assembly of completed motor vehicles Press molding, welding and painting Plastic injection and metal processing	Plastic case of meters Clutch parts Aluminum processing (cushion)
2000 and 2001	Metal casting (engine cover) Metal casting (engine case) Metal casting (cylinder) Metal casting (cylinder head)	Metal casting（cushion and clutch） Aluminum processing (clutch) Assembly of lamp code Damper processing of rear cushion
After 2002 inclusive	Metal casting (cylinder) Strengthening of plastic injection Strengthening of metal processing	Processing (pipe and steering system) Plating Oil pump, fuel unit parts Spring

Source: Chapter 8 of Mishima (2010)[45]

2) 2000-2001

In this period, Chinese motorcycles overwhelmed the Vietnamese market[46] because their prices, which were at approximately USD 1,000 each, were much lower than of other motorcycles. Since Chinese motorcycles sold very well, local manufacturers which assembled Chinese models increased their market share. While local manufacturers were more competitive in terms of price, foreign firms lost their share in the market. However, foreign firms could reduce overall costs of motorcycle assembly by increasing the local contents ratio and requesting their suppliers to reduce the cost of various parts and raw materials. In the process of cost reduction, these assemblers and suppliers maintained the quality level and in turn have become more cost competitive. The production of motorcycle parts from foreign firms as well as the assembly of motorcycles for import substitution increased to a large extent in this period. Foreign firms made continuous efforts to enhance QCD capacity and to develop innovative products, while local manufacturers did not attempt to increase QCD capacity thus they became less competitive.

3) After 2002

In this period (after 2002), Chinese models began to lose their share in the Vietnamese market, and local assemblers declined in marked contrast to foreign manufacturers that had tackled continuous enhancement of QCD. Foreign assemblers gained market share and, simultaneously, more foreign suppliers (especially Japanese suppliers of functional parts) entered into the local market. Although Taiwanese suppliers provided Japanese assemblers with their parts, after the entry of Japanese competitors into the market, the competition between Taiwanese and Japanese suppliers became more intense.

Evidently, in this period, foreign firms contributed largely to Vietnam's industrial development. In

[45] Mishima, Kohei, (2010) "*Tonan Ajia no outbai sangyo*" (Motorcycle Industry in Southeast Asia), Tokyo: Minerva Shobo

[46] CKD parts of these motorcycles were imported from China and assembled in Vietnam.

other words, foreign assemblers had a major role to play in developing suppliers and in enhancing organizational capacity of technology formation. Consequently, import substitution of parts (inputs) as well as of completed motorcycles (final goods) was promoted. In recent years, the export of motorcycle has increased and a part of R&D has been localized.

Progress of import substitution means diversification of the industrial structure. With the entry of new suppliers into the market and with the development of the supporting industry, Japanese assemblers switched their source for parts procurement from import of CKD (from Thailand, etc.) to local procurement, as shown in Table 2-35 below. Japanese assemblers tried to place their order to a single supplier for almost all functional parts. The assemblers also requested them to deal with defectives in a particular production process, to enhance QCD capacity and to develop metal molds, production equipment, etc.

Table 2-35 Japanese Assemblers' Classification (In-house Production and Outsourcing) in Vietnam (2003)

			Honda Wave	Yamaha
Category	Engine parts	Cylinder block	◎	◎
		Cylinder head	◎	◎
		Piston	-	△
		Piston ring	△	△
		Oil pump	△	●
		Carburetor	-	△
		Automobile muffler	●	●
	Drive train parts	Clutch	●	△
		Transmission	●	△
	Electric parts	Lights	●○	●
		Meters	●	●
		Generator	-	◎
	Auto body parts	Auto body	◎	◎
		Suspension	●	●
		Gasoline tank	-	◎
		Wheel	●	●
		Tire	●	●

Remarks: ◎In-house production, ● Outsourcing (special order), ○Outsourcing (general), △ Import
Source: Chapter 8 of Mishima (2010)

2.5.3 Lessons Learned for the Case of Cambodia

(1) Garment/Textile Sector

In the garment sector, the management form of production and distribution network tends to decide the level of further sophistication of the industry itself. In other words, incorporation with the network of buyers that seek for higher value-added products will bring a higher degree of technology transfer from the buyer. This would realize a higher degree of upgrading and efficiency both in quality of products and production process. On the other hand, in a network designed for mass exports primarily to a large market such as the US, the focus will be put more on price competitiveness and production efficiency pursuing for the scale economy requirement. While the sector may enjoy rapid expansion of export, the level of technology transfer can be limited and a high level of product quality upgrading will not be expected.

Thus, it is important to facilitate and guide the garment sector to link with the buyers' network in which contribution for industrial upgrading is expected. The realization of this linkage will lead to a sense of reality in the creation of original brands such as what the policy of Vietnam is aimed at. In order to do so, process upgrading is the first priority. That is to say that even simple CMT assembly processes should be upgraded to a level of comparative advantage such as the process of ultimate preciseness and speed. It should not be overlooked that Vietnam's strategy also gives importance to worker training based on this idea. Through the differentiation by the upgrading, the expectation to the upgraded process from the network (consigner) will become higher and the degree of involvement to the network will be stronger. It will lead to the integration of the simple CMT process with other function levels of the network such as material procurement, marketing design, and/or global even inventory management. This will also assist the sector to open the paths to the creation of Cambodia's new brands, although it is very difficult to do so. It is realistic to start with the development of original products and their deployment in the domestic market. It is easier to develop the domestic market than the much more competitive global market. RGC could consider setting out a policy to facilitate the sector in this direction. (Facilitation of development of the domestic market can be applied to other sectors as well, not only to the garment sector.)

Noting the experiences in the Philippines, delayed modernization of the upper- and middle-stream processes and the excessive reliance on simple CMT gave birth to a vulnerable and low value-added structure of the textile industry, leaving only the sewn products manufacturing part. In Cambodia, the upper- and middle-stream will depend on imports until a concrete foundation of the textile/garment sector is constructed. Even in such circumstances, it is important for the garment sector in Cambodia to focus on increasing the value-added in the sewn products manufacturing part rather than being confined in the simple CMT process. As seen in the case of Thailand, it is also important to consider how the policies can be designed and implemented in order to meet with the

economic background on which the corporate behavior was based. Provided that the low labor cost is the current and most of Cambodia's attraction to the FDI, the policy should encourage the FIE to provide technology transfer (i.e. training of workers) in return of their privilege for the low cost. The upgraded quality of workers can become an alternative incentive for FIE in the future even after the increase of labor cost when the level of their quality meets FIE's requirement.

(2) Motorcycle Sector

When it comes to the development of Vietnam's motorcycle sector, Mishima (2010) emphasizes the importance of the two following points. Firstly, the import of completed motorcycles was banned in the late 1990s. This regulation led to an increase in foreign assemblers' entry into the Vietnamese market and in the production volume of motorcycles. Secondly, the tariff is linked with the local contents to facilitate the localization of parts production and of the production process which was introduced in 2001. In the period between 1986 and 1999, *kaizen* activities were carried out and a wide variety of training courses for workers were provided. Import substitution was also promoted in the form of phased local procurement; namely, foreign manufacturers shifted the import of CKD parts to in-house production. In the first half of the 2000s, as indicated in Table 2-36 below, due to the Japanese firms' shift of import of CKD parts to in-house production and entry of foreign suppliers into the Vietnamese market, Japanese firms realized the localization of parts production and the production process in Vietnam.

The provision of incentives to FIEs according to the local contents ratio may be effective. In order to diversify the industrial structure of the country, it is crucial for the RGC to encourage FIEs to increase in-house production in widening their product lines, as well as to carry out *kaizen* activities and provide workers with a variety of training courses.

One of the lessons learned for Cambodia is the above-stated tariff that is linked with local content ratio. It is worth considering its introduction into the country. The other is to encourage FIEs to develop human resources for industries and to shift the import of CKD parts to in-house production.

Table 2-36 Outline of Main Policies of Vietnam's Motorcycle Sector

Year	Contents	Influence and Result	
1997	Ban on import of completed motorcycles	Foreign	After the 1994 prior notification of the future (1997) ban on import of completed motorcycles, foreign assemblers entered into the Vietnamese market and began local production.
		Local	Because of inadequate policy implementation, some local firms continued the assembly of CKD parts illegally.
2001	Introduction of tariff system linked with local contents	Foreign	Local procurement was promoted for cost reduction (Results: [1] Assemblers increased shift of import of parts to in-house production. [2] More and more foreign suppliers entered into the market. [3] Local suppliers were developed, etc.).
		Local	Until 2001, several local firms violated the regulations by making false reports about the local contents ratio. From 2002 onwards, however, enforcement of the regulations was strengthened and penalties (e.g. factory shutdown) were imposed on the firms for false reports.
2002	Quota on import of parts	Foreign	The quota caused a layoff of over 20,000 workers, shutdown of factories and foreign firms' postponement of planned investments in Vietnam.
		Local	Although sufficient quota was allotted, it was not fully utilized because of a stark fall in the market share, and factory shutdowns (penalties due to false report) imposed by the government.
2003	Liberalization on the import of completed motorcycles (Tariff: 100%)	Import of completed motorcycles did not increase sharply (Reason: [1] Fall in demand of Chinese models, [2] High tariff applied to import, etc.).	
	Tariff on import of parts lowered up to 50%	There was a change in the policy direction of local procurement promotion. From the viewpoint of not only cost but also QCD, the manufacturers decided on import or local procurement.	
	Regulations on registration for owning a	Registration of motorcycle was limited to one motorcycle per person. According to a trial estimate, the demand fell by 10%. However, many people avoided registration and the regulation was abolished at	

	motorcycle in urban areas	the end of 2005.
2005	Abolition of production quota based on F/S	Foreign firms gained an advantage in flexibly planning a strategy for production volume, import and product line.
	Exception made to CEPT[47] for import of parts and completed motorcycles	Entry of foreign suppliers into the market was accelerated because local production was prioritized instead of complementation of parts within the ASEAN.

Source: Chapter 8 of Mishima (2010)

2.6 Concluding Remarks

It was pointed out that Cambodia is at the initial stage of industrialization in East Asia and is at the turning point of either following the process of promising industrialization (Curve A) or missing a good opportunity of industrialization (Curve B). The critical point is whether the country can participate in the GVC across East Asia and realize the shift from light industry to processing assembly industry. On the other hand, it was emphasized that the linkage between agricultural and industrial sector is important in order to promote modernization of agriculture in the situation of over occupation in the sector. Also, the section pointed out that the main sector for manufacturing SMEs is food processing and the linkage among SMEs and other sectors are weak.

Section 2.2 pointed out that the GVC is the framework of analyzing how a company strategically organizes parts, assembly production, and delivery logistics from the two points of view (main and supporting activities) and that Cambodia is brought into the GVC of the automobile industry (Section 2.2.1). Regarding distribution and logistics (Section 2.2.2), Cambodia has not reached the level of milk run due to the small number of suppliers in the country. Cambodia carries with it basic problems including drivers' manner, although the country tries to conduct milk run and buyers consolidation to support TPS in neighboring countries such as Thailand.

This study defined supporting industries as "industries which supply parts (including packaging) and play a role of intensifying forward/backward linkage effects for industries in Cambodia" (Section 2.2.3). This definition widens the existing narrowly defined supporting industry (Figure 2-13) based on the current situation of Cambodia. The report also stated that firms like packaging, plastic products, and screws/bolts sectors have potential to grow as supporting industries, while the government needs to take necessary measures to promote foreign companies (including Japanese companies) in coordination with the policies of FDI promotion and SME development of other

[47] "CEPT" stands for Common Effective Preferential Tariff.

sectors.

In the current situation and issues of industrial sectors (Section 2.3), the current situation of GVC is discussed based on the interviews to the key sectors: namely, garment/footwear, motorcycle, precision instruments and parts, E&E parts, and agricultural and food processing, by the JICA Study Team. As a result, the GVC of the assembly and processing sector in Cambodia is categorized into four patterns. The garment/footwear sector, in which many production locations were transferred from China, falls in Pattern A. This pattern is a system where materials and parts imported from neighboring countries are processed in Cambodia and the products are exported to Japan. Motorcycles, precision instruments and parts, electronic parts fall under Patterns B, C, and D, respectively. The common characteristic among the three is making full use of the existing functions of the GVC built around the production locations in Thailand. For example, the companies import materials and parts from Thailand, send Cambodian workers to Thailand for training, and send Thai engineers and management staff to Cambodia for advisory and managerial service.

On the other hand, it was pointed out in Section 2.4 that an industrial agglomeration has been established around the Phnom Penh area. Although there are still issues of infrastructure development and maintenance considering geography and the current situations of business transaction, the existence of SEZs, and the proximity to the neighboring countries (i.e. Thailand and Vietnam), there is also a potential of forming an industrial agglomeration in Koh Kong, Sihanoukville, and Svay Rieng.

In the comparative analysis on industrial policies (Section 2.5), the garment/textile sector (case of Thailand and the Philippines) and the motorcycle sector (case of Vietnam) were discussed. Recently there have been new developments recognized that some service sectors, i.e. commercial distributors and supermarkets, are producing consumer goods under their original brand designed for the market where their sites of sales are located. It is important for the RGC to take advantage of this type of opportunity in linking the garment sector to such so that the sector may begin to develop their original products by producing and providing for the domestic market. Starting from 2012, it is known that a major Japanese distributor is planning to enter into the Cambodian market and to establish a large-scale shopping mall in Phnom Penh. The distributor may show interest in the development of their original brand products to the domestic market. The facilitation policy should take this type of movement into consideration and extend to the garment sector.

The establishment of an integrated manufacturing process from upper- to down-stream is important and it is not to be neglected especially for the long-term strategy. However, as observed in the case of the Philippines, it is quite challenging to link the once divided CMT process component to the upper- and/or middle-stream. (it also depends on how far the policy wishes to take the garment sector to be the driving force of the Cambodian economy.) For the short term, instead of taking on

the challenge of establishing a full range of integrated manufacturing processes, it is rather realistic to aim at upgrading the value chain (aim to link and integrate CMT-related functions, such as material procurement, marketing, and designing). From the long-term point of view, it is also considered in the course of upgrading to ensure the firm linkage with the upper- and/or middle-stream in other countries in order to form an international integrated manufacturing process. That is to say, it is important to see that the way of integration can be designed with the level of involvement of the Cambodian garment sector to the GVC. Instead of making a large-scale investment, focus should be put on functional upgrading taking technology and intelligence intensive processes into Cambodia. (For example, the integration of functions of the value chain on distribution management and/or designing to the Cambodian side.)

The upgrading of the quality of CMT should also be considered and not only the challenging simple shift from CMT to FOB. Provided that the CMT is what the actual business is pursuing, an end-to-end and high quality CMT should form the comparative advantage. There are many areas to promote differentiation even in the CMT (simple assembly process) area, such as efficiency in productivity, minimization of defect ratio, upgrading and standardization of the quality of workers, promotion of conformity with global standards, etc.

As for the case of the Vietnamese motorcycle sector, the two following points are important. Firstly, the import of completed motorcycles was prohibited in the late 1990s. This prohibition resulted in an increase in the entry of foreign assemblers into the Vietnamese market and the production volume of motorcycles. The second important point is that the tariff is linked with local contents to facilitate the localization of parts production and the production process. The tariff was introduced in 2001.

In the period between 1986 and 1999, many Japanese manufacturers carried out *kaizen* activities and a wide variety of training courses for workers were provided. Import substitution was also promoted in the form of phased local procurement; namely, foreign manufacturers shifted the import of CKD parts to in-house production. In the first half of the 2000s, as is indicated in Table 2-36 above, due to the Japanese firms' shift of import of CKD parts to in-house production and the foreign suppliers' entry into the Vietnamese market, Japanese firms realized the localization of part production and production process in Vietnam.

The provision of incentives to FIEs according to the local contents ratio may be effective for the development of the supporting industry in the future. In order to diversify the industrial structure of the country, it is crucial for the RGC to encourage FIEs to increase in-house production for widening their product line, as well as to undertake *kaizen* activities and provide workers with a variety of training courses.

CHAPTER 3 **Foreign Direct Investment into Cambodia**

3.1 FDI into Cambodia and Japanese Manufacturers

3.1.1 Role of FDI

Capital formation is a necessity for economic development. High-level investment and savings have contributed to the development of East Asia. In the initial stage however, there was a shortage of capital accumulation and of savings for investment. Foreign direct investment (FDI) has played a vital role in providing funds for domestic investors in many countries, including Cambodia.

Investor countries seek for low-cost host countries with a profitable market for their FDI destinations. In the meantime, host countries use FDI as a leverage to promote capital formation and export as well as to improve their services in the tourism sector. Through FDI, host countries can generate incremental income, employment, and benefits from technology transfer. FDI has been an engine of growth in East Asia. Special economic zones (SEZs) have been FDI's gateway to these host countries.

3.1.2 Savings and Investment in Cambodia, International Balance of Payment and FDI

Although foreign manufacturers make the final decision regarding FDI, the decision will still be based on the macro economy (i.e. international balance of payment, saving and balance, etc.) of a host country.

(1) Savings, Investment and FDI

Figure 3-1 indicates that Cambodia's rate of investment and savings have been on the rise in the long run. A few fluctuations in the rates have occurred after the Asian financial crisis in the late 1990s and the global financial crisis (hereinafter referred to as "GFC") in the late 2000s. In particular,

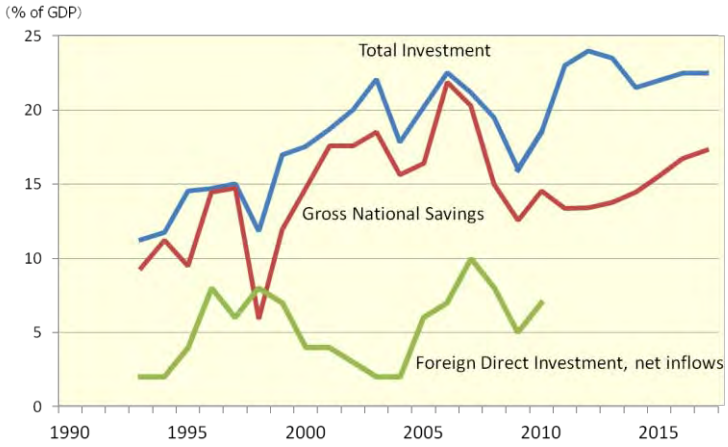
Table 3-1 and Table 3-2 indicate that gross domestic savings was higher in 2006-2010 than in 2001-2005, while total investment also went up to 24.0% in 2012. Consequently, the ratio of current GDP balance deficit went from 4.1% in 2010 up to 10.1% in 2012.[48]

The savings-investment gap is equivalent to the current account deficit. There is a large trade deficit in the case of Cambodia. As a result, the current account deficit is unavoidable, and the capital account deficit is compensated by FDI and by official development assistance (ODA).

On the other hand, FDI widens the savings-investment gap to increase the fixed capital formation of the country. The above-mentioned IMF's estimate indicates an increase in investment ratio as well

[48] IMF "Cambodia; 2011 Article IV Consultation: Debt Sustainability Analysis"

as the aggravating current account deficit in the phase of increased inflow of FDI.



Note: Three years moving average index (Estimation from 2010.)
Source: Complied by JICA Study Team based on http://www.imf.org and http://data.worldbank.org/

Figure 3-1 Cambodia's I-S Balance and FDI

Table 3-1 I-S Balance (1)

(unit: % of GDP)

	2001-2005	2006-2010
Gross domestic savings (a)	9.5	15.4
Gross domestic investment (b)	18.3	20.3
(b—a)	-8.8	-4.9

Source: Compiled by JICA Study Team based on IMF "Cambodia – 2011 Article IV Consultation" February 2012

Table 3-2 I-S Balance (2)

(unit: % of GDP)

	2008	2009	2010	2011	2012
Gross national savings (a)	15.0	12.8	14.4	13.5	13.9
Gross fixed investment (b)	19.5	16.0	18.5	23.0	24.0
Current account (b-a)	-4.5	-3.5	-4.1	-9.5	-10.1

Source: Compiled by JICA Study Team based on ADB's "Key Indicators for Asia and Pacific 2011"

(2) Balance of International Payments and FDI

Table 3-3 shows the balance of payment by stage hypothesis, which explains the patterns of balance of payments in the long run. The table illustrates that the I-S balance is changeable according to the stages of economic development. According to the hypothesis, Cambodia is currently at the stage of an immature creditor nation. In other words, since Cambodia is a developing country in terms of its economy, the balance on trade and services and income balance are both in the red (See Table 3-4). Capital and finance account is in the black. FDIs have a role to play in filling the gap of domestic capital shortage between the domestic savings and investment demand.

Table 3-3 Patterns of Balance of Payments by Stage

		Current Account	Trade Balance & Services	Income Balance	Capital & Finance Account
I	Immature Debtor country	−	−	−	+
II	Matured Debtor Country	−	+	−−	+
III	Debt Repayment Country	+	++	−	−
IV	Immature Creditor Country	++	+	+	−−
V	Matured Creditor Country	+	−	++	−
VI	Credit Drawdown Country	−	−−	+	+

It is necessary to build up a system of allocating savings to investment by raising the rate of savings so that Cambodia's long-term economic development may be realized. Trade balance is expected to improve by export promotion and import substitution, while service surplus is expected to expand by tourism promotion. Moreover, the Royal Government of Cambodia (RGC) is required to facilitate FDIs, in particular, "quality" FDI. A sharp decrease in FDIs in the country results in the deterioration of the current account and a decrease in foreign reserves.

Table 3-4 Cambodia's Balance of International Payments

(unit: USD million)

	Current Account	Trade Balance and Services	Income Balance	Capital and Finance Account
2005	-307	-532	-295	393
2007	-481	-711	-364	940
2009	-931	-1028	-477	1027

Source: IMF "International Financial Statistics"

From the viewpoint of Cambodia's industrial development, it is crucial to attract FDIs in the manufacturing sector, and maintain macroeconomic and financical management in order to secure sustainable economic development.

3.1.3 Trends and Characteristics of FDI in Cambodia

FDI in Cambodia has increased steadily since 1994 when the approval of qualified investment projects (QIP) began. When it comes to the trend of FDI into Cambodia from 1999 to 2010, annual FDI amounted to USD 633 million on average in 2005-2010. This amount is 4.5 times as large as that in the first half of 1999-2004. The accumulated amount of FDIs for the whole period (1999-2010) is USD 4,642 million. (See Table 3-5)

The characteristics of FDI in Cambodia are as follows;

First, although FDI inflow varies year by year, there is a tendency for FDI to increase continuously not only in terms of its amount but also its GDP ratio.

Figure 3-1 indicates two cycles of FDI inflow. Annual FDI inflow peaked and amounted to USD 227 million on average between 1996 and 1999 in the first cycle.

In the second cycle (2004-2009), although the inflow was recorded at USD 806 million in 2007, there was a 40% fall caused by the GFC in 2009. The FDI-GDP ratio was between 3% and 8% in the first cycle, while the range of the ratio was between 5% and 10% in the second cycle. There has been an upward shift in both the peak and bottom ratio. The third cycle of the FDI inflow began in 2010. According to the IMF estimate,[49] FDI-GDP ratio goes from 5.0% in 2009 up to 9.6% on average between 2011 and 2013. Cambodia has reached a new phase in attracting FDIs.

Table 3-5 Inflow of FDI

（Unit : USD million, ratio ）

Period	Accumulated	Annual Average
1999-2004 (a)	842	140
2005-2010 (b)	3,800	633
b/a	4.52	4.52

Source: JICA Study Team based on ADB's "Cambodia: Key Indicators for Asia and the Pacific 2011"

Secondly, the tourism and manufacturing sectors play a leading role in attracting FDIs. According to data from the approved QIP amount, the share of the manufacturing sector out of all sectors accounts for 42.7% in 2001-2005, and it went down to 5.5% in 2006-2010. This means that no other sector has emerged, which outgrew the garment and footwear sectors. Instead, the share of the tourism sector climbed up to 56.1% and the share of the manufacturing sector went up to 40.9% (See Table 3-6). This indicates that the manufacturing sector plays a leading role in industrial development of the third cycle.

Thirdly, Japanese manufacturers, assembly and processing sectors, and SEZ have a major role to play in the new phase in attracting FDIs into Cambodia.

China has been the largest source of FDI, followed by Korea and Malaysia. Other leading investors are U.K., U.S.A., Taiwan, Vietnam, Russia, Singapore, and Japan, which is ranked 14th.[50] However, Japanese firms' FDI into Cambodia has increased in recent years.

[49] IMF "Cambodia; 2011 Article IV Consultation: Debt Sustainability Analysis"

[50] Please refer to the Cambodia Investment Guidebook (2012).

The number of Japanese firms that visited the Japan Desk of Council for the Development of Cambodia (CDC) was 158 between Janauary and June 2012. Out of the 158, 55 firms decided to invest in the country. Among them, 15 are garment manufacturers. Most of the others invested in the machinery sector: consumer electronics, automotive parts, electric and electronics (E&E) parts, precision instruments/parts, etc.[51] Japanese FDI helps Cambodia to diversify its industrial structure. The industrial sectors of Cambodia is transforming from the garment and footwear-centered to the machinery (assembly and processing)-centered structure.

It should be noted that Japanese firms tend to select an SEZ. Although some Japanese firms prefer the location outside SEZ in Phnom Penh, the manufacturers of Japan outnumber other FDI countries (e.g. China, Korea, and Taiwan)[52] in terms of investment.

In line with the preceding discussions, it is important to focus on Japanese companies of the assembly and processing sector which are located in SEZs for industrialization strategies in Cambodia.

Table 3-6 Approved Amount of FDI for Foreign Companies by Sector

（Unit：%, USD million）

	2001~05	2006~10	2011
Agriculture	3.3	8.0	10.3
Industries	59.7	14.9	40.9
Energy	7.9	8.9	0.0
Maiming	9.2	0.6	0.4
Manufacturing	42.7	5.5	40.5
Services	15.2	21.0	9.4
Tourism	21.8	56.1	39.4
Total	100.0	100.0	100.0
Amount	1,986	26,535	7,012

Note: Investments equal to or less than USD 200 million are excluded.
Source: JICA Study Team, based on documents from CIB (CDC)

3.1.4 Characteristics of Japanese FDI and Investment Climate

Majority of Japanese FDIs are “quality FDI” which contribute to positive development of the Cambodian economy. There are five following characteristics of Japanese FDIs,[53]

[51] Yuji Imamura “Three points for Investment in Cambodia (Location, Logistics, Labor)”, CDC, ASEAN-Japan Center, JICA, JETRO（2012）at Cambodia Investment Seminar

[52] Please refer to 3.2.3 of Chapter 3 in Part 1.

[53] Aoki, T. (2000) *Ajia keizai jizokuteki seicho noto* (Asian economies: measures of sustainable growth) Tokyo: Nihonhyoronsha, Kitahar, A. and Nishizawa, N. (2004) *Ajia keizairon* (Asian Economies) Tokyo: Minerubashobo,

First, it has high manufacturing sector ratio in export. Japanese manufacturing sectors are called the "assembly and processing" sectors and are export-oriented. They help the host country to promote export-oriented industrialization by shifting manufacturing from outside nto the country.

Second, the intra-industry trade (especially the machinery sector) has been in progress. One of the characteristics of Japanese machinery sectors is being complicated and there are various production fragmentation across East Asia. The progress of intra-regional trade of East Asia has resulted from the progress of intra-industry and within-enterprise trade of Japanese firms. In other words, Japanese FDI has provided host countries with an opportunity to become integrated into GVC.

Third, it helps a host country to increase its production and export capacities. It also enables the host country to export its products to Japan. Through technology transfer, the relocation of Japanese manufacturing facilitates the localization of production and development of the supporting industry. As a result, trade is also facilitated between a host country and Japan.

Fourth, Japanese firms have advanced industrial technologies. With the progress of production fragmentation, technology is upgraded gradually from lower, to middle, to higher levels (finally, localization of R&D function) in the host country. Japanese FDI contributes to technological upgrading in the host country.

Fifth, an increase in Japanese FDI has been accelerated by the appreciation of the yen since the mid-1980s. Japanese firms tried to maintain their competitiveness by relocating their production to a foreign country. In recent years, on top of larger firms, more and more Japanese SMEs have shifted their manufacturing overseas and, as a result, the demand for local human resources grows. Japanese FDI also contributes to the host country's human resource development industry.

Majority of Japanese FDIs are "quality" FDIs, which contribute to positive development of the Cambodian economy. There is a need to develop and maintain Cambodia's investment climate (e.g. legal framework) in order to attract FDIs from Japan and many other foreign countries. It is essential for latecomer ASEAN members (Cambodia, Laos, Myanmar, and Vietnam; hereinafter referred to as "CLMV") to stabilize a macro-economic environment, develop and/or maintain physical infrastructure, develop economic systems, and improve governance (Figure 3-2).

Considering the current situation in Cambodia, it is necessary to improve its investment climate as follows. First of all, the conditions of physical infrastructure should be improved. In particular, transportation infrastructure as well as the stable supply of electricity is crucial. Specific areas where there is an industrial agglomeration should be prioritized.

Ono, M. (2011) *Nihonno taigaichokusetsutoshi ga tonyukozoniataetaeikyo* (Japanese FDI's impact on input structure) in Hasegawa, T. (eds.) APEC no shijotogo (Market integration of APEC), Tokyo: Chuo University Press, etc.

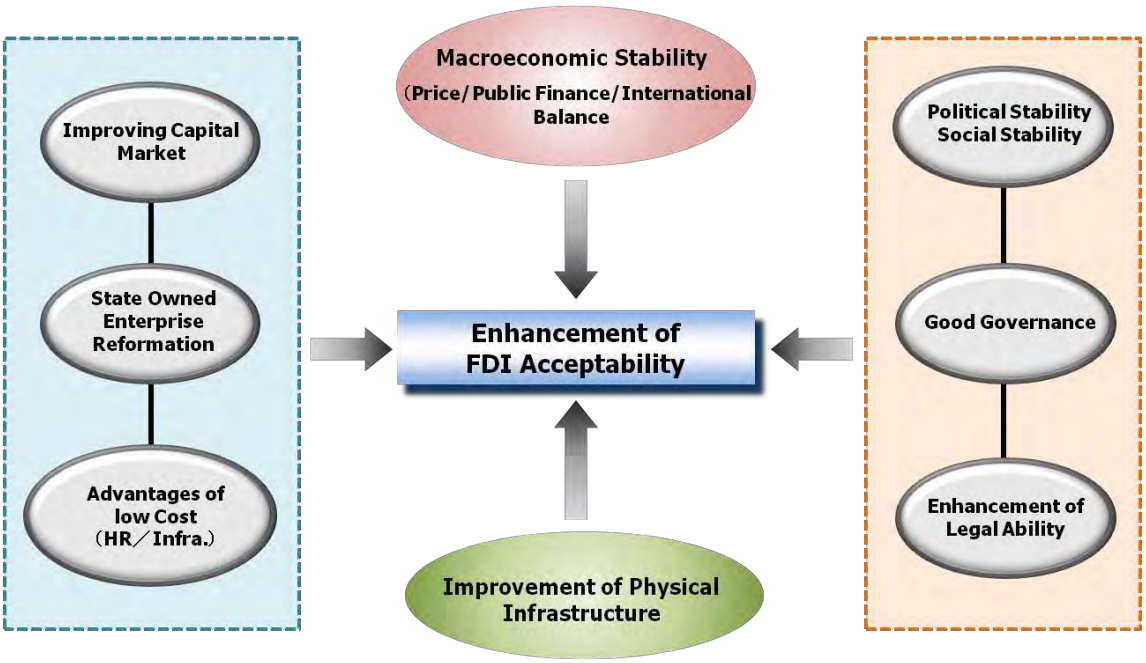


Figure 3-2　Conditions for Attracting FDIs（CLMV)

Secondly, human resources for industry is vital. There is a need for low-cost workers that are well-trained for manufacturing activities.

Thirdly, governance, legal framework, and improvement of enforcement are of much importance. These are critical not only in the formulation of laws and other related policies and measures, but also to enforce them. Transparency and legal enforcement is required so that private firms may concentrate on their specific manufacturing activities.

The fourth point is a stable financial market. Since the economy of Cambodia is dollarized and currency exchange risk is low, the economy has an advantage of attracting FDI. In order to promote cooperation between FIEs and local SMEs, it is necessary to develop mechanisms to provide funds for SMEs.

Fifthly, stable macro economy is also crucial. There is a need to balance stable prices of goods and economic growth, to maintain budgetary discipline, and to avoid deficit of overall balance of payment. Part 2 of this report elaborates on the above-stated improvement of investment climate.

3.1.5　Japanese Manufacturers' Views about Cambodia and Selection of Location

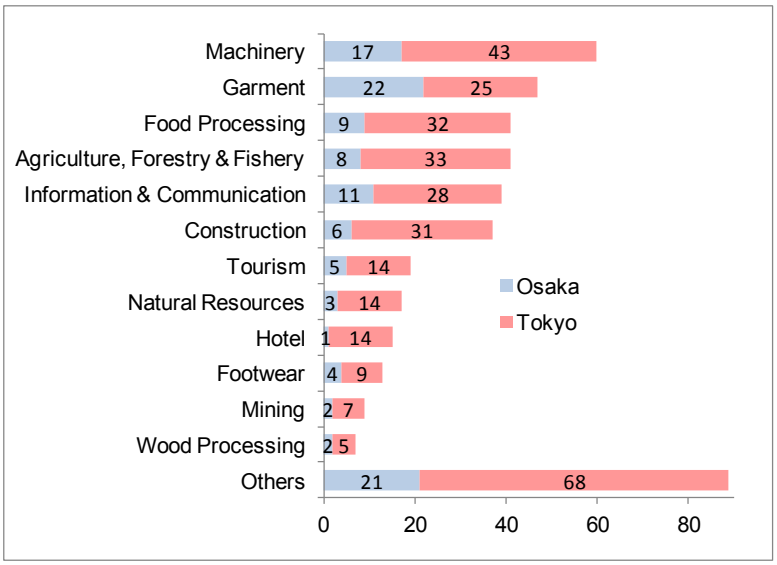
(1)　Views of Participants (Potential Investors) in the Investment Seminar Held in Japan in July 2012

In July 2012, the Cambodia Investment Seminar was held in Tokyo and Osaka and a questionnaire survey was carried out. The number of respondents was 303 (79 in Osaka and 224 in Tokyo). In the questionnaire, the four following questions were asked. 1) sectors in which participants are

interested, 2) future plan to invest in Cambodia, 3) main reasons for considering investment, and 4) constraints on investment. Regarding 1), 2) and 4), multiple answers were allowed.

1) Sectors in which Respondents are Interested (Multiple Answers Allowed)

Most sectors in which respondents are interested seems to be machine processing. In Osaka, garment account for the largest share, while both agriculture, fishery and forestry, food processing, and construction are selected by approximately 30 respondents in Tokyo (See Figure 3-3).

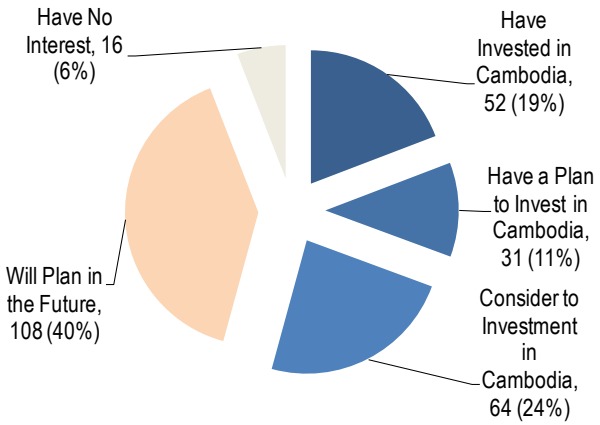


Source: JICA(2012) "Project on Enhancing the Investment-Related Services of Council for the Development of Cambodia：Report on the Cambodia Investment Seminar 2012" (KRI)

Figure 3-3 Interested Sectors for Investment in Cambodia

2) Plan of Investment in Cambodia

The percentage of the respondents who are planning to invest in or considering investment in Cambodia is 30% in Osaka and 35% in Tokyo. These results show high interests in investment in Cambodia.

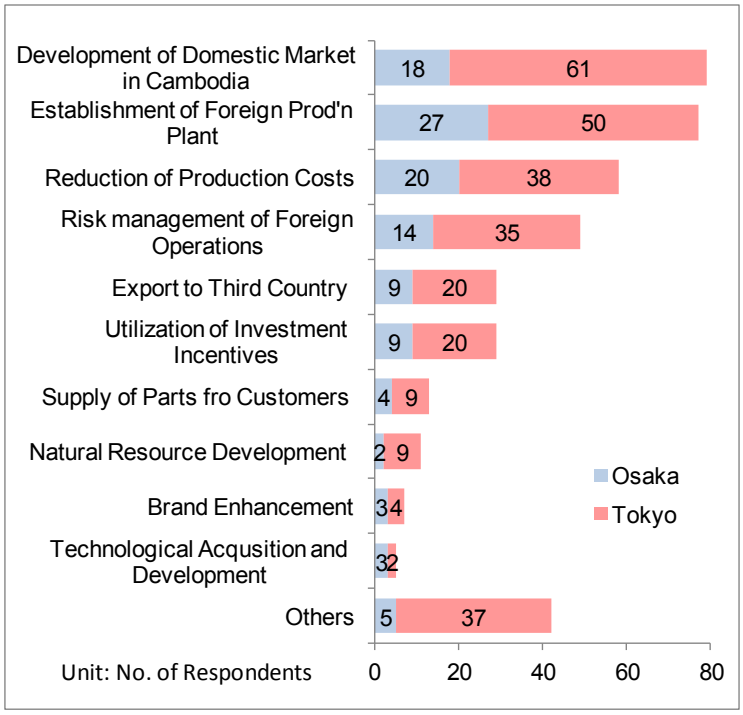


Source: JICA (2012) as above

Figure 3-4 Plan of Investment in Cambodia

3) Main Reasons for Planning and Considering Investment in Cambodia (Multiple Answers Allowed)

Both respondents in Osaka and Tokyo chose "establishment of foreign production plant", "reduction of production costs", and "development of domestic market in Cambodia" as main reasons for planning and considering to invest in Cambodia. Among the respondents who chose "export to third world countries" as the main reason, those who are in Osaka tend to consider neighboring Asian countries as a destination, while respondents from Tokyo seem to consider Japan as the destination.

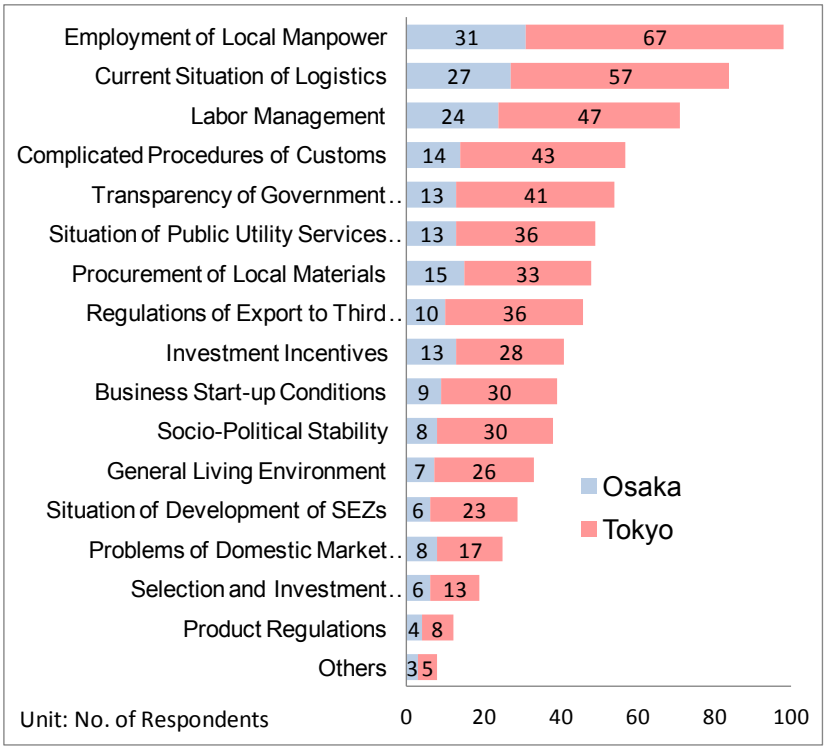


Source: JICA (2012) as above

Figure 3-5 Main Reason in Considering Investment in Cambodia

4) Constraints on Decision-Making to Invest in Cambodia (Multiple Answers Allowed)

The most serious constraints on investment in Cambodia that respondents in both Osaka and Tokyo answered "finding and developing local human resources", followed by "logistics and labor management".



Source: JICA (2012) as above

Figure 3-6 Constraints on Investment in Cambodia

(2) Views of Japanese Manufacturers in Cambodia

Despite time constraints, the JICA Study Team visited different Japanese manufacturers in Cambodia in the months of July and August 2012 in order to conduct interviews with them. For the improvement of investment and operation environment, Japanese manufacturers made the following requests. In line with the conditions, the requests of different Japanese firms are as follows:

1) Physical Infrastructure Development

- Stable supply of electricity and reduction of electricity cost (Motorcycle, E&E parts, logistics and transportation)[54]
- Improvement of physical infrastructure conditions and development of highways (Precision instruments and parts and logistics)
- Improvement of convenience of the Phnom Penh Port
- Development of public transportation (e.g. bus) (Footwear)
- Housing development in the surrounding areas of SEZ (E&E parts)

2) Human Resource Development for Industry and Employment

- Improvement of basic education (Footwear)

[54] The words in the parentheses indicate the sectors of which the firms interviewed belongs to.

- Government assistance in recruiting workers (Garment)
- Measures to increase attendance ratio (Garment)
- Deregulation of law on labor (8 working hours per day, 2 hours overtime per day) (Footwear)
- Enlightenment activity to encourage Cambodians to work for foreign firms (Footwear)

3) Governance, Legal Framework and Improvement of Enforcement

- Consideration of incentives for reinvestment (Precision instruments and parts)
- Information provision of incentives for local procurement (Motorcycle)
- Streamlining of customs procedures by computerization (Motorcycle)
- Reduction of time for customs procedures (Motorcycle)
- Securing transparency of customs and other administrative procedures (Logistics and garment)
- Reduction of time for approval of master list (ML) (E&E parts)
- Streamlining of negotiation on import of parts that is not listed in ML (E&E)
- Improvement in application for "country of origin" when preparing ML (Garment)
- Reduction of rate of welfare tax and withholding tax (Footwear)
- Abolition of unofficial costs（E&E parts and garment）
- Regulation of fake products (Food processing)
- Eradication of smuggling (Logistics)
- Setting appropriate price of agro-products (Food processing)
- Establishment of associations (social insurance and share of equipment) (Food processing)
- Establishment of market and linkage with SEZ (Food processing)

(3) Japanese Firms' Selection of Location

Views from existing Japanese firms about Cambodia's investment and operating environment are very important. This is because potential Japanese investors that plan to invest in Cambodia will listen to their views. In this section, four points (electricity supply, road transportation, human resource development for industry, and transparency) are discussed which make up the deciding factors of Japanese firms in selecting their location.

1) Electricity Supply

For Cambodia's industrial development, the greatest problem is the supply of electricity. The country currently has had a shortage of electricity supply. Electric grids are not integrated and electricity costs in Cambodia are much higher than in neighboring countries. High electricity costs and frequent power failures prevent factories from obtaining stable operations which make foreign investors reluctant to invest in the country.

According to interviews with Japanese and other foreign investors, as well as the results of the surveys conducted, the capacity of electricity supply is one of the key determinants of decision-making of FDIs. For example, Urata and Kawai (2000) carried out statistical analysis of determinants of Japanese firms' decision-making of FDIs by using econometric model.[55] According to the result, all estimated coefficients of electricity supply were statistically significant (See Table 3-7). The capacity of electricity supply is among the key determinants (including labor cost, industrial agglomeration, and governance) of Japanese firms' FDIs.

Table 3-7 Determinants of FDI by Japanese Enterprises

	Textile	General machine	Electric machine	Transportation machine
Exchange rate	+++	(·)	(·)	(+)
Wages	···	···	···	···
Market (GDP)	+	(·)	···	(·)
Inflation	(·)	(·)	(·)	·
Secondary education	···	···	···	···
Electric power	+++	+++	+++	+++
Industrial accumulation	+++	+++	+++	+++
Governance	+++	+++	+++	+++
Number of sample	13,630	9,968	28,299	12,909

Source: Shujiro Urata and Hiroki Kawai (2001) "The Determinants of the Location of Foreign Investment by Japanese Small and Medium-sized Enterprises." Small Business Economics.

Since the nuclear power plant accident caused by the March 2011 Great East Japan Earthquake, Japanese firms have been faced with shortage of electricity supply and have also been sensitively aware of electricity supply. One is the shortage of total supply of electricity. The other is the difference in electricity grid between eastern (50Hz) and western (60Hz) Japan. Because of the difference, interchangeability of electricity is small between the two parts. Therefore, Japanese firms have been more and more conscious of the capacity of electricity supply and the integration of electricity grid.

In Japan, a hydropower plant was constructed with financial assistance from World Bank in the 1950s and the 1960s. The construction of large-scale power plants was among the most important projects using Japan's yen loan in China in the 1980s and 1990s. The same applied to Vietnam in the 1990s. The time will come soon when Cambodia will draw lessons learned from the aforementioned experiences.

[55] Urata Shujiro and Hiroki Kawai (2000) "Intra-Firm Technology Transfer by Japanese Manufacturing Firms in Asia." In Takatoshi Ito and Anne O. Krueger eds., The Role of Foreign Direct Investment in Economic Development, University of Chicago Press

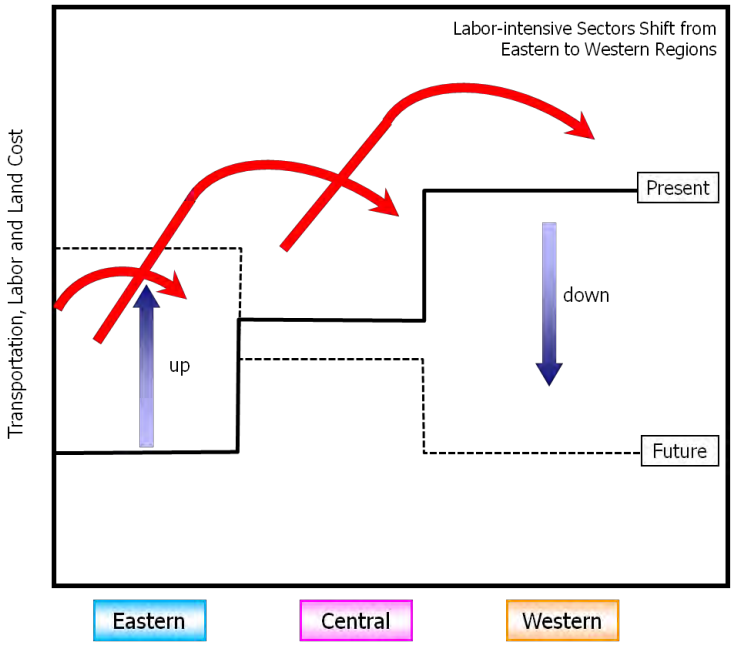
2) Road Transportation

In Japan, highways were constructed across the country after the postwar rapid growth period (during the 1950s and the 1960s). At the same time, industrial parks and estates were also constructed along with it. With the progress of highway construction, factories and plants were constructed in industrial parks and estates. Highways have a positive effect on the attraction of factories and plants to a certain area along highways *per se*. Such effect is observable around the world. In northeastern Japan for instance, the industrial agglomeration of the automotive and electronics sectors has been formed and their factories and plants were dotted along the Tohoku (northeastern Japan) Expressway. Such effects of expressways on factory attraction were observed not only in Japan but also in many places in the world.

According to JICA (2006),[56] China's national land is so vast that with the construction of highways, the labor-intensive sectors have shifted their manufacturing plants from its eastern to western regions in accordance with the flying geese pattern (See Figure 5-8). Land price and labor costs have increased in the eastern coastal region. On the other hand, in the western inland region, transportation costs decreased because of the progress of highway construction. The total costs in the western region become smaller than those in the eastern region. As a result, industries relocated their factories from the eastern to western regions. It is pointed out in the report that there is a need to prepare the conditions and prerequisites to promote westward investments.

The then high-ranking official of the Chinese government who was in charge of the development of the western region, worried that foreign factories would relocate to Southeast Asian countries. However, they were relocated to western China. Figure 5-8 indicates an example of highway's economic effects (See Table 3-8).

[56] JICA/KRI/OPMAC (2006) Report on Study for Financial System Reform for Western Region Development in China



Source: JICA/ KRI/OPMAC (2006) "Study for Financial System Reform for Western Region Development in China"

Figure 3-7 Road Improvement and Labor-intensive Industries

When Japanese firms make a decision on the selection of location, they regard the convenience of logistics/distribution as an important factor. Necessary conditions in the selection of location involve short lead time, high connectivity with port facilities, etc. in order to secure product quality. There is a need to accelerate the development of trunk roads such as the Southern Economic Corridor (SEC) in order to attract Japanese FDI.

3) Human Resource Development for Industry[57]

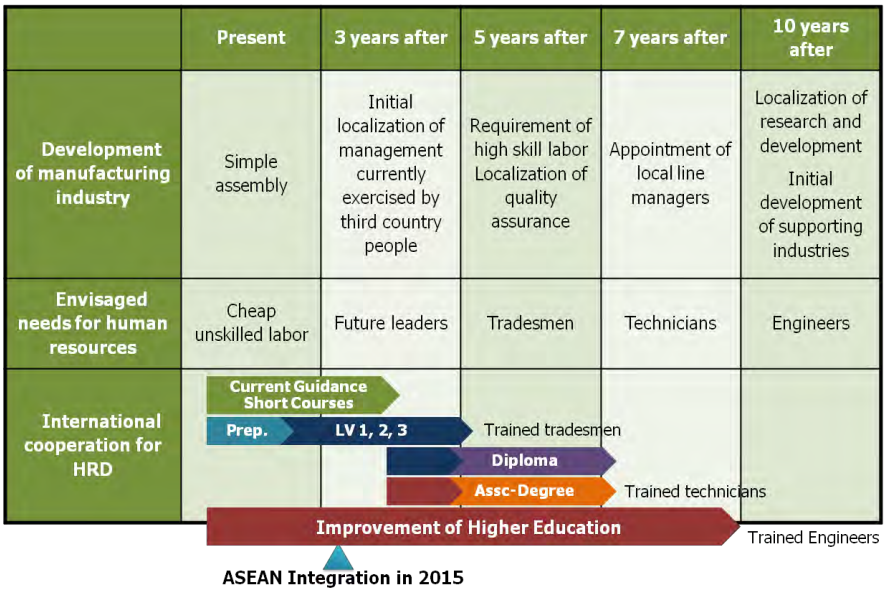
One of the most important factors of industrial development is human resource development. Currently, unskilled labors are in much demand. Human resource development for industry is a decisive factor of industrial development. In Cambodia, unskilled workers are in demand. However, several Japanese firms pointed out that the unskilled workers have poor basic literary ability for daily work at a factory. According to a Japanese company, since 10% to 20% of the workers are illiterate, they need to explain to them about work by showing photos. Some other firms provide a Khmer language course for workers as part of in-house training. There is a strong and urgent need to strengthen basic education.

For long-term economic development, however, there is a need for not only unskilled workers but also other human resources. In the coming ten years, the following human resources will be in demand as Table 3-8 shows: workshop team leader (in three years), tradesman (in five years),

[57] Regarding the definitions of human resource for industry, this report is based on those of JICA/KRI (2012) "The Preparatory Study on Program for Human Resource Development for Industry in Cambodia."

technician (in seven years) and engineer (in ten years). Motorcycle firms aim to nurture middle managers and workers who understand quantitative management and production management through its in-house training in Thailand. Other firms (E&E parts, etc.) intend to develop workers in charge of cost accounting and production management.

Table 3-8 Long-Term Strategy for Human Resource Development for Industry



Source: JICA/KRI (2012) "The Preparatory Study on Program for Human Resource Development for Industry in Cambodia"

In view of the integration into the East Asian network of production, it is important to nurture various skilled workers and technicians (e.g. welders, metal plate worker, maintenance personnel, and electrician), foremen, plant managers, engineers (e.g. design and development), white-collar middle management, and so on. Through the human resource development for industry, localization of manufacturing will be set in progress. For the diversification of industrial structure, a variety of training courses (i.e. management, technical and vocational, etc.) should be developed and improved. The matching mechanisms of the labor market and technical certification systems should also be developed.[58]

4) Transparency of Administrative Procedures

According to Japanese manufacturers in Cambodia, advantages over investment in the country include political stability, good eyesight, diligence and dexterity of Cambodian workers, etc. These advantages heighten Cambodia's reputation as target country of FDIs. On the other hand, one of the garment firms complained about unofficial costs that the local police requests. It seems that Japanese tenants of SEZs are requested to pay unofficial costs for customs clearance and other administrative

[58] JICA/KRI (2012)

procedures. Evidently, these unofficial costs damage Cambodia's reputation.

Transparency and accuracy are required for Japanese firms in doing their accounting report. It is difficult for the directors of Japanese firms in Cambodia requiring them to account for unofficial costs. This is the reason that they request the abolition of such costs. RGC is advised to improve these situations. It is important to intensify Cambodia's reputation by broadening the areas of the country's good reputation as well as by abolishing the costs. It must be noted that transparency of administrative procedures are crucial for Japanese firms.

3.2 Investment Trend Research

3.2.1 Structure of the Section

Investment trend research is three-fold: Section 2.2.2 Cambodia's Investment Climate, Section 2.2.3 Trend of Qualified Investment Project (QIP), and Section 2.2.4 Trend of Investment in SEZ. In this section, CDC's data are analyzed by sector and by country.

3.2.2 Trend of Qualified Investment Project (QIP)

(1) Overview

With robust economic growth, FDI inflow into Cambodia is strikingly impressive. The approval of FDI is on a rising trend. In January and February 2012, the number of qualified investment projects (QIPs) approved by the CDC was 28, which is double the number of QIPs approved last year of the same period.

The number of QIPs approved in 2011 reached 164 which was equivalent to USD 7.01 billion according to the data compiled from CDC. Compared to last year, ratio of QIP edged up by 29% and 160% in terms of the number of projects and total fixed assets, respectively. It should be noted that sources of FDI inflow are diverse. New emerging investors such as Japanese firms continue to make FDIs in Cambodia.

Moreover, although traditional sectors such as the garment and tourism sectors continue to welcome new investment projects, non-traditional sectors including agro-industry and electronic assembly or manufacturing are gaining momentum. This may be the result of the diversion of FDIs from China due to rapidly rising wages while labor wages in Cambodia remain low.

(2) Analysis of QIPs by Sector

As shown in Table 3-9, QIPs are concentrated in the service sector. Out of the total USD 7.012 billion, the service sector absorbed 48.7%, industry accounted for 40.9%, and the agriculture sector took the rest. Although the agriculture sector was only able to share 11.1% of the total investment in 2011, its value was USD 725 million in which the agro-industry accommodated USD 31 million.

The rubber sector experienced huge investments in 2011 worth USD 675 million, an increase of 255% from USD 190 million in the previous year. Surge investments in this sector were the result of the expectations of investors that the price of rubber will continue to rise in the upcoming years.

The garment sector remains the most attractive sector for FDI. Total FDIs in this sector reached USD 361 million, which climbed up almost three-fold from USD 129 million in the previous year. Low labor cost is still a key determinant in attracting FDI in this sector.

Likewise, tourism, one of the key pillars of growth, continues to absorb significant shares of the total FDI inflow. The total values of investments in the sector were USD 2.477 billion in 2011, increasing from USD 128 million in 2010.

The issues are to be discussed in the two periods: the first (2007-2009) and second (2010-2011) periods. As the following table shows (by sector), FDIs decreased by approximately 50% in the second period than those in the first period. Regarding the trend by sector, despite the GFC occurred in the late 2008, those in the agriculture sector in the first period increased by approximately 49% than those in the second period. In particular, agro-industry decreased by approximately 46% in the second period than those in the first period, while FDIs in the rubber sector in the second period increased approximately 7.5 times as much as those in the first period.

On the other hand, FDIs in the industrial sector in the first period increased over 50% than those in the second period. This was mainly because a large increase in other industries (i.e. pharmaceutical sector), although there were an approximately 48% fall in the energy sector and an approximately 20% increase in the garment sector. In the service sector, as a whole, there was an over70% decrease for which the main reason was FDIs in the tourism sector decreased by over 80%.

Table 3-9 QIPs by Sector over 2007-2011

Sector	2007	2008	2009	Sub-Total 2007-09	2010	2011	Sub-Total 2010-11
Agriculture	**160**	**107**	**590**	**857**	**554**	**725**	**1,279**
Agro-industry	160	94	457	**711**	353	31	**384**
Rubber	0	0	115	**115**	190	675	**865**
Other Agricultures	0	13	18	**31**	12	19	**31**
Industries	**756**	**814**	**958**	**2,528**	**945**	**2,869**	**3,814**
Energy	3	468	665	**1,136**	589	0	**589**
Garment	171	149	90	**410**	129	361	**490**
Mining	31	5	15	**51**	92	31	**123**
Construction	44	98	0	**142**	0	0	-
Other Industries	507	94	188	**789**	136	2,477	**2,613**
Services	**1,751**	**9,970**	**4,311**	**16,032**	**1,191**	**3,418**	**4,609**
Services	78	1,036	0	**1,114**	0	91	**91**
Telecommunication	471	87	235	**793**	0	567	**567**
Hotel	3	0	17	**20**	4	283	**287**
Tourism	1,098	8,776	3,884	**13,758**	128	2,477	**2,605**
Other Services	101	71	176	**348**	1,059	0	**1,059**
Total	**2,667**	**10,891**	**5,859**	**19,417**	**2,691**	**7,012**	**9,703**

Source: Compiled from CDC (2011) (Unit: Million USD)

(3) Analysis of QIPs by Country

Cambodia's FDI was typically dominated by Asian investors, especially Chinese and Vietnamese firms. Chinese investments in 2011 reached USD 1.193 billion, an increase of approximately 72% compared to last year. Meanwhile, Vietnamese investors injected USD 631 million into the Cambodian economy, edging up more than five-fold from USD 115 million in 2010.

Nonetheless, there was noticeably a huge investment from the United Kingdom in 2011; the total investment was worth USD 2.238 billion compared to only USD 11 million in the previous year. As a result, the UK became the first largest investor among the top five in 2011, followed by China, Vietnam, Malaysia, and Korea. It is worth noting that the total value of Japanese investments in 2011 was USD 6 million from zero in 2010.

As the following table shows (by country/ region), FDIs of the United States decreased by approximately 73% in the second period (2010-2011) than those in the first period (2007-2009). Those of ASEAN also fell by approximately 66%, although both FDIs of Malaysia (60%) and Vietnam (93%) increased between the two periods. Those of other Asia decreased by approximately 53% between the two periods. In the meantime, those of Europe increased more than ten times in the first period as much as in the second period. As mentioned earlier, this is because UK's large-scale FDI in 2011.

Table 3-10 QIPs by Country for 2007-2011

(Unit: Million USD)

Country	2007	2008	2009	Sub-Total 2007-09	2010	2011	Sub-Total 2010-11
America	**3**	**688**	**4**	**695**	**43**	**144**	**187**
Canada	0	16	2	**18**	7	0	**7**
United States	3	672	1	**676**	36	144	**180**
ASEAN	**1,830**	**4,082**	**4,424**	**10,336**	**713**	**2,810**	**3,523**
Cambodia	1,323	3,932	3,753	**9,008**	391	1,930	**2,321**
Malaysia	241	3	7	**251**	167	235	**402**
Singapore	2	52	272	**326**	37	14	**51**
Thailand	108	74	178	**360**	2	0	**2**
Vietnam	156	21	210	**387**	115	631	**746**
Other ASEAN	0	0	3	**3**	0	0	**-**
Other Asia	**675**	**5,941**	**1,127**	**7,743**	**1,844**	**1,791**	**3,635**
China (mainland)	180	4,371	893	**5,444**	694	1,193	**1,887**
Japan	113	8	5	**126**	0	6	**6**
Korea	148	1,240	121	**1,509**	1,027	146	**1,173**
Others	234	321	109	**664**	124	446	**570**
Europe	**80**	**74**	**67**	**221**	**42**	**2,238**	**2,280**
France	35	6	50	**91**	0	0	**-**
United Kingdom	26	6	5	**37**	11	2,238	**2,249**
Other EUROPE	19	62	12	**93**	31	0	**31**
Rest of the World	**80**	**106**	**238**	**424**	**50**	**29**	**79**
Australia	14	3	3	**20**	50	25	**75**
Russia	0	102	235	**337**	0	0	**-**
Other ROW	66	0	0	**66**	0	4	**4**
Total	**2,667**	**10,891**	**5,859**	**19,417**	**2,691**	**7,012**	**9,703**

Source: Compiled from CDC (2011)

3.2.3 Trend of Investment in SEZ

(1) Overview

Given the fact that the Cambodian economy is reliant on a narrow industrial base, the SEZ was established as an industrial policy instrument to diversify economic foundation and specifically to foster export and industrial development. In this regard, SEZ plays a vital role in attracting FDI and diversifying industrial and export basis.

Investments in SEZ are generously offered both fiscal and non-fiscal incentives. Fiscal incentives are profit taxes and import duties exemptions that are identical with QIP outside of SEZ. Moreover, value-added tax (VAT) is suspended for all export-oriented activities. Non-fiscal incentives are one-stop services provided by the SEZ administration, which is the public authority responsible for handling works at individual SEZs.

While the SEZ law is on the drafting process, a sub-decree on the establishment and management

of special economic zones was adopted on December 29, 2005[59]. Since then, 22 SEZs have been approved but only 8 SEZs are currently in operation. However, investments in the SEZs keep on increasing. As of May 2012, total investments by companies operating in the SEZs have reached USD 710.9 million.

As illustrated in the following table, Phnom Penh SEZ (PPSEZ) and Sihanoukville SEZ (SSEZ) are the two most active zones. As of May 2012, PPSEZ has generated 28,820 jobs, and capital injected by investment projects totaled USD 207.5 million. Likewise, SSEZ has welcomed 20 investment projects worth USD 56.3 million and created 18,537 jobs.

Table 3-11 List of Operating SEZs in Cambodia

No.	SEZ Name	Number of Company	Company's Invested Capital (USD million)	Area (m^2)	Labor
1	Manhattan SEZ (MSEZ)	15	69.4	529,127	7,124
2	Phnom Penh SEZ (PPSEZ)	34	207.6	853,452	28,820
3	Tai Seng Bavet SEZ (TSEZ)	13	86.0	340,594	5,042
4	Poi Pet O'Neang SEZ	1	0.8	12,385	635
5	Neang Kok Koh Kong SEZ (KKSEZ)	3	69.0	328,000	16,000
6	Goldfame Pak Shun SEZ	3	26.6	393,000	3,702
7	Sihanoukville SEZ (SSEZ)	20	56.3	157,590	18,537
8	Sihanoukville SEZ 1	1	195.4	200,000	130
Total		90	711.1	2,814,148	79,990

Source: CDC（2011）

(2) SEZ's Investments by Sector

Analysis of investments in SEZ should be conducted in two periods. The first period started from the initial establishment of the SEZ in 2006 until 2009 when the Cambodian economy was badly affected by the GFC. The second period started from 2010 when the Cambodian economy gained firm recovery until now. During the first period, few investment projects were operated in the zones and business activities were mainly in textile and garment sector and plastic manufacturing.

SEZ have just attracted significant investments in the past few years, specifically in the second period. Though the textile and garment sector continues to be attractive to foreign investments, SEZ has welcomed more diverse investment projects from different countries.

[59] SEZs in Cambodia were established based on Sub-Decree No. 148 made in 2005. After that, the drafting of the SEZ law has been interrupted.

Excluding a large investment in the electricity sector in 2009, the textile and garment sector absorbs the largest share, approximately 33%, of the total investments since the first establishment of SEZ. It was then followed by a 15% share in the automobile assembly, 12% in electrical equipment manufacturing, and 6% in other manufacturing sectors (See Table 3-12).

Table 3-12 Investments in SEZ by Sector

（Unit: Million USD）

No.	Sector	2006	2007	2008	2009	2010	2011	2012
1	Textile and Garment	13.4	-	23.6	8.4	36.9	38.0	33.5
2	Automobile Assembly	-	-	11.5	50.0	-	8.9	-
3	Electrical Equipment Manufacturing	-	-	-	-	24.2	32.2	-
4	Bicycle Manufacturing	2.0	-	-	-	9.5	1.0	15.0
5	Plastic Manufacturing	-	1.1	5.4	5.0	4.0	9.3	-
6	Wire Harness Manufacturing	-	-	-	-	-	22.7	-
7	Medical Product Manufacturing	-	-	-	-	-	-	15.0
8	Food Processing	-	-	-	5.5	5.0	2.6	-
9	Wood Processing	-	-	-	-	-	12.7	-
10	Packaging	-	-	0.5	1.9	4.4	5.0	-
11	Dry Port	-	-	3.3	-	-	-	-
12	Steel Processing	-	-	1.0	-	1.9	-	-
13	Other Manufacturing	-	-	-	1.2	7.1	12.4	7.0
14	Electricity	-	-	-	249.1	-	-	-
15	Paper Processing	-	-	-	-	1.9	1.6	-
16	Ice Production	-	-	-	-	2.0	-	-
17	Animal Feed	-	-	-	-	5.0	-	-
18	Bio-energy Manufacturing	-	-	-	-	-	0.6	-
19	Electronics Assembly	-	-	-	-	-	2.5	0.9
20	Home Appliances	-	-	-	-	1.2	4.2	-
Total		15.4	1.1	45.3	321.1	103.1	153.7	71.4

Source: CDC（2011）

(3) SEZ's Investments by Country

Until now, FDIs in SEZ are typically sourced from Asian investors. The first investment in the SEZ which was launched in 2006 was from Taiwan. However, investments from other Asian economies such as Japan, China, and Singapore during the past few years have been growing

rapidly.

Investments from Japan surged in 2011, reaching USD 98.0 million, which increased almost four-fold when compared to USD 26.0 million in 2010. The total investments from Japan in SEZs in 2011 outperformed investments from other countries. Chinese investments totaled USD 32.2 million in 2011, edging up by 87% from USD 17.2 million in the previous year. At the same time, investments from Taiwan in 2011 were worth USD 10.0 million, a decrease of 42% from the previous USD 17.2 million in 2010 (See Table 3-13).

Table 3-13 Investments in SEZ by Country

(USD million)

No.	Country	2006	2007	2008	2009	2010	2011	2012
1	Japan	-	-	13.4	13.9	26.0	98.0	22.7
2	China	-	-	6.8	1.2	17.2	32.1	15.0
3	Taiwan	15.4	-	12.8	5.0	17.2	10.0	15.0
4	Korea	-	-	3.0	50.0	-	-	-
5	Malaysia	-	-	1.0	195.4	2.0	-	-
6	Singapore	-	-	4.0	53.7	-	1.0	16.7
7	Philippines	-	-	-	-	5.0	-	-
8	Vietnam	-	-	-	-	5.4	-	-
9	Cambodia	-	-	-	-	-	0.6	-
10	Hong Kong	-	1.1	-	-	27.8	-	2.0
11	Ireland	-	-	-	-	1.7	-	-
12	USA	-	-	-	1.9	-	1.0	-
13	France	-	-	-	-	-	1.0	-
14	Thailand	-	-	-	-	0.8	10.0	-
15	Russia	-	-	4.3	-	-	-	-
Total		15.4	1.1	45.3	321.1	103.1	153.7	71.4

Source: CDC (2011)

(4) Current Situations of Special Economic Zones (SEZs)

The current situations of Cambodian SEZ are as follows.

Table 3-14 List of Cambodia's SEZs (As of October 2011)

1. Neang Kok Koh Kong SEZ	
1) Location	Neang Kok Village, Pakkhlong Commune, Mundul Seyma District, Koh Kong Province 5km from Thai border
2) Land Area	335.43 ha

3) Project Implementation	Entrance, road, power grid from Thailand and water: Completed Fencing, administration building, waste water treatment: To be developed
4) Zone Investors	1-Camko Motor Company Ltd. (Vehicle assembly and spare part) 2-Yazaki Cambodia Products Co., Ltd. (Wire harness)
2. Suoy Chheng SEZ	
1) Location	Neang Kok Village, Pakkhlong Commune, Mundul Seyma District, Koh Kong Province
2) Land Area	100 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
3. S.N.C SEZ	
1) Location	Sangkat Bet Trang, Khan Prey Nob, Preah Sihanouk Province
2) Land Area	150 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
4. Stung Hav SEZ	
1) Location	Sangkat O Tres, Stung Hav District, Preah Sihanouk Province
2) Land Area	196 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
5. N.L.C SEZ	
1) Location	Phum Prey Phdao Abd Phum Thlok, Khum Chrok Mtes, Srok Svay Teab, Sray Rieng Province
2) Land Area	105 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
6. Manhattan (Svay Reing) SEZ	
1) Location	Bavet Commune, Chantrea District, Svay Rieng Province 6km from Vietnam border on National Road No.1
2) Land Area	180 ha 1st phase: 20 ha (Commercial zone) 2nd phase: 60 ha (Manufacturing zone: completed) 3rd phase: 100 ha

3) Project Implementation	Fencing, entrance, administration building, power grid from Viet Nam, water for the first phase: Completed Waste water treatment: To be developed
4) Zone Investors	1- Best Way Industry Co., Ltd. (Bicycle) 2- S.Y.G. Steel International Co., Ltd. (Bold-Nut) 3- Kingmaker Footwear Co., Ltd. (Footwear) 4- Galaxy Textile Co., Ltd. (Garment) 5- ARC Cambodia Corp. (Hi-tech equipment recycling) 6- MSEZ Comfort Hospital Co., Ltd. (Hospital) 7- Sheico (Cambodia) Co., Ltd. (Neoprene wet suits) 8- Forest Packing (Cambodia) Co., Ltd. (Packing bag) 9- Pique Garment Co., Ltd. (Garment) 10- Leegrow Plastic Packaging Co., Ltd. (Packaging bag) 11- Ampac Packaging (Cambodia) Ltd. (Packaging products) 12- Eastern Industrial Enterprise Inc. (Garment and textile) 13-Visca Plastics Joint Stock Company (Plastic) 14- Angkor Spring Co., Ltd. (Mattress products) 15- Kaoway Sports Ltd. (Sport shoes) 16- Morofuji (Cambodia) Co., Ltd. (Bags and package products) 17- Top Sports Textile Ltd. (Textile and garment) 18- Elite (Cambodia) Co., Ltd. (Garment)
7. Poi Pet O'Neang SEZ	
1) Location	Poipet Commune and Nimit Commune, O' Chhrov District, Banteay Meanchey Province
2) Land Area	467 ha
3) Project Implementation	Infrastructure Developing: Fencing, Entrance gate, Electric pole
4) Zone Investors	1- Campack Co., Ltd. (Jewelry packing manufacturing)
8. Doung Chhiv Phnom Den SEZ	
1) Location	Kiri Vong District, Takeo Province
2) Land Area	79 ha
3) Project Implementation	Infrastructure Developing: Landfill and fencing
4) Zone Investors	None
9. Phnom Penh SEZ	
1) Location	Khan Dangkao, Phnom Penh and Ang Snuol District, Kandal Province

2) Land Area	360 ha 1st phase: 141 ha (Completed)
3) Project Implementation	Fencing, roads, administrative building, entrance, electricity, water, waste water treatment and telecommunication system: Completed
4) Zone Investors	1- Navy Water Production Co., Ltd. (Drinking water) 2- Bok Seng PPSEZ Dry Port Co., Ltd. (Dry port) 3- Redial Industrial Co., Ltd. (Plastic) 4- Civil (CP) Construction Product Ltd. (Pole) 5- Tiger Wing Co., Ltd. (Footwear) 6- Evergreen Industrial Co., Ltd. (Garment) 7-Yamaha Motor Cambodia Co., Ltd. (Motorcycle assembly, accessories and spare parts) 8- Cambodia Success Industries Co., Ltd. (Steel processing for construction material) 9- Agricom (Cambodia) Co., Ltd. (Sugar packaging) 10- Cambox Private Limited. (Plastic) 11- Ji-Xiang Co., Ltd. (Processing cartons and papers production) 12- Colben Energy (Cambodia) PPSEZ Ltd. (Power plant) 13- Yi Xiang Co., Ltd. (Plastic) 14- Ajinomoto (Cambodia) Co., Ltd. (Seasoning and food processing) 15- Sin Chn Hong (Cambodia) Plastics Industry Co., Ltd. (Plastic) 16- Clean Circle Co., Ltd. (Leather shoes) 17- Cambodian Food Processing and Distribution Co., Ltd. (Food processing) 18- Sichuan New Hope Agribusiness (Cambodia) Co., Ltd. (Animal feed) 19- MKK Co., Ltd. (Cigarette and cigar) 20- Liwayway (Cambodia) Food Industries Co., Ltd. (Food processing) 21- Haru Phnom Penh Comic Center Co., Ltd. (Comic book assembly and authoring) 22- Dishells (Cambodia) Ltd. (Heat insulation and its products) 23- Proceeding (Phnom Penh) Co., Ltd. (Japanese traditional clothes) 24- FST PP Co., Ltd. (Japanese traditional clothes) 25- Shin Feng Paper Co., Ltd. (Carton box and paper processing)

	26- Atlas Ice (Cambodia) Co., Ltd. (Ice manufacturing) 27- Thibidi (Cambodia) Co., Ltd. (Electrical equipment) 28- Minebea (Cambodia) Co., Ltd. (Small-size motor) 29- O and M (Cambodia) Co., Ltd. (Leather products) 30- Combi (Cambodia) Co., Ltd. (Baby goods and toy) 31- Marunix (Cambodia) Co., Ltd. (Wire harness assembly) 32- Sumi (Cambodia) Wiring Systems Co., Ltd. (Wiring harness) 33- Kyowaseikan (Cambodia) Co., Ltd. (Packaging materials) 34- Sunhsin Thread and String (Cambodia) Co., Ltd. (Shoulder pads) 35- Zion Label and Printing Co., Ltd. (Labels) 36- Daiwa Onkyo (Speaker) 37- Denso Electronics (Wiring harness)
10.Kampot SEZ	
1) Location	Koh Toch commune, Kampot district, Kampot Province
2) Land Area	145 ha
3) Project Implementation	Infrastructure Developing: Landfill and building Kampot seaport
4) Zone Investors	None
11. Sihanoukville SEZ 1	
1) Location	Stung Hav District, Preah Sihanouk Province
2) Land Area	178 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	1- Cambodian Energy Limited (To build, operate and own 100 MW coal-fired power generation plant) 2- C.I.I.D.G Erdos Hongjun Electric Power Co., Ltd. (Power plant of 3x135 MW by coal-fire)
12. Tai Seng Bavet SEZ	
1) Location	Bavet District, Svay Rieng Province
2) Land Area	125 ha Main phase: 77 ha Sub phase: 48 ha (5 km form the main phase site toward Phnom Penh)
3) Project Implementation	Entrance, administration buildings, road, power grid from Viet Nam and water: Completed Fencing and waste water treatment: To be developed
4) Zone Investors	1- Atlantic Cycle Co., Ltd. (Bicycle) 2- La More (Cambodia) Ltd. (Footwear)

	3- DK Inc. (Garment) 4- Yorks (Cambodia) Co., Ltd. (Gloves) 5- Smart Tech (Cambodia) Co., Ltd. (Bicycle) 6- A and J (Cambodia) Co., Ltd. (Bicycle) 7- Swany (Cambodia) Corporation (Gloves) 8- Ronchester (Cambodia) Co., Ltd. (Lady's apparel) 9- Helsa South East Asia Co., Ltd. (Shoulder Pads) 10- Towa (Cambodia) Co., Ltd. (Men's Suits) 11- Nakayama Cambodia Co., Ltd. (Baby underwear)
13. Oknha Mong SEZ	
1) Location	Srea Ambel District, Koh Kong Province
2) Land Area	100 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
14. Goldfame Pak Shun SEZ	
1) Location	Sa Ang District, Kandal Province
2) Land Area	80 ha
3) Project Implementation	Infrastructure Developing: fencing
4) Zone Investors	1- Gold Dragon Printing & Carton Boxes Factory Co., Ltd. (Carton, Printing plastic label, Knitting) 2- Kingway Manufacturing Limited (Garment) 3- Good Ray Development Limited (Garment)
15. Thary Kampong Cham SEZ	
1) Location	Da commune, Memot District, Kampong Cham Province
2) Land Area	142.14 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
16. Sihanoukville SEZ 2	
1) Location	Pou Thoung Village, Betrang Commune and Smach deang Village, Ream Commune, Prey Nop District, Preah Sihanouk Province
2) Land Area	1,688 ha
3) Project Implementation	Infrastructure Developing: internal roads, the administrative building, entrance, electricity, and telecommunication system: Completed Building fence, water and waste water treatment: To be developed.

4) Zone Investors	1- Nanguo Garment Co., Ltd (Garment) 2- Hongdou International Garment Co., Ltd. (Garment) 3- Qianlima Vehicle Co., Ltd. (Vehicle assembling) 4- Taihua Plastic Products Co., Ltd. (Plastics) 5- Huang Jia Arts and Crafts Co., Ltd. (Arts and crafts candle) 6-Wealth (Cambodia) Steel Industry Engineering Co., Ltd. (Steel processing for construction material) 7- Horseware Products Cambodia Co., Ltd. (Horse ware products) 8- Zhong Zheng (Cambodia) Co., Ltd. (Material for construction) 9- Keeptop Sporting Goods (Cambodia) Co., Ltd. (Bags) 10- Brilliant Shoes Factory Co., Ltd. (Shoes) 11- Prosource Electronics (Cambodia) Co., Ltd. (Household appliances) 12- Wan Hai Hanger (Cambodia) Co., Ltd. (Founded hanger) 13- Continental Cycles Cam Co., Ltd. (Bicycles) 14- Galey Global (Cambodia) Co., Ltd. (Garment) 15- Oufeiya Leather (Cambodia) Co., Ltd. (Leather products) 16- Asle Electronic (Cambodia) Co., Ltd. (Electronics parts) 17- Shandong Forest Wood (Cambodia) Co., Ltd. (Floor and plywood) 18- Izumi (Cambodia) Co., Ltd. (TV frame and electric parts) 19- Rebecca Hair Products (Cambodia) Co., Ltd. (Hair products) 20- Cambodian Gateway Underwear Co., Ltd. (Underwear garments)
17. D&M Bavet SEZ	
1) Location	Bavet Commune, Chantrea District, Svay Rieng Province
2) Land Area	117.95 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
18. Kiri Sakor Koh Kong SEZ	
1) Location	Khum Prek Kasach, Srock Kirisakor, Koh Kong Province
2) Land Area	1,750 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
19. Sihanoukville Port SEZ	
1) Location	Tomnop Rolok Area, Sangkat Lek1 and Lek3, Sihanoukville City, Preah Sihanouk Province

2) Land Area	70 ha
3) Project Implementation	Fencing, Entrance, roads, administration buildings, electricity and water distribution system, waste water treatment, telecommunication lines, workers dormitories, apartments: Development work in progress (To be completed at the end of 2011)
4) Zone Investors	None
20. Kampong Saom SEZ	
1) Location	Village 4, Ortres Commune, Stung Hav District, Preah Sihanouk Province
2) Land Area	255 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
21. P (SEZ) I C	
1) Location	Salatean and Preytob Villages, Chhrokmates Commune, Svayteab District, Svay Rieng Province.
2) Land Area	107.55 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None
22. MDS THMORDA SEZ	
1) Location	Khum Thmorda, Srock Veal Veng, Pursat Province
2) Land Area	2,265 ha
3) Project Implementation	Infrastructure Developing
4) Zone Investors	None

Source: Cambodia Investment Guidebook (2012)

3.3 Comparative Analysis on Promotional Measures for Industrialization through Introduction of Foreign Direct Investment

The current Cambodia Investment Law and other related decrees (Sub-decree No. 111) stipulates the incentives (preferential treatments) for QIPs. Foreign capital share is not restricted, and is almost fully open based on the National Treatment. The prohibited investment activities are limited within those indicated in the negative list of the annex to the above-mentioned Sub-Decree of which prohibited activities. They are mostly to secure the national security and public welfare objectives rather than requirement for economic reasons. Investment activities not eligible for incentives are also listed in the said sub-decree, but are not restricted or conditional.

The following section will discuss the industrialization through introduction of FDI by comparing

experiences of Thailand and Vietnam with Cambodia's situation. (The comparative overviews of investment related regulations are available in Annex 1.)

3.3.1 Industrialization Through Introduction of Foreign Direct Investment in Thailand

(1) Thailand's Industrial Policy Development on Investment Promotion Act

The following sections will discuss the overview of development of industrial policies focusing on industrial agglomeration from the aspect of evolution of the Investment Promotion Act. In this section, the issues are to be highlighted in three development stages which are:

i) 1960s period where major policy shift occurred due to World Bank's conditionality measures (1st stage),

ii) 1970s to mid-80s period where import substantiation and localization progressed (2nd Stage),

iii) Mid-80s to late 90s period where the overlapping effect of export promotion policy and Plaza Accord promoted the development of foreign direct investment (3rd stage).

1) Policy Shift from Governmental Control to Market Mechanism (1st stage)

During the 1950s, Thai economy suffered burdensome trade deficits from heavy dependence on imports, notably consumer goods imports. As capital formulation of private sectors was far from adequate, industrialization process relied on fiscal investments from the government. The increase of fiscal expenditure and imports of capital goods caused serious expansion of its fiscal deficit. The Thai Government finally took action with the financial assistance of World Bank and accepted its proposed economic development plan. This recognized a big shift from the Thai conventional policy to switch to an industrialized market mechanism. Based on the new policy, the Act for the Promotion of Industrial Investment (BE2503) was introduced in 1960. This act was considered a principal prototype of subsequent amendments.

The Act for the Promotion of Industrial Investment of 1960 (the 1960 Act) abolished existing acts including the previous government authority-oriented act, the Industrial Promotion Act (BE2497), and other related governmental orders. While encouraging initiative to the private sector, the 1960 Act stipulates the following principles: i) promotion of private sector, ii) limitation of government intervention, iii) protection of infant industry. The institutional change was also welcomed with the provision that the Chairperson and members of the Board of Investment (BOI) were to be appointed by the Cabinet. Positions of the BOI from the former authority, which is the Ministry of Industry, were also removed.

< The Act for the Promotion of Industrial Investment (BE2503)>

i) The government will not initiate and engage any business which competes with the business

of the promoted person. The government will not nationalize private enterprises.

ii) Possession of property will be granted to foreign entities in the case of approval of the BOI.

iii) Exemption from payment of import duties will be given on machineries comparable in quality that are not being produced or assembled in Thailand.

iv) Exemption of juristic person's income tax for two years after granting the approval of the BOI.

v) Permission to take out or remit money in foreign currency.

vi) Permission to bring into Thailand skilled workers, experts, spouses and dependents of foreign investors.

vii) Permission to export.

viii) Exemption of export tax for a certain period.

ix) Exemption for a certain period the import tax for machinery essential to the establishment of its factory comparable in quality that is not being produced or assembled within Thailand.

x) Ban the import of similar products of the promoted person for a certain period.

xi) Increase import duties of similar products of the promoted person for a certain period.

Based on a one-year operational exercise of the 1960 Act, the Act was amended in 1962. Major amended provisions were; i) setting out three different types of sector (A, B, C) for promotion, based on its importance to economic and social development, ii) include excise tax for subject to exemption adding to import duties, iii) period for exemption of income tax was extended to five fiscal years, iv) reduction of preferential condition after five years of enactment of the Act. The two major points were that the new act will widen the scope of promotional measures and welcome applicants during the early stage of enactment of the new Act.

The 1960 Act was aimed to play a role in improving trade deficit. That is to say, it was aimed to enhance import substation and domestic production. It was realized through further market access by foreign companies, high tariff and import restriction. A total of 64 companies (of which 35 were foreign firms) were approved as promoted person for two years since 1960 while there were 896 companies that were approved during the 1960s. In response to the special procurement that is booming from the result of the Vietnam War, Thai market demands and domestic consumption increased. The Thai economy grew rapidly in this period. The GDP growth rate was recorded average of 8.1% annually

2) Development of Import Substitution and Localization (the 2nd Stage)

The Thai Government has launched and promoted an import substitution policy throughout the 1960s. As domestic market expanded reflecting on the procurement booming by the Vietnam War, the import volume was also increased to more than what the import substitution policy would have expected. In addition to increasing trade deficit, the overall balance of payment turned into deficit of

which, government concern was keen on cutting down its imports. In the late 1960s, many restrictive measures on imports were introduced such as a notable increase in import duties in 1968, import ban in the used automobiles, restriction on imports of raw materials and intermediate goods for foreign capital import substitution enterprises. Besides its import substitution measures, the noticeable policy on localization was launched in that period.

In 1972, the 1960 Act was amended, strengthening the authority power of the BOI. Further exemptions on import duties and excise tax for exporting enterprises, preferential treatment for the enterprises to be established in regional location, etc. were set out. It was regarded as an initial sign of shift from import substitution to exporting enterprise promotion (export promotion).

However, this shift was not successful as only plain exemption measures of tax would not attract export oriented foreign capitals to increase direct investment. There were further essential factors to be considered to attract them, such as adequate industrial infrastructures, distribution system, financial system, and improved technology levels, in which, Thai investment environment was not yet ready. Rather than those measures related to export promotion, localization measures contributed to domestic industrialization, that is the local content requirement measures and tariff barriers for industrial parts. Such measures were considered as negative incentives to those that may initially make investment in Thailand. Although those were inevitable conditions for the already established foreign capitals to be followed, as long as they are in operation in Thailand. This turned out to be an initial start of industrial localization.

From the latter half of the 1970s, after experiencing the first oil shocks in 1973, Thai economy was suffering from heavy burden of payment for imported petroleum. In addition to that, there were further negative impacts to Thai economy, such as the termination of special procurement booming that resulted from the end of the Vietnam War, the anti-revolutionary coup by the military, and the second oil shock in 1979. The Thai economy turned into a recession period. The Thai government, however, did not set out any noticeable recovering policy during this period. The only change recognized was the amendment of the 1972 Act in 1977. The major provision that was amended was the increase of power of the Chairman by putting the prime minister on that position. Other than that, not much major change was recognized.

3) Export Promotion Policy and Plaza-accord Currency Adjustment (the 3rd Stage)

In the beginning of the 1980s, the Thai Government made turn in its industrial policy relaxing localization measures to exporting enterprises. This was set out by amending criteria of approval for promotion of persons in the 1977 Act. As characteristically observed, for example, the announcement by the BOI (No. 1/2526) introduced several following promotion measures while setting out that the promotion measures are not applicable to import substitution enterprises in principle. Those are: i) to permit exporting enterprises to have up to 100% foreign capital share

according to the share of exports on their production, ii) to exempt import duties and restrictions on raw materials and intermediary goods to be incorporated in the products for exports, and iii) to permit exporting enterprises to sell 20% of their products to the domestic market. However, those measures were not attractive enough to increase FDI at that stage.

The actual trigger which led to the burst of the country's economic growth in Asia (also called as the East Asia Miracle) was the Japanese yen's appreciation by the Plaza Accord currency adjustment. In the context of the yen's appreciation, many Japanese industries, such as textile, electronics/electrics, transport machinery sectors and related parts supplying manufacturing sectors inroad into Asian countries were centered in Thailand. Direct investment from Taiwan, Hong Kong, and USA and European countries also developed into several Asian countries expanding its domestic employment and consumption at that period. The Thai Government accelerated its investment promotion policy together with the development of industrial infrastructures, such as the establishment of industrial parks in Ayutthaya, Rayong, Chachoengsao during the 1990s. Up until the late 1990s, the government continued the exporting promotion policy that were centered in the exemption of export duties, liberalization of imports of capital goods, raw materials and intermediary goods for exporting products, and further establishment of industrial parks to facilitate many industrial infrastructures. During this period, the localization policy was also continued in line with all other measures.

(2) Localization Policies Under the Investment Promotion Act

One of the most important points of industrialization was that the introduction of FDI recognized the localization policy on FDI that were based on the Investment Promotion Act. It is also important to note that the localization policy were developed in response to the global changes in economic/political climate as an external factor while the changes themselves require the FDI to localize their business operation in Thailand. It is needless to say that the role of BOI and its strengthening and upgrading function has contributed in its implementing policy.

Since the establishment of the 1962 Act, a series of localization policies have been placed through, not only in its BOI announcements that were based on the act, but also through the notifications of the Ministry of Industry (MOI) which was then the responsible agency for investment promotion in Thailand. The examples of major localization policies which promoted the development of supporting industries for automobile and motorcycle are spelled in the following paragraph.

Through localization policies, foreign enterprises were obliged to achieve the localization targets (local content requirement) stipulated under the policies. For example, in the automobile manufacturing area, the requirement for local contents during the early 1970s was set at 15%. It was then increased to 25% in 1975, 50% in 1978, and further to 54% in 1986. During this period, although Japanese enterprises tried to procure locally produced parts and equipment to its possible

extent, total procurement was not possible to meet the required ratio. As a result, many related parts manufacturers shifted their production sites, making inroad into Thailand so that their products were counted as local parts. This development brought derivative effects in the technology transfer of related domestic industries. There were many cases that Japanese parts manufacturers tried to promote local manufactures by providing technology guidance so that they could assist Japanese manufacturers. Former employees of Japanese parts manufacturers to whom these technology had been transferred, established their own companies to supply parts to their previous Japanese makers.

Localization policies were more in the restrictive side in comparison with the incentives for investment. However, in the case of Thailand, they have contributed to promote domestic industries eventually; which are i) direct promotion of domestic industries through technology transfer, ii) further shift and agglomeration of the parent country's supporting industries into Thailand, iii) promotion of access and entrepreneurship to new supply chain through direct/indirect technology transfer.

Table 3-15 Major Localization Measures Applied to Automobiles/Motorcycle Industry

Year	Automobile	Motorcycle
1964		BOI: Preferable condition on tax to the import substitution industries
1972		MOI: Local content requirement not less than 50% within 2 years, and ban on new establishment in knock-down assembly for 5 years
1972	Introduction of local content requirement on automobile parts	
1975	Minimum 25% of local content requirement in general (for trucks and buses: 15% for those with chassis/engines, and 20% with chassis/wind-shields)	
1977		70% of local content, shifting parts points method in evaluation
1978	Announcement: increase to 50% of the local content passenger cars (from previous 25%) within 5 years (raising every 5% from 1979), ban on imports of finished cars	Ban on the imports of finished motorcycle
1980	Local content requirement to input 7 types of truck parts (radiators, exhaust pipes, batteries, leaf springs, tires, inner tubes, safety glasses and drum brakes)	

1982	Reduction of local content requirement from 50% to 45% in 5 years for passenger cars	
1984	Introduction limitation of numbers in Knock-down models	Nomination of compulsory procurement parts
1985	Listing of local content requirement parts for pick-up trucks to be assembled from 1986 to 1988	Import duties: 20% on finished motorcycle, 40% (from 30%) on parts
1986	Revision of list of local content requirement parts consisting of two lists, all parts in list A are subject to local content requirement of assembly makers, and requirement for total local content of 54% from both list A and B	BOI: local content requirement for all the engines for motorcycle less than 150 cc
1987	Local content requirement for all passenger car engines	
1989	Local content requirement for all pick-up truck engines less than 2300 cc	Local content requirement of 30% for engine parts (stepped expansions of the rate from 30% to 80% in 1993)
1990	Removal of restrictions for knock-down model numbers	
1991	New policy for pick-up-trucks: local content requirement for all the parts in both list A and B as well as engines for those over 1,000 cc; removal of ban on imports finished, passenger cars and reduction of tariff from 189% to 60% for less than 2300 cc and from 300% to 100% for over 230 0cc	
1993		BOI: nominated 4 stokes bikes production as investment promotion industry, and removal of restriction on knocking-down assembly
1994	Removal of restriction of knock-down passenger cars. Commencement of brand-to-brand complementation scheme. Import duties reduction by 50% toward parts supplied within ASEAN (only for the parts with more than 50% ASEAN content)	
1996		Removal of ban on imports on finished motorcycles, removal of local content requirement on parts other than engines

1997	(Financial crisis with Bart devaluation in July) Increase of tariff on passenger cars from 42-62.5 to a single rate of 80%	
2000		Total removal of local content requirement on parts
2002		BOI: removed 4-stroke motorcycles from the promoted industry and set 5% of import duties within ASEAN
2004		BOI: re-nominated 4-stroke motorcycles as part of its promotional industry

Source: Study Team, based on "Motorcycles Industry in Thailand" by Shigeki Higashi, 2004, Institute of Developing Economies, Japan External Trade Organization

The localization policy, in many cases has a regulatory nature by demonstrating disincentives to FDI. In the case of Thailand, however, it has to be noted that localization also contributed in the promotion of technology transfer and industrial agglomeration while domestically established FIEs brought in new parts/raw material suppliers. FIE also assisted domestic manufacturers to become local suppliers as part of the supporting industry. Localization was not limited to the automobile and motorcycle sectors but in other key manufacturing sectors as well, such as the textile sector as mentioned in the previous section.

In Thailand, in order to maintain consistency with the provisions of the Agreement on Trade-Related Investment Measures (TRIM) under the WTO regime, performance requirements have been abolished, such as more than 50% of the local content requirement measures on agricultural products (BOI Announcement No. 1/2526) and more than 54% on automobile parts. However, it is important to note that the following substitution measures are in place:

1) Differentiated level in import duties on materials, parts, and finished products;
2) Claiming of 20% value added ratio as a condition to approve investment promotions;
3) For the purpose of protection of domestic industries, levying import surcharges and/or import restriction by BOI are implemented;
4) Encouraging the use of domestic materials or parts in case the BOI granted investment promotion benefits (incentives);
5) Different benefits provision by administrative guidance based on the achievements of procurement target of local content; and
6) Promotion of government procurement on domestic products.

In order to promote the linkage between FIE and the domestic manufacturing sector, the BOI established a section named "The BOI Unit for Industrial Linkage Development (BUILD)". The BUILD provides a variety of services related to linkage promotion such as; vendors meet customers (VMC) service which facilitates business linkage for FIEs and/or large sized companies through the introduction of Thai domestic vendors (suppliers), facilitating services for direct procurement of

parts/raw materials in Thailand, match making services for joint ventures through the introduction of partners, and so on. The range of services extends to proactive business development promotions further than the encouragement of localization. It should be noted that the successful undertaking of BUILD is backed up by the continuous effort to maintain good relationship with established FIEs and to collect offers and demands information from domestic industries – which indicates the significance of "after grant/certification services".

3.3.2 Industrialization Through the Introduction of Foreign Direct Investments in Vietnam

In Vietnam, the active policy to attract the foreign direct investment has been developed since 1988 in the context of the Doi Moi Policy which initiated in 1986. It also started developing the foundation of inflow of FDI through participating in the framework of international trade and investment for globalization process. It participated in AFTA in 1996, WTO in 2007, and the official discussion on TPP announced in 2010.

(1) Related Laws and Regulations on Foreign Direct Investment (Law of Investment, Law on Enterprises)

The 1996 Law on Foreign Investment in Vietnam was amended in 2000. The provisions related to compulsory nationalization of FIE and confiscation of assets and the principle of unanimity in the board of directors were annulled. The protection of foreign investment was preserved in the amendment. Upon the participation of WTO, the Law on Investment was enacted in 2006, replacing the Law on Foreign Investment in Vietnam. The Law on Investment encompasses both the domestic and foreign investment under same provisions in order to ensure the non-discriminatory treatment in the area of investment. In relation to the introduction of the new law, the related company law was replaced by the Law on Enterprises, which also encompass both domestic and foreign enterprises under the same provisions.

The Law on Investment provided freer conditions in terms of investment itself, management, access to finance, trade procedures and marketing, foreign exchange, transfer of investment project, utilization of land property, and so on, as well as the preservation and protection of invested assets. The restriction on foreign capital share was removed and foreign capital was permitted for up to 100%, other than the sectors otherwise stipulated as under the prohibited/conditional provisions. The form of enterprise includes the stock company under the new law.

The Decree No.108[60] of the Law on Investment simplified the jurisdiction system for investment project approval. There were four levels of jurisdiction for two categories of investment projects in the former Law. The new law amended the system into three levels, which are the level for the Prime

[60] Decree No.108/2006/ND-CP

Minister, the Regional People's Committee, and the Management Board of Industrial District. The issuance control of the investment certificate is transferred to the Regional People's Committee, or the Management Board of the Industrial District. This speeds up the proceeding time of comparing with the former procedure by MPI[61]. The MPI that has mandate on the formulation of the investment policy was made efficient. As for investment promotion areas, the priority sectors and spearhead industries up to 2020 are announced under the Prime Minister Decision (Decision No.55/2007/QD-TTg) indicated in Table 3-16 as follows.

Table 3-16 Priority Sectors and Spearhead Industries

No	Industries	2007-2010		2011-2015		2016-2020	
		Priority industry	Spearhead industry	Priority industry	Spearhead industry	Priority industry	Spearhead industry
1	Textile and garment (yarn, fabrics, silk, exported clothings, raw materials and auxiliary materials)	X		X		X	
2	Leather and footwear (exported footwear, raw materials and auxiliary materials)	X		X		X	
3	Plastics (domestic-use plastics, packings, bottles, jars, pipes, etc., technical plastics)	X					
4	Processing of agricultural, forest and aquatic products	X		X		X	
5	Steel (steel draft, special-use steel)	X		X			
6	Exploitation and processing of aluminum bauxite	X		X			
7	Chemicals (base chemicals, fertilizers, petro-chemistry, pharmaco-chemistry, cosmetics)	X		X		X	
8	Mechanical engineering (automobiles, ship building, complete equipment, agricultural machines and mechanical electronics)		X		X		X
9	Electronic, telecommunicatio-ns and information technology equipment		X		X		X
10	Products from new technologies (new energy, renewable energy, software industry, digital content)		X		X		X

(2) Vietnam-Japan Joint Initiative and its Significance

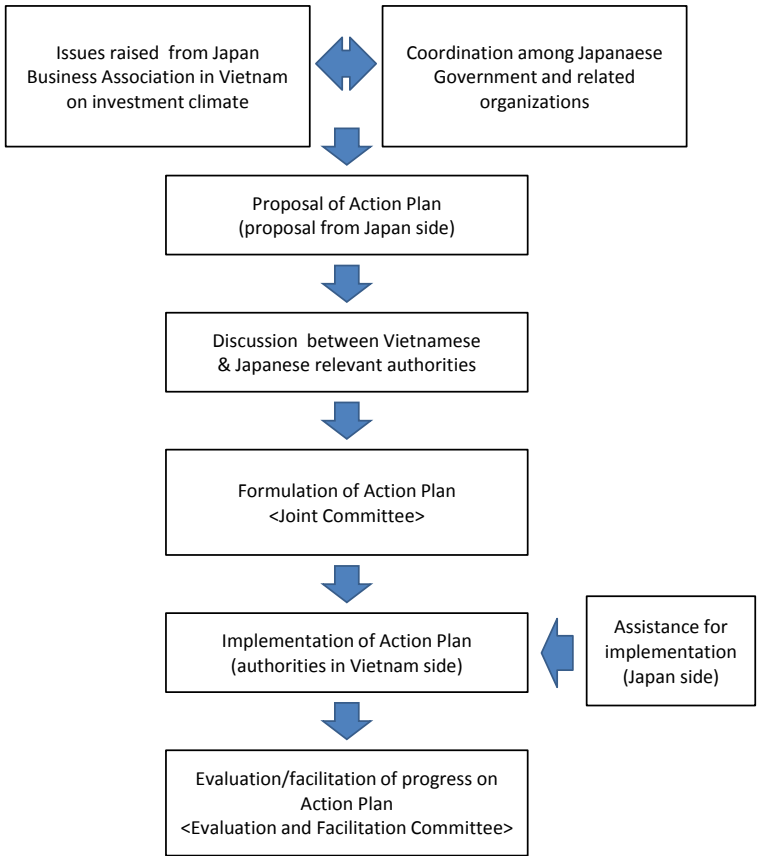
In addition to the improvement on investment climate, it is essential to take close attention to the undertakings of the Vietnam-Japan Joint Initiative[62] which started in 2003 between Vietnam and Japan. This is essential in the investment climate in terms of its industrialization through

[61] Ministry of Planning and Investment

[62] Vietnam-Japan Joint Initiative to Improve Business Environment with a view to strengthen Vietnam's competitiveness

introduction of foreign direct investment. Although the initiative is initially targeted to promote Japanese FDI, this undertaking actually brought about further improvement on Vietnam's investment climate as a whole.

This undertaking consists of several steps. The Japanese FIEs will first propose issues to be improved for the betterment of the country's investment climate. Then, an action plan will be formulated among stakeholders for both Vietnam and Japanese sides, including governments through a series of discussion and coordination in the joint steering committee. The action plan will be submitted to the Vietnamese Government for them to tackle with. Important factors for this are; i) private sector involvement is needed in the discussion, and ii) public sectors of the two countries will take up actual requests for the improvement of this undertaking. The structure of chairmanship is also very practical and efficient. It should be noted that the Minister to MPI of Vietnam, the Ambassador of Japan to Vietnam, and the Head of Economic Committee of KEIDANREN are co-chairing the Joint Steering Committee.



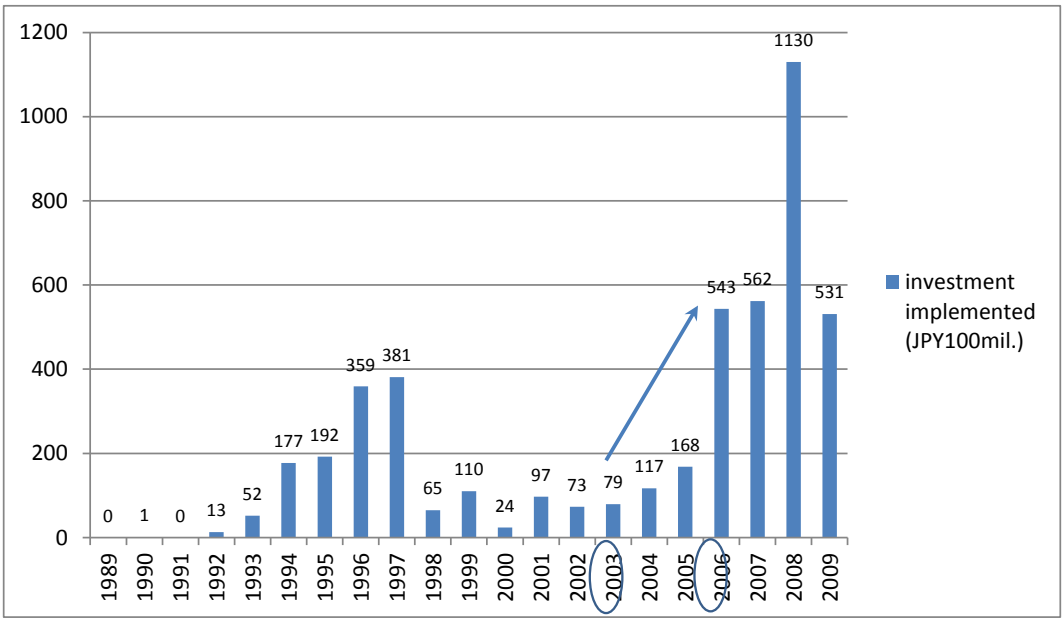
Source: "Vietnam-Japan Joint Initiative and Vietnam-Japan Economic Partnership Agreement" (2008), Embassy of Japan

Figure 3-8 Implementation Flow of the Vietnam-Japan Joint Initiative

The first action plan was formulated during the Phase I stage and submitted to the Government of Vietnam in December 2003. The plan consists of 44 items (125 sub-items) to be improved for the investment climate. About 85% of the project achievement was confirmed by the Evaluation and

Facilitation Committee in July 2006. The Phase I stage was followed by Phase II which started from July 2006 consisting of 46 items in seven categories, of which, the achievement rate was 93% in November 2007. Finally, the Phase III stage has 37 items (62 sub-items) with an achievement rate of 81% in December 2010. Some of the major improvement were: exemption of short-term VISA from Japan, decrease in the ceiling rate of income tax from 50% to 40%, privatization of electrical power development, 24 hours land transportation, introduction of PPP scheme, etc.

As observed in the results of the undertaking, the inflow of Japanese investment rapidly increased in 2006, which was the year when the first Evaluation and Facilitation Committee meeting was held.



Source: "Investment Climate in Vietnam"(2011）, Japan Bank for International Cooperation

Figure 3-9 Implementation Flow of Vietnam-Japan Joint Initiative

3.3.3 Lessons Learned for the Case of Cambodia

As mentioned above, it was not the industrial policy that directly led FDI booming and capturing industrial agglomeration in Thailand during the mid-1980s. Rather, it was more on the exogenous factor that the Plaza Accord currency adjustment played as an actual trigger to investment booming. However, for the foreign investors, it was also true that the relatively well-established Thai industrial infrastructure foundation was one of the important criteria for FDI to make a decision on why they chose to relocate to Thailand as compared to other countries in the region at that time. It should also be noted that that the foundation could not have been recognized without the Thai localization policy in the 1960s and 1970s.

It was also the external factor that made Japanese textile and automobile enterprises inroad into the Thai market in the 1960s. As for the textile and clothing sector, the industry needs to expand its foreign market to locate its production base abroad as the result of the so-called “Synthetic

Recession" in Japan, which was caused by oversupply due to efficiency in production of synthetic fiber spinning. In the case of automobile sector which was benefitting from rapid and high economic growth, it was very important to expand and explore new markets as the Japanese market was almost saturated. In that respect, Asia was their preferable market. Thus, to locate assembling bases right in the market was a rational and efficient strategy at that time. For both cases, it was considered that the basic criteria for their decision-maming on FDI into the Thai market were low labor cost, better infrastructure including parts supply and distribution/ logisitics channels, sound foundation of legal system, and political stability. The incentives of the investment policy should be one of the criteria. However, it must not have been a priority and others were more crucial for the operation of the actual business.

Even if Japanese FIEs were not directly attracted by the incentives that were provided by the investment policy, it is to be noted with significance, especially in the discussion of policy, that the localization policy was developed in order to take advantage of the pioneers of FDI to promote and foster the domestic industry. In addition to this policy development, it was fortunate in the Thai case that most of Japanese FDIs at that time were put in the apparatus industry, which is the upper-stream of industry, rather than simple assembly and processing areas. Both factors supported a sound foundation for the Thai industrial development and was actually recognized as a source of key differentiators in addition to the conventional criteria of low labor cost, better infrastructure including parts supply and distribution routes, sound foundation of legal system, and political stability.

Thus, industrial agglomeration encouraged by foreign investments was not realized only through the incentive policy in investment but also through the localization policy, even though it may tend to have a regulatory effect. The balanced combination or synergy of investment incentives and regulations for localization is considered as an effective and significant policy design strategy. Pursuing either one is not sufficient.

The local content requirements which the Thai localization policies were set out during its developing period are not applicable today to comply with the provisions in TRIM of WTO. They are prohibited as a performance requirement. Unfortunately for LDC, such performance requirement measures are only effective for the localization and promotion of domestic industries as they are prohibited by TRIM. Examples are: i) import quota for protection of domestic industry, ii) local content requirement for domestic industry promotion iii) export subsidies and/or performance requirements for export promotion. Considering the importance of industrial localization, it is essential to consider the substitution for WTO to have consistent measures for localization, which is the challenge to realize export promotion, protection and promotion of domestic industries in the global competition. Options of WTO-consistent measures include financial assistance (incentive)

measures related to tariff, investment, training, and research and development (R&D), and safeguard.

Even under such WTO regime, Thai's effort has to be noted as for reference that continues to encourage (but not require) "the use of domestic materials or parts in case of a BOI grant for investment promotion benefits (incentives)". It is also important to note that proactive promotion is a very effective way for industrialization through FDI as observed in the activities of linkage programs by BUILD. As a matter of course, these undertakings are only or mostly successful when supported by the continuous efforts to maintain close relationship with FIE which will further be established after the certification services. The significance of the after certification services are also to be confirmed.

In the case of Vietnam, the effectiveness was observed from the well-designed system to generate actual motivation of FIE through grasping and taking up their requests for the improvement in investment climate. Even if a certain request is specified after certification services, without the system to put the request into actual improvement, the significance of the after certification series shall be undermined. The dialogues and discussions among private and public sectors are a very effective way for the government and relevant authorities to respond to their messages. The undertakings already being conducted, such as the Japan-Cambodia Public and Private Sector Joint Meeting, should be strengthened and/or substantiated for the overall framework. This is not only to serve in the improvement of investment climate but also for good reputation-building to appeal the advantage that FIE's requests shall be taken into actions by the authorities.

3.4 Concluding Remarks

It is essential to attract quality investment for industrialization through the introduction of the FDI. The improvement and upgrading of the investment climate is the basic foundation for such a problem. In many cases, this is recognized with the construction of infrastructural foundation, the development of a legal business enabling environment, and provision of incentives for investment. These are components for the basic foundation of a decent investment climate for FDI, but not exactly the final and only determinative factors for a destination of FDI. It is because of the determinative factors of FDI that they are essentially depending on the requirements and relative consideration for their actual business operations and never in its uniformity. "Good reputation" can be a horizontal and important determinant as it implies the proof of a good soft infrastructure in the investment destination, like the good quality of services that was recognized in Thailand's BOI after certification services as well as Vietnam's joint initiative scheme. In Cambodia, it is recommended that the improvement and upgrading of the quality of services by investment authorities shall be promoted in order to develop good reputation among investors, as well as provide the basic foundation of a decent investment climate for the FDI.

CHAPTER 4 **Cambodia's Business Environment**

4.1 Structural Change of Economic Situation Through ASEAN Economic Integration and ASEAN Plus 1

4.1.1 Structure of Trade Relations of ASEAN as a Whole

After a sharp fall in both exports and imports in 2001, the values of intra- and extra-ASEAN trade exhibited positive performances until 2008. Due to the global economic recession following the bankruptcy of the Lehman Brothers, a temporal fall was again recorded both in extra- and intra-ASEAN trade values followed by a notable recovery. The value of extra-ASEAN trade continuously exceeds one of the intra-ASEAN trades. Some characteristics of the commodity-level data may be summarized as follows:

- Petroleum products, machinery, electrical machinery and equipment, and motor vehicles have large shares both in the extra- and intra-trade; and
- Although many commodities have high ratio of extra-imports, textile, garment and footwear related commodities have notably high ratio of the extra-imports as against the intra-imports.

These characteristics may be attributed to the current flow of raw materials and parts and parts from ASEAN, East Asian countries, and other regions and the flow of the final products to East Asia, Europe, North America, and other final destinations. Although the share of locally or internally procured raw materials and parts and parts was relatively high for the majority of goods, garment may even have a higher ratio of externally procured raw materials and parts and parts (see Table in Annex2).

The values of traded commodities between two countries, namely Vietnam and Thailand, and two East Asian countries, China and Japan, are as shown in Table 4-1. The actual trading system is more complex with more major players such as Korea, Taiwan, Singapore, and Malaysia. The trade of electrical machinery and equipment between Vietnam and Japan recorded more export value from Vietnam. Thailand's trade of machinery and parts with China indicated trade surplus. However, all the other items recorded as deficit for both Vietnam and Thailand. Thailand has trade surplus with Vietnam.

Table 4-1 Vietnam and Thailand Trade Values of Machinery, Automobile, Electrical Machinery with China and Japan

(Unit: 2010, Million USD)

		Vietnam			Thailand		
	HS 2digit Commodities	China	Japan	Thailand	China	Japan	Vietnam
Import	Machinery and parts (HS84)	3,663.63	2,134.78	979.31	5,444.59	7,429.45	141.80
	Electrical Machinery and parts	3,925.97	1,407.50	384.96	7,224.70	7,992.65	343.55
	Vehicle and parts (HS87)	376.79	383.88	337.01	341.36	4,700.44	57.08
Export	Machinery and parts (HS84)	362.77	417.57	159.00	5,586.41	3,097.44	898.89
	Electrical Machinery and parts	638.49	1,825.95	228.88	2,570.03	4,089.76	349.68
	Vehicle and parts (HS87)	46.36	227.33	55.63	70.93	1,091.83	379.21

Source: JICA Study Team based on the data of UN-COMTRADE

The directions of the trade of motor vehicles and parts (HS87) between four countries are shown in Table 4-2. The volume between Japan and China is outstanding as compared with the other directions of trade. It is also recognized that Vietnam has a larger trade deficit with the total trade volume much lower than that of Thailand.

Table 4-2 Vehicles and Parts (HS87) Direction of Trade

(Unit: 2010, Million USD)

To		Japan	China	Thailand	Vietnam
From	Japan		15,032.7	4,394.7	348.8
	China	2,854.7		428.7	629.5
	Thailand	1,221.8	163.5		475.8
	Vietnam	227.3	46.4	55.6	

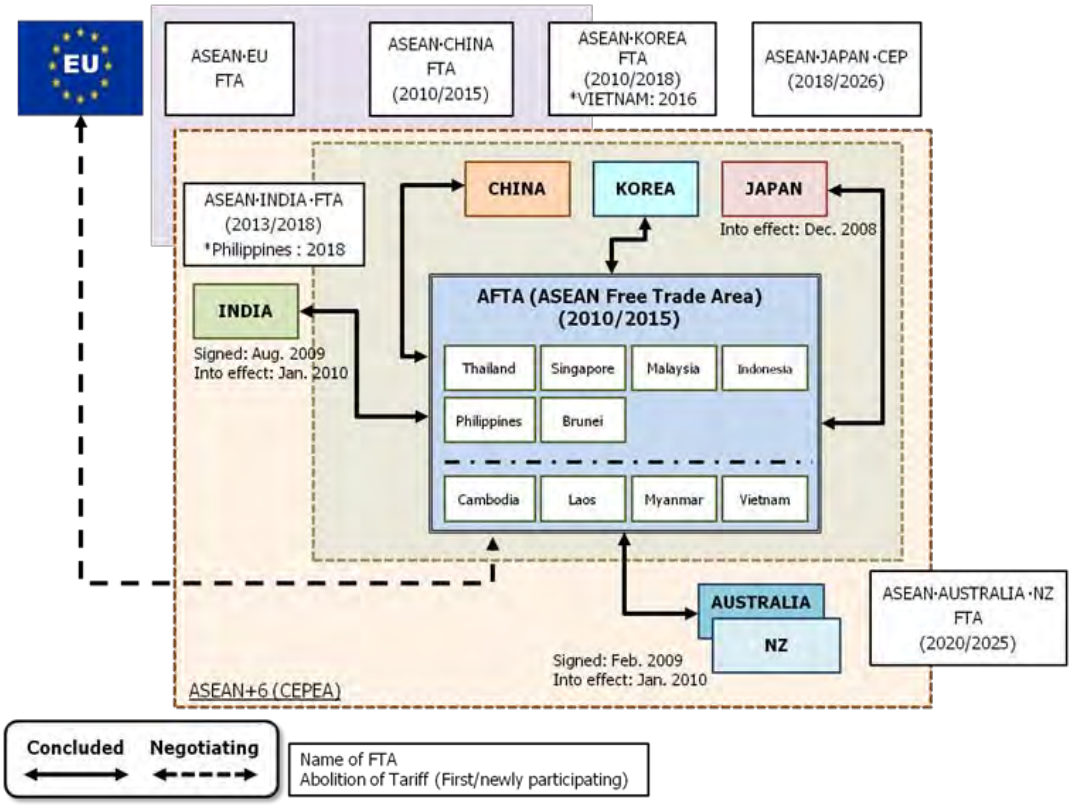
Source: JICA Study Team based on the data of UN-COMTRADE

The detailed analysis using the larger digit data revealed that Thailand has the capacity of exporting spare parts to some extent, whereas Vietnam's exports are largely dominated by motorcycles. Its spare parts exports are also limited to motorcycle parts[63]. As explained above, the structure of trade relations within and outside ASEAN is in (i) China and Japan supply parts, (ii) part of Thailand and some ASEAN produce, (iii) parts were assembled within the region, and (iv) the products are exported outside of ASEAN.

4.1.2 The Changes in Tariff and Institutional Settings Under ASEAN Plus 1

In this section, the expected impacts of ASEAN economic integration on the economies of CLMV are reviewed. Through the regional integration and concluding FTAs/EPAs, ASEAN member countries have reduced their tariff and trade barriers. In addition to the efforts as a region, individual member countries also have bilateral FTAs and EPAs with various countries. ASEAN's FTAs/EPAs as a region are already in effect or under negotiation as depicted in Figure 4-1. The size of the economy of ASEAN as well as the external trade partners with FTAs/EPA, China, India, and Japan, is shown in the Table in Annex 3. The analysis in this report is mainly done for the FTAs/EPA between ASEAN and these three countries.

[63] Techakamont (2012), "New Division of Labor Between Thailand and CLMV Countries: The case of Automotive Parts Industry" in Industrial readjustment in the Meking River Basin Countries:Toward the AEC, Ueki and Bhongmakapat, ed., BRC Research Report No.7., Bangkok Research Center, IDE-JETRO, Bangkok Thailand



Source: JICA Study Team based on the information of JETRO Website

Figure 4-1 ASEAN FTAs/EPAs

The table below shows a brief overview of the observed effects and possible impacts of the ASEAN Trade in Good Agreement (ATIGA), ASEAN-China Free Trade Area (ACFTA), ASEAN-India Free Trade Area (AIFTA), and ASEAN-Japan Comprehensive Economic Partnership (AJCEP) on Cambodia. The highlights of these agreements and its implementation schedule are explained further in Annex 3.

Table 4-3 Overview and Expected Impact of ASEAN Plus1 FTA/EPA

Overview	Observed Impact So Far	Cambodia: Schedules and Impact
ASEAN Trade in Goods Agreement (ATIGA) - Tariff elimination on trade in goods. - Elimination of tariffs for priority areas already completed. For the Inclusion List (IL) commodities, tariffs eliminated in 2010 for ASEAN 6. - Also includes such issues as trade, custom, voluntary standards, mandatory standards and conformity assessment measures, sanitary and phytosanitary measures, and trade measures. - Does not include the service trade.	- Gradual increase in the utilization of the FTA by enterprises enjoying the simplified transactions and reduction of tariff. - The economic impact may be observed in the location of the branches and production facilities. - Greater impact may be expected after the larger tariff elimination by ACFTA and completion of Schedule A by ASEAN 6 in 2012.	- Tariffs on ICT related products have already been eliminated in 2011. - IL tariffs should be eliminated in 2015. - Disadvantage for commodities with low comparative advantage such as industrial goods. - The tariff for imported materials will be reduced, which may be a plus for industries with high imported raw materials and parts. At the same time, the export of parts/raw materials and parts with comparative advantages may be benefitted. - The benefit for agro-processed products may not be fully enjoyed unless there is facilitation of quality control and reduction of logistics costs .

ASEAN-China Free Trade Area (ACFTA) - Early Harvest (EH) list was developed and the tariffs of the listed commodities were eliminated. - ASEAN 6 and China have eliminated the tariffs of the normal track (NT) commodities (90% of the lines). CLMV will follow in 2015. - Sensitive lines (SL) shall be reduced to less than 20% in 2012 and eventually less than 5% in 2018.	- Some increase in trade value in EH commodities. Some merit has been cancelled by the already-provided incentives through export processing zones and other preferential scheme. - The major impact is expected when tariffs for SL, highly sensitive lines will be eliminated after 2012.	- Reduction of NL tariffs in 2015 and reduction of SL to less than 20% in 2018. - Possible expansion for Chinese commodities in the market.
ASEAN-INDIA Free Trade Agreement (AIFTA) - Took effect in 2010. - The tariffs of the Normal Track commodities (80% of commodity lines): ASEAN 5 (Philippines with a different schedule) will eliminate 71% of commodity tariffs in 2013 and the rest in 2018. - The tariffs of Sensitive Track commodities will be eliminated in 2019. - India sets the category of "Highly Sensitive Track" and General Exceptions" with different reduction schedules and exception of tariff elimination.	- Despite some limitations set by India in terms of the number of commodities for tariff elimination, ASEAN export has been increasing utilizing the reduced tariff. - An emerging form of trade are structured with spare parts and raw materials and parts exported from ASEAN and assembly done in India.	- CLMV countries will eliminate tariffs for the Normal Track commodities in two stages in 2018 and in 2021. - Elimination of tariffs for the Sensitive Track will be done in 2021. - Some advantages may be identified in the manufacturing of parts which requires cheap labor force by utilizing the hub function of Thailand and other ASEAN industrial hubs.
ASEAN Japan Comprehensive Economic Partnership (AJCEP) - Signed, ratified, and took effect in 2008. - Application of the new Rule of Origin (ROO) with the Regional Value of Contents (RVC), allowing back-to-back arrangement, and third party invoicing. - ASEAN 6 eliminates tariffs on 90% of commodities either at the time when the agreement took effect or within 10 years from date of effectively; however, Vietnam within 15 years, and CLM within 18 years.	- The new ROO enables the manufacturing companies to import Japanese parts, assemble in ASEAN member countries and export to any other ASEAN member countries without tariff charged; or export products from ASEAN with parts from different ASEAN member countries to Japan without tariff charged.	- The tariffs on 90% of commodities will be eliminated in 2026. - Easy access to Japanese market with parts procured within ASEAN, or to ASEAN intra-market using Japanese parts.

Source: JICA Study Team based on the agreements of ATIGA, ACFTA, AIFTA, AJCEP, and web-site of the ASEAN Secretariat, the Ministry of Foreign Affairs and the Ministry of Economy, Trade and Industry of Japan, and JETRO

In general, the impact of AFTA to CLMV with relatively weak industrial basis may be more negative as compared with other advanced member countries[64]. A large portion of the products assembled in CLMV relies on imported parts and raw materials and parts. Instead of importing the parts and assembling it

[64] Sukegawa(2010) reviewed the trade specialization coefficient among ASEAN members and the recent reorganization of major manufacturing companies in ASEAN and pointed out that the gaps in the industrial agglomeration among ASEAN 6 started appearing with some impact on Vietnamese manufacturing sectors (Sukegawa (2010), ASEAN and changing environment for competition for industries and enterprises facing FTA-Era, "RIM Pacific Business and Industries" , Vol.10. No.38、pp.67-85, Ishikawa (2009)、ASEAN FTAs and Japanese Firms – the survey result from Indonesia, Philippines, and Vietnam-, "*International Trade and Investment*" (Japanese: Kokusai Boeki toToshi), Summer 2009/No.76, pp. 20-3)

locally, some manufacturing companies have started to import the final products from the other ASEAN member countries. On the other hand, under AIFTA and AJCEP, major industrial hubs such as Thailand may be chosen to coordinate the procurement and assembly process for two major markets, namely, India and Japan. When the price and possibly quality are regarded as competitive, Cambodia's industrial sector may have an opportunity to supply the parts or to undertake some production process as part of these network controlled by the major industrial hubs.

4.1.3 Common Arrangements for Standard, Quality, and Measurement

The ASEAN Blueprint raises issues related to standards and technical barriers for trade as one of the areas of activities. These include areas such as standard, technical regulation, harmonization of the laboratory testing procedures, and the sectoral Mutual Recognition Arrangements (MRAs) of conformity assessment. At the same time, the blueprint envisions the promotion of trade in food, agriculture, and forestry sector through harmonization and enhancement of testing and management procedures, proliferation of standards of sanitary and phytosanitary (SPS) measures.

In the area of standard, metrology and quality certification, the basic infrastructure for legal measurement that is compliant and certified with the international standards is necessary. Moreover, the legal and administrative system on its implementation such as how to undertake calibrations domestically is also required.

Cambodia has developed the legal and regulatory framework for the sanitary and phytosanitary measures (SPS) after joining the WTO. However, the actual implementation capacity of these regulations as well as some physical infrastructure for such activities as testing and certification are not fully in place. This situation may cause two consequences: first, the agro-processing sector may not be able to enjoy the benefits of tariff elimination due to the insufficient facilitation of quality control and lack of confidence on the products of Cambodia; second, the flow of the products with relative low quality may be difficult to develop due to the insufficient quality control regulations. For example, the current exported agricultural commodities to Thailand are largely limited to animal feeds with less quality requirement other than oil seeds[65]. This may be partially due to inadequate and unreliable logistics infrastructure which incurs costs and damage to products[66]. However, even under the current circumstances, Cambodia's agricultural and food sector continue to experience large trade deficit with Thailand[67]. The situation may be even aggravated unless the capacity of the industry is strengthened.

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[65] JETRO(2011) , "Tai to Shuhen Koku tono Nourinsuisanbutsu, Shokuhin no Butsuryu to Kongono Kanousei Chousa (Survey on the Current Situation on the Logistics of Agro-Fisheries and Forestry Products and the Future Potentials)" JETRO Bangkok Center

[66] According to the research done in 2008 to review the current situation of institutional building relevant to SPS and the administrative capacity for implementation, lack of procedural laws at the administration agencies, complication of demarcation among supervising organizations, insufficient organizational capacity for implementation and the physical infrastructure for laboratory testing are pointed out (Parsons (2008), "Kingdom of Cambodia: Cambodia Sanitary and Phytosanitary Quality and Standards Report (Technical Report under Private Sector and Small- and Medium-sized Enterprise Development Program Technical Assistance No.7056-CAM), Technical Assistance Consultant's Report, ADB。

[67] JETRO (2011), "Logistics and the Future Prospective of Agricultural, Fishery, and Forestry and Food Products of Thailand and the Neighboring Countries", JETRO Bangkok Center

4.1.4 Transportation Infrastructure Development in ASEAN Plus1

(1) Transportation Infrastructure Development in ASEAN

The Master Plan on the ASEAN Connectivity (MPAC) approved in 2011 indicates the strategy for improving connectivity from three pillars, namely: physical connectivity, institutional connectivity, and people-to-people connectivity. The strategies under the physical connectivity and institutional connectivity are listed in Table 4-4 below.

Table 4-4 Strategies Listed in the Master Plan on ASEAN Connectivity

Key Strategy to Enhance Physical Connectivity	
Strategy 1	Complete the ASEAN Highway Network
Strategy 2	Complete the implementation of Singapore Kunming Rail Link (SKRL) Project
Strategy 3	Establish an efficient and integrated inland waterways network
Strategy 4	Accomplish an integrated, efficient, and competitive maritime transport system
Strategy 5	Establish an integrated and seamless multimodal transport system to make ASEAN the transport hub in the East Asian region
Strategy 6	Accelerate the development of ICT infrastructure and services in each of the ASEAN member states
Strategy 7	Prioritize the processes to resolve institutional issues in ASEAN energy infrastructure
Key Strategy to Enhance Institutional Connectivity	
Strategy 1	Fully operationalize the three framework agreements on transport facilitation
Strategy 2	Implement initiatives to facilitate inter-state passenger land transportation
Strategy 3	Develop the ASEAN Single Aviation Market (ASAM)
Strategy 4	Develop an ASEAN Single Shipping Market
Strategy 5	Accelerate the free flow of an efficient and competitive logistics sector, in particular transport, telecommunication, and other connectivity-related services in the region
Strategy 7	Substantially improve trade facilitation in the region
Strategy 8	Enhance border management capabilities
Strategy 9	Accelerate further opening up of ASEAN member states to investment from within and beyond the region under fair investment rules
Strategy 10	Strengthen institutional capacity in lagging areas in the region and improve regional- and sub-regional coordination of policies, programmes, and projects

Source：ASEAN Secretariat (2011), Master Plan on ASEAN Connectivity

The first two strategies under the physical connectivity refer to the already existing projects on ASEAN Highways and Singapore-Kunming Railway Link (SKRL) project. The Strategy 5 mentions the development of Mekong-Indian Economic Corridor (MIEC) which connects SEC with Chennai, India through Dawei, Myanmar. The MPAC envisions the construction of the port of Dawei in 2020. Although the plan is yet to be realized, the access to the eastern coast of India via Dawei is expected to gain a positive impact on the regions along the SEC including Cambodia[68].

(2) ASEAN Single Window

Based on the agreement in 2005 by the member countries, the efforts in establishing ASEAN Single Window (ASW) have been made targeting 2008 for launching ASEAN 6 and 2012 for CLMV. Currently, Thailand, Indonesia, Myanmar, Philippines, Malaysia, and Vietnam have formed the national working group for establishing their National Single Windows. As a result of the extensive coordination with

[68] Kimura, Kudo、Umezaki (2010) "ASEAN-India Connectivity: A Regional Framework and Key Infrastructure Projects", *ASEAN – India Connectivity: The Comprehensive Asia Development Plan, Phase II*, Kimura & Umezaki (Eds), ERIA Research Project Report 2010, No. 7

various domestic institutions, the progress of the implementation has been delayed and will be completed in ASEAN 6.

(3) Infrastructure Development in Cambodia

The on-going transportation infrastructure development in Cambodia and its expected impact are shown in the Table 4-5 below.

Table 4-5 Transportation Infrastructure Development and Its Impact

Road	・The construction of the bridge at Neak Loeung is expected to increase the connectivity between Ho Chi Ming City (HCMC) and Phnom Penh.
Railway	・The rehabilitation of the existing railway lines within Cambodia is under process. The concession for its operation was granted to Toll (Cambodia) Co., Ltd. ・Extension to the neighboring countries may not be realized in the near future as the current status of the connection with the lines in Thailand has no clear plan; and the Vietnamese side is still under review.
Maritime	・The constructed Sihanoukville Port SEZ may induce foreign direct investment (FDI) inflow by utilizing the port facilities. ・Construction of the multipurpose terminal is financed by Japanese ODA loan.
Inland water transportation	・Construction of a new container terminal at Phnom Penh Autonomous Port is expected to increase the terminal's capacity from about 70,000 TEU to 300,000 TEU. ・The port in Cai Mep near HCMC enables the direct access to Europe and USA without transshipment.

Source: JICA Study Team

For the enterprises located around Phnom Penh, the transportation through the port of Phnom Penh is more cost efficient than via Sihanoukville. Therefore, the competition between two ports may be happening. Under the current market situation with limited volume of logistics, the said competition might have negative effects on the development of both ports. It is necessary to clearly define the roles of each port and to undertake continuous upgrading of both facilities in order to accommodate the expected increase in demand for transportation. In addition to the capacity of the facilities, there are various areas which require improvement such as the connectivity with the inland industrial sites, smooth transactions for import/export, and the possible participation of domestic capital into the various areas related to maritime transportation and logistics industries including ship repair[69].

(4) Cross-border Transportation Agreement

In order to expedite the transaction at the border point, it is necessary to standardize and simplify the transaction on both sides of the border. GMS countries have been negotiating the introduction of

[69] JICA/OCDI/MRI (2010), "The Study on Project Priorities to Upgrade Performance and Capacity of ASEAN Network Ports : Final Report", JICA/OCDI/JMS(2007), "The Study on the Master Plan for Maritime and Port Sectors in the Kingdom of Cambodia : Main Report"

Cross-border Transport Agreement (CBTA) in order to simplify the transaction at border points and to liberalize the transit of the vehicles without reloading. However, the negotiations to modify the details are still on-going including its actual implementation.

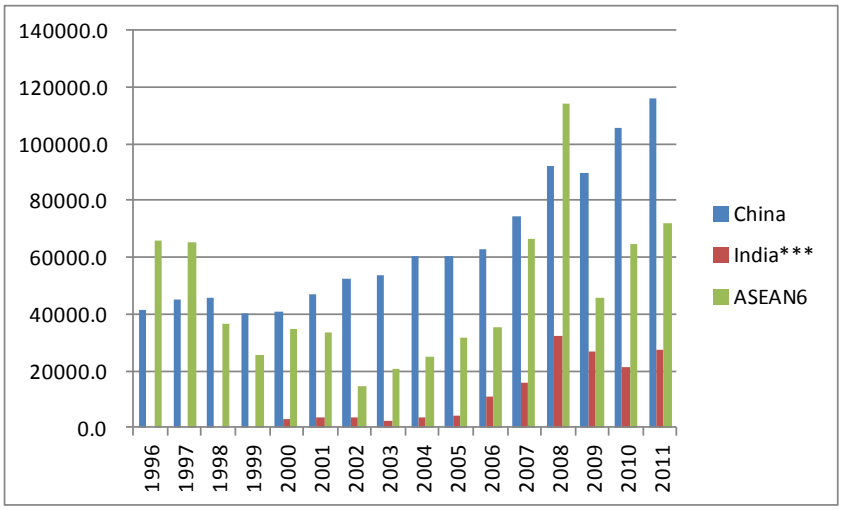
The traffic rights for those bound to SEZ factories within 20 km from the border points has allowed the free flow of Thai and Vietnamese trucks of SEZs across the borders.

About 300 registered vehicles have been granted cross-border transport permission without changing vehicles based on the bilateral exchange of traffic rights between Cambodia and Vietnam. In 2012, Cambodia and Thailand also came to an agreement on the bilateral exchange of traffic rights, but the number of vehicles allowed for border-crossing is limited only to 40. It turned out that the majority of the registered vehicles were buses rather than trucks. Comparing it with the number of granted vehicles to Vietnam, the number of vehicles to Thailand is not enough to entail the tangible positive impact[70].

4.1.5 FDI and Enterprise Location in ASEAN Plus1

(1) FDI Trend to ASEAN, India and China

This part grasps the general trend and the characteristics of FDIs in ASEAN in recent years especially focusing on Japanese firms. The trend of FDI inflow to ASEAN member countries, China and India, is shown in the figure below. Whereas China accepts the increasing volume of FDI, ASEAN countries experienced the first peak in the 1990s and the next wave from the mid-2000s. The steep increase in 2008 was mainly due to the increase in Vietnam.

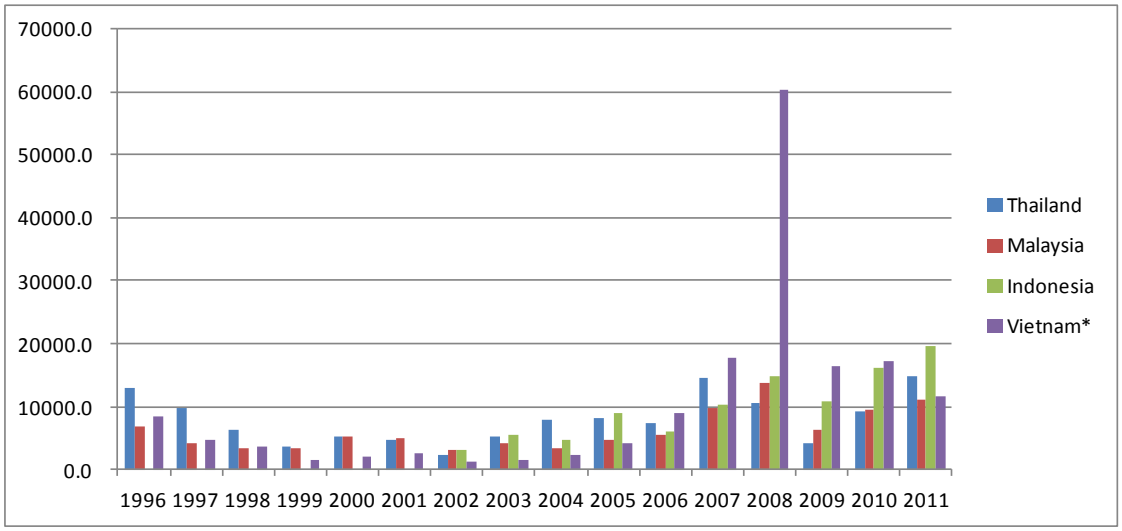


Source: JICA Study Team based on the data compiled by JETRO

Figure 4-2 FDI Inflow in Asian Countries（Million USD)

The FDI inflow to the three countries in ASEAN, namely; Indonesia, Malaysia, and Thailand experienced a decrease in 2009 and picked up again in year 2008, whereas Vietnam accepted an outstanding value of FDI in the same year. However, the value has been decreasing in the last few years.

[70] JETRO (2012) Tsusho Koho, July 24, 2012

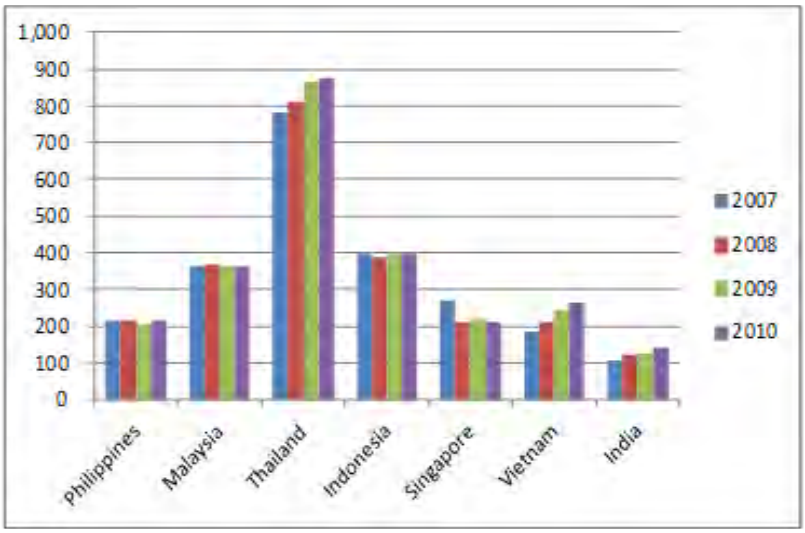


Source: JICA Study Team based on the data compiled by JETRO

Figure 4-3 Trends of the Amount of Direct Investment in ASEAN Countries（Million USD）

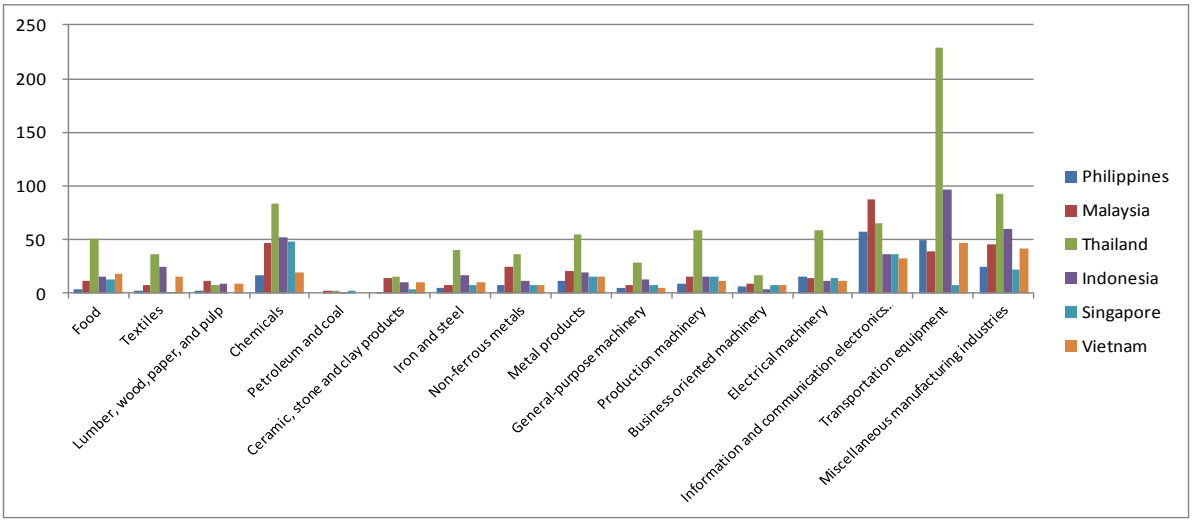
The major investors to ASEAN are emerging economies in addition to "traditional" investors such as Japanese, European, and American. For example, only 35% of the value of the approved investment in 2011 was the investment of Japanese firms comparing 65% in 2004. The contribution of Japanese to the investment toward Vietnam was limited to16% in 2011.

Changes and trends of the location of the enterprises and production facilities based on the investment are reviewed using the case of Japanese firms. The number of the Japanese owned and locally operating manufacturing establishments in Asian countries are shown in Figure 4-4. The number of establishments in Thailand, Vietnam, and India are increasing, whereas the number in the Philippines, Malaysia, and Singapore are rather stagnant.



Source: JICA Study Team based on the data of the Basic Survey of Japanese Business Structure and Activities 2007, 2008, 2009, and 2010

Figure 4-4 Manufacturing Establishment Operating Overseas (Number of Companies)

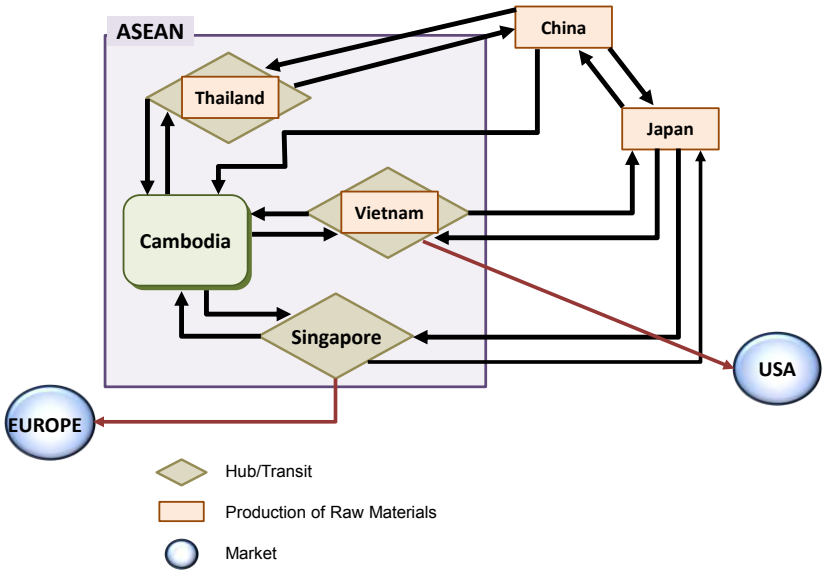


Source: JICA Study Team based on the data of the Basic Survey of Japanese Business Structure and Activities 2010

Figure 4-5 Manufacturing Establishments Operating Overseas (Number of Companies)

(2) Position of Cambodia in ASEAN Plus1 for FDI

This section analyzes the position of Cambodia within East Asian trade system based on the information on the trend of Japanese FDI. The Japanese Business Association in Cambodia (JBAC) comprises 100 member companies in 2012. The information collected based on the interviews with their sample members explained in Chapter 3 revealed that the position of Cambodia can be depicted in Figure 4-6.



Source: JICA Study Team

Figure 4-6 Trade Structure in East Asia

Due to the underdeveloped domestic industry in Cambodia, it is difficult to find possible supporting industries which have the capacity of serving as suppliers for Japanese foreign invested enterprises (FIEs) immediately[71]. As mentioned earlier, the FIEs operating in Cambodia import most of the raw materials and parts and parts from outside. It may have a certain degree of difference among sectors depending on its

[71] Please refer to Section 2.2.3 of Chapter 2 for the definition of "supporting industries" in this report.

nature of the sector, market conditions, and each company's strategy and management structure. Nevertheless, the structure may be explained as follows:

Raw materials and parts are imported from China, Japan, Thailand, and other ASEAN countries (ASEAN 6 plus Vietnam).

- Some FIEs establish the regional headquarters in such countries as Singapore and Thailand where the industrial agglomeration and logistical hub are located. These headquarters control strategy, management and operation, and procurement as well as logistics for the branches and factories in ASEAN countries; and
- Utilizing the multi-modal nature of Cambodia's transportation sector, FIE employ the mode of transport best for their needs depending on the origin and destination of import/export, availability, and the location of regional headquarters as well as the nature of the products.

4.2 Impact of ASEAN Plus 1 Regional Economic Integration

4.2.1 Economic Integration and Cross-border Industrial Linkage

(1) Impact of Trade Liberalization

As overviewed in the preceding sections, ASEAN is accelerating its preparation for the economic integration in 2015. The major essence of ASEAN Economic Community (AEC) as the core of the integration envisages establishing the "one market and production base"[72] based on Asean Free Trade Area (AFTA). Together with the bilateral and plurilateral FTAs/EPAs between ASEAN or member countries with various counterparts, the framework of free trade is expected to entail the trade facilitation and trade diversion effects which may have a large impact on Cambodia's economy.

In 2010, Kenechi Kawasaki conducted the analysis on the macroeconomic effects of trade linearization using the Global Trade Analysis Project (GTAP) model[73][74]. The estimation reveals that the trade liberalization between ASEAN+3 (Japan, China, and Korea) may cause the increase in real GDP of CLM by 9.04%. However, comparing with the expected size for Vietnam at 23.13% and Thailand at 16.31%, the size of the impact of these countries remains small (See Table 4-6).

[72] The 13th ASEAN Summit "Declaration of AEC Blueprint" 2007

[73] GTAP model is applied general equilibrium model developed as a method to evaluate impacts of trade policies quantitatively. The model is utilized by various relevant organizations worldwide including the World Bank and WTO.

[74] Kenichi Kawasaki (2010) "The Macro and Sectoral Significance of an FTAAP" ESRI, Cabinet Office、川崎研一(2011) "EPAno Yusenjuni: Keizaikoka no Ohkii Boekiaite wa?(Priorities in EPAs: Who is the Partner with the Largest Impact?)" RIETI、Cabinet Administrative Office of Japan（2011）"EPA no Makurokeizaikoka Bunseki (Macroeconomic Effect Analysis of EPA (Estimated by Kenichi Kawasaki))" in "EPA nikansuru Kakushu Shisan (Estimation of Various Items Relevant to EPA)"

Table 4-6 Effects on Real GDP by Regional Trade Liberalization

(%)

	World	FTAAP	ASEAN+6	ASEAN+3	Korea, China, Japan	TPP
LCM	12.95	-1.78	9.21	9.04	-0.23	-0.35
Thailand	26.35	20.24	17.03	16.31	-1.19	-0.89
Vietnam	37.50	34.75	23.42	23.13	-0.50	12.81

Note 1: (21 APEC member countries). ASEAN+3 (ASEAN + China, Korea, & Japan). ASEAN+6 (ASEAN+3 + Australia, New Zealand & India). TPP (9 TPP participating countries + Japan. The countries from ASEAN are Brunei, Malaysia, Singapore and Vietnam.).
Note 2: Estimated by Kawasaki Kenichi based on GTAP (Global Trade Analysis Project) Model (2008 nominal GDP basis).
Source: Complied by JICA Study Team based on the May 2011 data from Kawasaki Kenichi. "EPA no yusenjyuni: keizai kouka no okii boekiaite wa? (A Priority Order of EPA: Which trade partners will bring largest economic benefits?)." RIETI.

Analyzing the impact solely on Cambodia, different results were obtained as indicated in Table 4-7. The impact on real GDP from ASEAN+6 and ASEAN+3 trade liberalization are more than 21% for both cases. It may be smaller than the impact on Vietnam but larger than that of Thailand. The effects of the liberalization globally are estimated to push up Cambodia's real GDP by 29.4% which is again larger than that of Thailand.

Table 4-7 Real GDP Effects of Regional Trade Liberalization on Cambodia

(unit: %)

World	FTAAP	ASEAN+6	ASEAN+3
29.4	3.6	21.1	21.4

Source：Kawasaki Kenichi (2010) "The Macro and Sectoral Significance of an FTAAP" Economic and Social Research Institute Cabinet Office, Japan.

The bilateral trade liberalization with the USA, China, Thailand, and EU is expected to entail larger impacts on Cambodia, Laos and Myanmar (CLM) within which the USA is the largest and EU is the least. The impact of bilateral agreement with Japan is the tenth largest. For Thailand, the largest impact on GDP is expected from the agreement with Japan, whereas Vietnam is expected to be benefitted most with China (trade liberalization with Japan is ranked as 6th).

This result indicates the significant positive impacts from regional trade liberalization on Cambodia's GDP. Furthermore, it may also emphasize the great benefit of strengthening economic partnership with Thailand and Vietnam. Industrial Agglomeration and connectivity along the Southern Economic Corridor and the cross-border industrial linkages

The economic partnership with Thailand and Vietnam should be analyzed from the aspect of spatial economics.

The Bangkok Metropolitan Region (population of Bangkok City: 8.3 million and metropolitan region total population: 14.6 million) is the largest industrial agglomeration in GMS. Bangkok plays a pivotal role in integrating the economies in GMS and expanding its industrial economic network beyond the border. At the same time, Ho-Chi-Minh City (HCMC) with the biggest population in

Vietnam (7.4 million) and its surrounding areas form the expanding metropolitan area. The route connecting these two economies is the Southern Economic Corridor (SEC) via Phnom Penh with the total length of 920 km.

Industrial agglomeration is a cumulative process with the momentum of self-sustaining development of industries beyond the national boundary. With the economic development, centripetal forces push the industrial activities to concentrate spatially up to some point. After that point, centrifugal forces are to be activated[75]. Through SEC transportation development, the transportation costs will be reduced with the smooth transition at the border points. Together with the low labor cost, (despite the problem of the high electricity price), fragmentation of labor-intensive industries can be located in Cambodia.

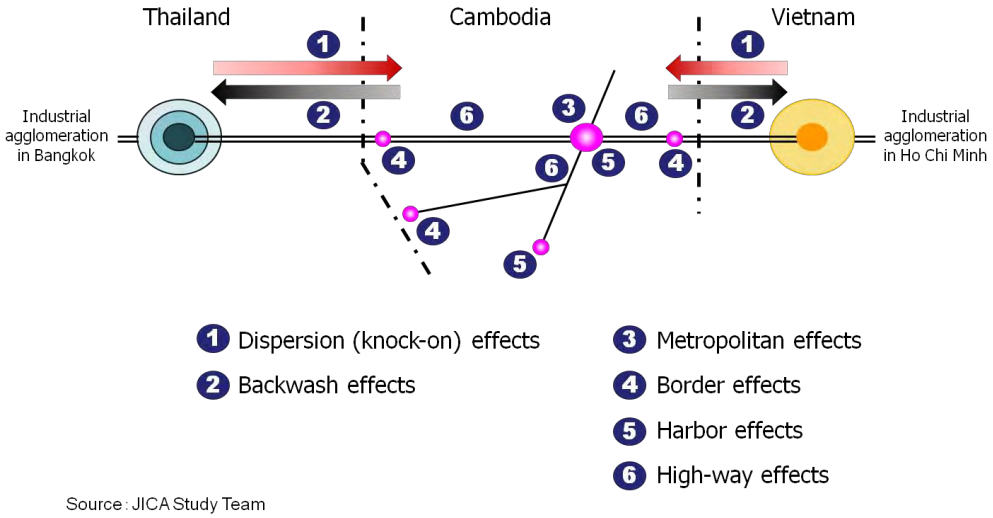
With the pervasive effects of the industrial agglomerations around Bangkok and HCMC, the following four forces inducing industrial agglomerations are expected to be active in Cambodia (see Figure 4-7):

1) Urban agglomeration effects: Phnom Penh with urban facilities, amenities, and population attracts and generates new industrial agglomeration;

2) Border area agglomeration effects: Taking advantage of the proximity to the industrial centers of neighboring countries, the factories have already been located in Koh Kong and Svay Rieng;

3) Port effects: International ports with logistical advantages such as the Phnom Penh Port and the Sihanoukville Port; and

4) Highway effects: with the construction of highways, the minimization of logistical cost should increase the possibility of locating agglomeration along the highways.



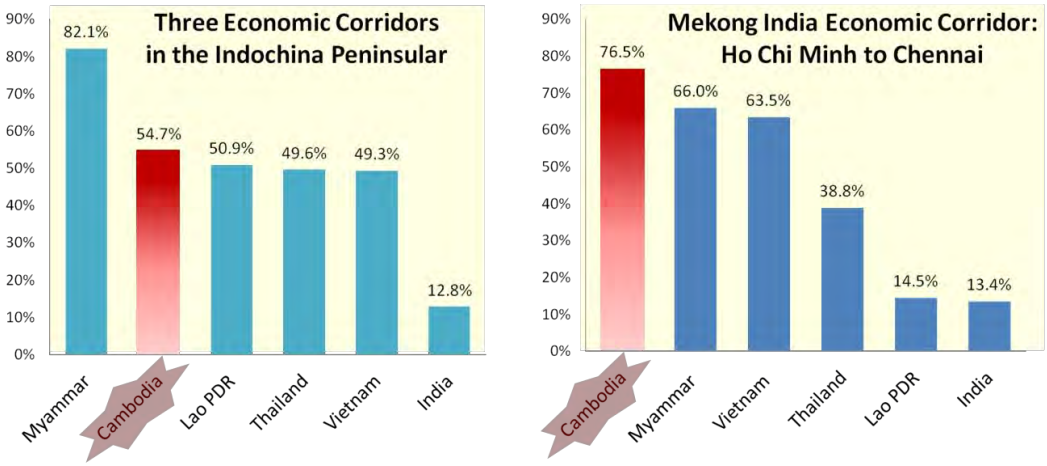
Source : JICA Study Team

Figure 4-7 Industrial Agglomeration in Cambodia and Fragmentation Effects

[75] Fujita M., P. Krugman, and A.J.Venables (1999) "The Spatial Economy: Cities, Regions, and International Trade" MIT Press. (Translation: Fujita, Krugman, Venables, Koide(translation) (2000) *KukanKeizaigaku* (Spatial Economy), Toukyou Keizai Shinpou Sha)

The Economic Research Institute for ASEAN and East Asia (ERIA) developed the Comprehensive Asia Development Plan (CADP) which includes infrastructure development plan. The estimation of the economic impacts from the development of economic corridors was also done in the planning process. The result of the estimation indicates 76.5% increase of Cambodia's GDP can be brought about by the SEC development (between HCMC and Chennai, India) during the period between 2011 and 2022. The size of effect exceeds the ones of Myanmar, Vietnam, and Thailand. (See Figure 4-8).

It is expected that the enhanced connectivity will induce the formation of the cross-border industrial linkages, and will be effective in forming mutual dependency and complementarities among Cambodia, Thailand, and Vietnam.



Note: The economic effect of an infrastructure project is measured as the percentage ratio of cumulative gains in regional GDP over 10 years (2011 – 2012), vis-à-vis the baseline level of regional GDP in 2010.
Source: Complied by JICA Project Team based on Fukunari Kimura & So Umezaki. ERIA. (Oct 2010). Comprehensive Asia Development Plan.

Figure 4-8 Estimation of the Economic Impact of Infrastructure Projects

4.2.2 Expansion of Japanese Manufacturing Establishments to ASEAN and Their Investment Choice: Current Situation and Change

(1) The Recent Trend of the Location of Japanese Manufacturing Establishments

In order to understand the recent trend in FDI, the investment behavior of Japanese firms are further reviewed. According to the survey by JETRO in 2011, the Japanese firms which either withdrew or reduced the size of operation in Asia and Oceania raised the reasons for the move: (i) rise in cost (35.7% in those companies operating/operated in ASEAN); and (ii) decrease in sales (73.8%). The ratio of firms is limited to 6% of all the respondents which answered that the re-organization of production and distribution network based on the progress in FTAs/EPAs as the reason for the reduction/closure of operation. However, together with the multiple factors including cost factors and profitability, the location of the enterprises can further converge with the sites with most rational for their operation[76].

Sukegawa overviewed the on-going restructuring of production system of Japanese firms seeking efficiency in the progress of AFTA implementation, and categorized the behavior into two major directions:

[76] JETRO (2011), FY2011 Survey on the International Operations of Japanese Firms

i) firms which currently maintain the operating facilities through line-up adjustment and variety of products and streamlining of sources from various existing facilities; and ii) firms which maximize the efficiency through consolidating multiple production facilities in various locations. The firms of automotive industries are largely categorized as the former and the electrical and electronics machinery industry may be considered as the latter[77]. The situation of the re-organization of firms may be explained further as follows.

Table 4-8 Firm Re-organization of the Production Network in AFTA Plus1[78]

Automotive	・ Converge the production of specific parts to specific locations and supply mutually among these production sites ・ The convergence of final assembly sites are yet to be started ・ Establishing mother factories in Thailand (e.g., Toyota IMV Project)and export of knock-down kits
Electrical Appliances	・ TV: segmenting the production facilities by converging production of products with higher technology to Malaysia (e.g., liquid-crystal TV sets) and the rest to the others (CRT-based TV) ・ Concentrate R&D functions in Malaysia ・ Import the finished goods in the Philippines and Vietnam, closing the production facilities, and expand distribution and wholesale functions.

Source: Sukegawa (2010), ASEAN and Changing Environment for Competition for Industries and Enterprises Facing FTA-Era, "RIM Pacific Business and Industries" , Vol.10. No.38、pp.67-85, Ishikawa (2009)、 ASEAN FTAs and Japanese Firms – The Survey Result from Indonesia, Philippines, and Vietnam-, "*International Trade and Investment*" (Japanese: Kokusai Boeki toToshi), Summer 2009/No.76, pp. 20-31

The table below shows the results of the questionnaire survey with the members of the Japanese Chamber of Commerce Bangkok about the possible countries which they may consider to invest after the realization of AEC. While the largest portion of the respondents chose "no change", Myanmar was selected by 29% of the total respondents of the manufacturing sector. Around 7% of the total respondents of mainly textile and garment sector chose Cambodia. The general trend shown in the results is the possibility of fragmentation in the production bases after the ASEAN economic integration to optimize their production network. The criteria and conditions of Japanese firms for deciding business location are discussed in the following section.

[77] Sukegawa (2010), ASEAN and changing environment for competition for industries and enterprises facing FTA-Era, "RIM Pacific Business and Industries" , Vol.10. No.38、pp.67-85

[78] Sukegawa(2010, Ishikawa (2009)

Table 4-9 Candidate Countries to Locate Future Production Base after Realization of AEC

(Number of Companies, Multiple Answers were Allowed)

Sub-sector	Cambodia	No change	Myanmar	Vietnam	Total	Total Number of responding companies
Textile & garment	5	4	7	2	23	14
Iron and steel, non-ferrous metals	1	15	7	2	36	29
Electrical and Electronic machinery	3	17	21	3	60	42
Transportation machinery	0	16	10	6	49	39
Total	15	108	64	33	299	222

Note: Only relevant sectors for Cambodia were selected and listed. Therefore, the total at the bottom is not the same as the sum of the figures above.

Source: Japanese Chamber of Commerce Bangkok , "2012 nen Kamiki Thaikoku Nikkei Kigyo Keikidoko Chousa (Business Trend Survey to Japanese Companies in Thailand First-half of 2012), July 2012

(2) Factors and Conditions Affecting the Decision of Enterprises Location

1) Enterprise location: factors and conditions observed in FDI

The conditions and factors affecting the firm's decision on location were analyzed based on the review of the existing materials. The analysis was done mainly taking the Japanese firms as examples.

According to the Survey on Overseas Business Operation of Japanese Manufacturing Companies by the Japan Bank for International Cooperation (JBIC), four countries from ASEAN are among the top ten named as the "promising" investment destination in medium-term (roughly for the next three years), namely; Vietnam, Thailand, Indonesia, and Malaysia. In the same survey, Cambodia was listed at 16th with Bangladesh and Australia. The table below indicates the ranks of these countries and the reasons why they were regarded as "promising" with the ratio of respondents who raised the reasons out of the total numbers answered as "promising". The two significant factors raised as the reasons were the market potentials of the countries and the possibility of setting up the basis for export to the third countries. The third factor may be the availability of cheap labor force.

As for the problems perceived in these countries, difficulty in finding human resources in supervisory and management levels and the rise in labor wage[79]. The survey was done before the massive flood in Thailand in 2011. Therefore, some possible risk-hedge behaviors by the firms located in Thailand were not captured. On the other hand, some perceived risks of disaster, political unrests, and probably the deterioration of the Japanese perceptions of China may have affected the respondents raising "risk aversion" as the reason for choosing Vietnam (18% of the respondents chose Vietnam).

[79] JBIC (2011), "The FY2011 Survey on Overseas Business Operation of Japanese Manufacturing Companies"

Table 4-10 "Promising" Investment Destination in the Medium-term

(unit: % of the respondents who chose the countries)

	Vietnam	Thailand	Indonesia	Malaysia
Rank 2011	3	4	6	10
Rank 2010	3	3	8	10
Availability of compitent human resources	20.6	15.9	5.7	17.9
Availability of cheap labor force	61.2	44.7	51.4	39.3
To establish the hub for supplying parts/raw materials for assemblers	21.9	31.8	21	25
Risk hedge	18.8	7.6	5.7	7.1
To establish the hub for exporting to the third countries	16.4	27.3	13.3	21.4
Growth potentials of market	61.2	49.2	71.4	42.9

Source: JICA Study Team based on the data of JBIC (2012), "FY2011 the Survey on Overseas Business Operation of Japanese Manufacturing Companies"

2) Fragmentation of the production functions and its conditions

What may be the criteria and conditions of choosing the location of the fragmented production base?

The research on the possibility of Malaysia-based electrical and electronics firms to open new production facilities in CLMV revealed that the conditions highlighted as important are the total cost incurred through various factors including the following items: i) wage level; ii) level of education; iii) infrastructure; iv) efficiency in business-related administrative transaction; and v) incentives. All the factors affecting the efficiency of the operation are regarded as important. On the other hand, the degree of importance of market size is not as high as the other efficiency-affecting factors[80]. For this kind of industry, the fragmentation can occur where the combination of the various cost factors can be minimized.

On the other hand, the research on the automotive sector in Thailand revealed the major points to be considered for the location of enterprises as follows:

Table 4-11 Important Factors Affecting the Decision of the Location of Production Facilities: Case of Electrical and Electronics Industry and Automotive industry

Electrical and Electronics Industry	Automotive Industry
1. Political stability	1. Market size
2. Market size	2. Political stability
3. Port and access to market	3. Port and access to market
4. Level of education of workers	4. Infrastructure
5. Tax incentives	5. Legal framework of investment

Source : Sopadang and Yaibuathet (2010), Evaluation of the fragmentation and relocation of electronics and automotive and related industries to CLMV countries: view points of Thailand, in "Study on Upgrading Industrial Structure of CLMV Countries (Edt.) Banomyong and Ishida, ERIA Research Project Report No.7-3: Ch4. pp.104-157

It is assumed that the cost structure of the specific products that the interviewees produced may have an effect on the result. While it is difficult to generalize, it is noticeable that both industries stressed the following: i) the size of market; ii) political stability; and iii) port and access to the market. At the same time, due to the necessity of highly skilled labor with the capacity of managing multiple tasks, the electrical

[80] Chang Tii Tan (2009), Evaluation on fragmentation and relocation of electronics industries to CLMV countries: view points from Malaysia, in *Study on Upgrading Industrial Structure of CLMV Countries* (edt.) Banomyong and Ishida, ERIA Research Project Report No.7-3: Ch3. Pp70-103

and electronics industry weighted the level of education as important, whereas both industries did not really emphasizes low wages (6th out of 13 elements for electrical and electronics and 9th for automotives)[81].

Figure 4-9 summarizes the degree of significance of the factors affecting the decision on the location for electrical products. The inflow of investment has been observed for those types of products that are less sensitive with the size of labor market, valuing the ability of cheap labor force and utilizing labor-intensive production mechanism with relatively small demand for electricity. Wire harness is one of those products. Similarly, coils and transformers with the same type of characteristics may have higher potential for the investment.

Product Group		Domestic Market	Labor	Component or Material	Production Facility	Remarks
Active Component	Semiconductor, Display Device	△	△	△	◎	-
Passive Component	Registor, Condeser	○	◎	△	○	-
	Coil, Transformer	○	◎	△	△	Cheap labor is one of the most important factor.
Sub-Assembly	Wire Harness, High Frequency Module, Camera Module, Power Supply	△	◎	△	△	Investment occurred in wire harness. Infrastructure to support smooth and quick procurment from other countries and delivery to customer are required. The delivery of the product are often done using air cargo.

Note: △ Low significance, ○ Significant, ◎ Highly significant
Source : JICA Study Team based on JICA/NRI/KRI (2007), "The Study on Economic Policy Support in the Kingdom of Cambodia"

Figure 4-9 Conditions and Criteria for Electrical and Electronics Products and its Significance

3) The structure of costs of the operation of FIEs

The major reasons of FIEs already operating in Cambodia to invest in Cambodia are the availability of cheap labor force and domestic market potentials. In order to promote the investment from the same or similar sectors as well as to promote the additional investment from existing FIEs, the structure of the production cost is analyzed. Due to the constraints in data, it is difficult to compile necessary information for detailed analysis. The analysis is based on the interviews with Japanese FIEs operating in Cambodia. The data was obtained from FIEs in electrical and electronics, transportation machinery, and leather goods. In general, the labor cost does not take a large share (about 30% at the highest), whereas the share of costs incurred by raw materials and parts is generally high (more than 80% in some of the sectors). Without the active supporting industries, the majority of raw materials and parts are imported from abroad which raises the cost.

Referring the cost index data of Japanese small and medium enterprises, the ratio of the cost for raw materials and parts of resource-based sectors such as food processing and petrochemicals is high, whereas the ratio of labor cost is relatively low. On the other hand, the ratio of raw materials and parts and parts of metal fabrication, electrical machinery, and transportation machinery sectors are relatively low with higher ratio of labor costs. In order to reduce this cost, manufactures look on the location with cheap labor. On the other hand, pursuing the cost efficiency in raw materials and parts and parts procurement is still the most

[81] Sopadang and Yaibuathet (2010), Evaluation of the fragmentation and relocation of electronics and automotive and related industries to CLMV countries: view points of Thailand, in "*Study on Upgrading Industrial Structure of CLMV Countries* (Edt.) Banomyong and Ishida, ERIA Research Project Report No.7-3: Ch4. pp.104-157

effective way for cost reduction.

In the current level of development of manufacturing sector in Cambodia, FDI promotion may target industries such as assembly and resource-based processing industries such as agro-processing. If the former is to be targeted, forming the domestic industrial agglomeration for supplying raw materials and parts and parts as well as the infrastructure will be able to utilize the higher technical level to accommodate technology-intensive sectors and human resource development.

As mentioned earlier, Cambodia can be more easily integrated into the regionalized industrial agglomerations through logistics infrastructure development and economic partnership in ASEAN Plus 1. It will further enable Cambodia to enjoy the benefits of regionalized industrial agglomeration. In order to take advantage of the situation, it is important to upgrade logistics infrastructure to differentiate itself from other emerging economies. Moreover, it will minimize logistics-related costs both for importation of raw materials and parts and exportation of finished products.

4) Understanding the significance of changes in the situation in Thailand and Vietnam

The following three points should also be noted as the recent moves in Thailand and Vietnam which may have some impacts on the investment climate in Cambodia.

First, the consequences of the political instability, the flood and the possible rise of labor cost may force the foreign manufacturing companies to review their locations for risk aversion taking into consideration of the business continuity plans (BCP). It has been observed that many Japanese manufacturers located in Thailand have been trying to rehabilitate their production facilities in their original locations to resume work. Many of them have temporarily transferred some functions affected by the flood either to the other production facilities within Thailand, in third world countries, or in Japan. However, some reportedly remain without clear projection on the rehabilitation, which may be forced to transfer to other locations including the third world countries on permanent basis[82].

Secondly, the effects of the minimum wage increase in Thailand in 2012 that goes into full effect in January 2013 may have impact on the decision of the strategy of the investors. In 2013, the minimum wage will be raised in all areas including BOI Zone 3 up to the level of Bangkok which already rose to a 40% increase in 2012. The degree of increase in Zone 3 areas is larger in Zone 3 areas as the current original wage at the lowest level in the country has to be adjusted to the same level as that of the highest area. According to the questionnaire survey with the member companies of the Japanese Chamber of Commerce Bangkok, only 4% (7 respondents) of the total 181 respondents answered that they have plans to move a part of the production lines to other countries due to the rising wages. In order to overcome the problem of labor shortage, out of 220 respondents, 4% (9 respondents) answered that they have considered relocation

[82] JETRO, "Kouzuigo no Zaithai Nikkeikigyo no Keiei Joukyou (Business and Management Trend of Japanese Companies after the Flood- Based on the Japanese Chamber of Commerce Bangkok 'Business Trend Survey of Japanese Companies in Thailand in 2011 2nd half')", March 2011. According to JETRO Bangkok Office, out of 48 respondents to the questionnaire (possible of selecting multiple answers), 85% of respondents answered that they will remain in the same location for re-starting the production activities. At the same time, 25% answered to relocate to other places in Thailand, other locations abroad (8%), yet to be decided (6%).

to other countries[83]. Whereas Japanese manufacturers already operating in Thailand tend to maintain the production facilities in Thailand. Potential investors considering new investment in ASEAN may take these difficulties into consideration for their decision on the locations of investment.

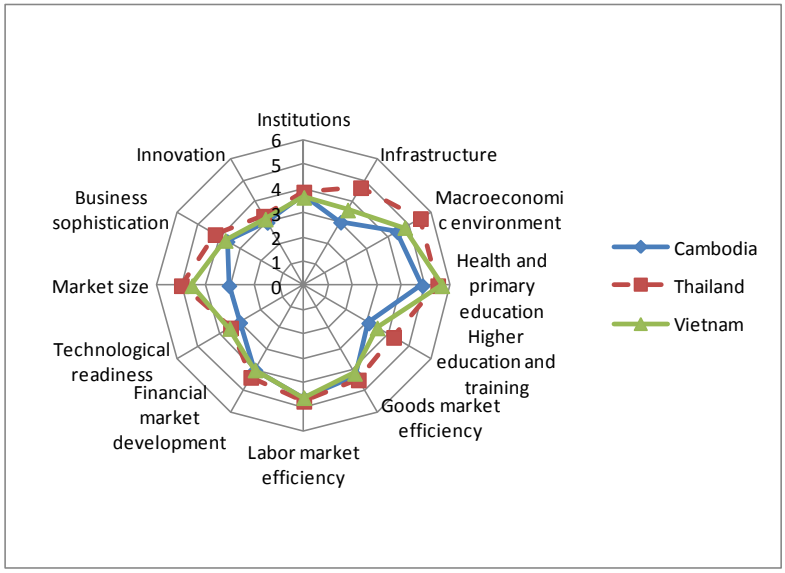
Thirdly, the new trend in the Japanese FDI to Vietnam may have an interesting implication. The supporting industries in Vietnam have been underdeveloped, which forces foreign manufactures to import a large part of their raw materials and parts and parts from other countries such as Japan and China. However, it has been observed that Japanese small and medium enterprises have started investing in Vietnam, especially in the northern area, to undertake some processing works such as plating and heat treatment. This is mainly due to the SMEs side reasons such as cost reduction, risk-hedging for production locations, and market expansion in emerging economies as well as the recent trend of yen appreciation. This type of investment targets the sub-contracting from multiple customers rather than depending only on their main customers[84]. The implication is that the investment of SMEs forming the vital part of supporting industries requires a number of potential clients with certain volume of demand as well as the possibility of out-sourcing some works which cannot be possibly done in-house.

4.3 Competitiveness Analysis of Cambodia

4.3.1 Comprehensive Evaluation on the Investment Climate of Cambodia

(1) Comprehensive Evaluation on Economic Competitiveness

The Global Competitiveness Index (GCI) developed by the World Economic Forum shows the significant gaps of Cambodia's competitiveness compared to Vietnam and Thailand.



Source：JICA Study Team based on the World Economic Forum, Global Competitiveness Index 2011

Figure 4-10 Competitiveness of Cambodia (GCI) (Unit: point)

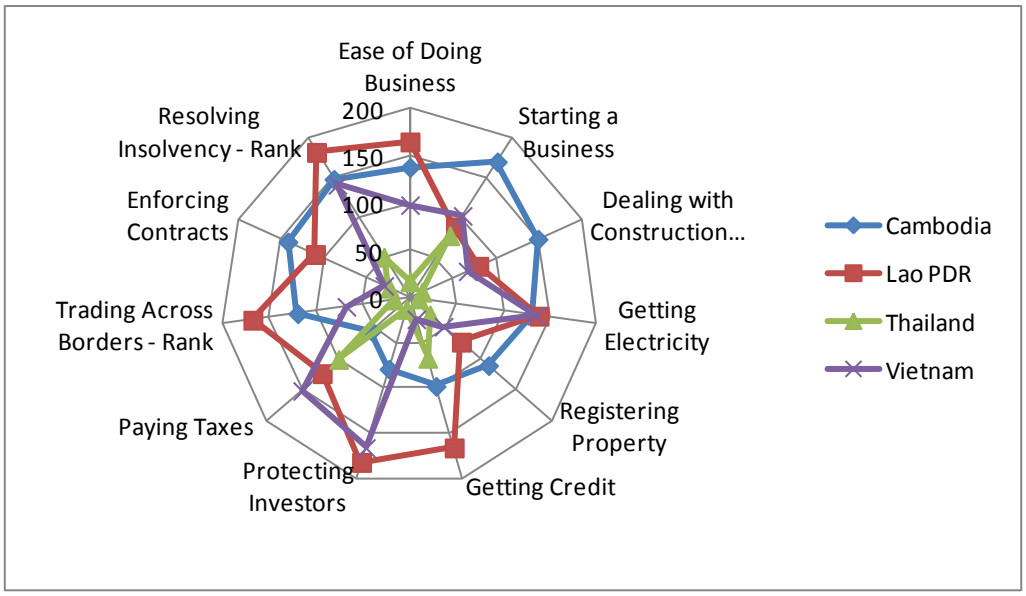
[83] Japanese Chamber of Commerce Bangkok (2012)

[84] JETRO、Tsusho Koho, 21 March 2012 and JETRO（2012）, "Chushou Buhin Supplier no Keiei Jittai to Asia Tenakai noGenjou /Kadai (Operational and Managerial Situation of Small and Medium Parts Suppliers and their Investment Trends and Problems)" URL: http://www.jetro.go.jp/news/releases/20120516125-news

(2) Analysis on the Business Environment

The World Bank's Doing Business project assess the business regulatory and administrative environment of various countries using the composite indices, specifically on the following areas; i) Starting a business, ii) Dealing with construction permits, iii) Getting electricity, iv) Registering property, v) Getting credits, vi) Protecting investors, vii) Paying tax, viii) Trading across borders, ix) Enforcing contract, and x) Resolving insolvency. The results are shown both in the shape of composite indices and ranking among countries assessed. Figure 4-11 below shows the comparison of Cambodia, Thailand, Vietnam, and Lao PDR using the ranking. Cambodia is ranked relatively high in the "investor protection" and is ranked highest in the "paying taxes" among four countries.

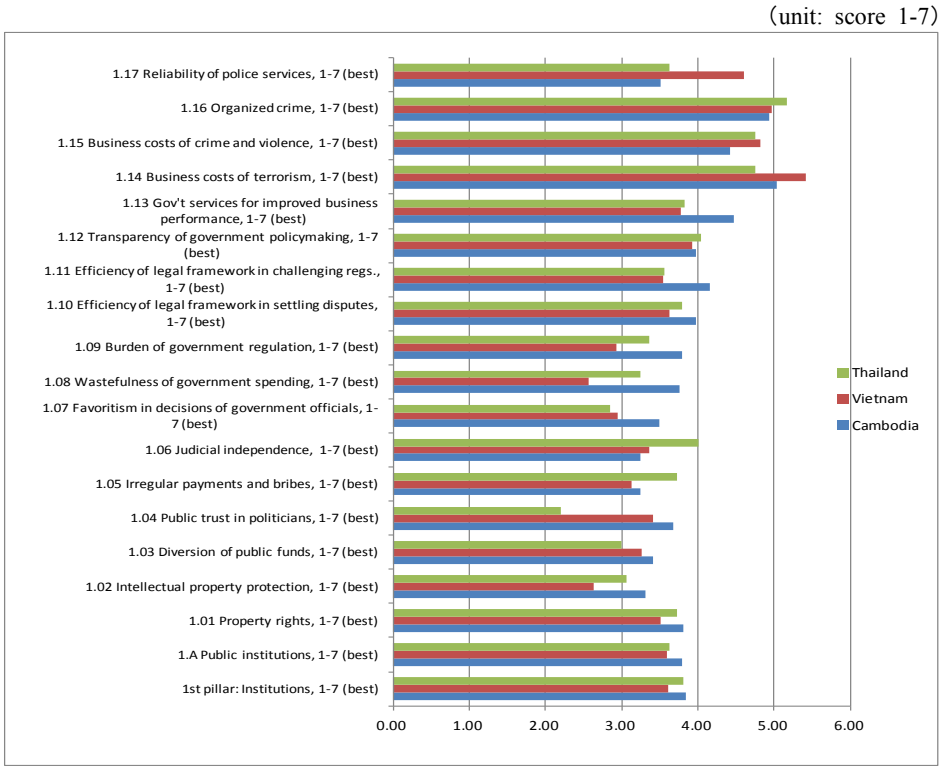
On the other hand, the ranking on "starting business", "dealing with construction permits", and "enforcing contracts" are relatively low. It is revealed that on the various points benchmarked such as the number of procedures, the time required for completing, and the costs for preparation in doing business are not favorable. In terms of the cross-border trade, the time required for the administrative procedures as well as the number of documents necessary for the processing are more than those of the counterparts in ASEAN. At the same time, the costs related to the procedures done in-country and domestic transportation cost to the port/border points is also high.



Source: JICA Study Team based on World Bank, Doing Business 2012

Figure 4-11 Ranking of Cambodia, Lao PDR, Thailand and Vietnam in Doing Business 2012 (Ranking)

GCI 2012-2013 evaluated the public sector of Cambodia from the aspects listed in Figure 4-12. Some factors in the area of transparency, efficiency, and fairness are with good evaluation as compared with Thailand and Vietnam. On the other hand, business leaders with business knowledge and experience in Cambodia listed corruption and bureaucracy in the government as the obstacles to business apart from the level of education.



Source: JICA Study Team based on the World Economic Forum, GCI 2012-2013

Figure 4-12 Global Competitiveness Index（Institutions）Comparison of Cambodia, Thailand, and Vietnam

(3) Comparison of Costs

The table below compares various costs relevant to the business operation with Asian cities. While labor cost and lease of land may have relative advantage, the cost of electricity is expensive. The situation in other cities such as Sihanoukville is worse.

Table 4-12 Comparison of Business Costs Among Asian Cities

		Phnom Penh	China (Shenzhen)	Kuala Lumpur	Bangkok	Jakarta	Manila	Hanoi	Ho Chi Minh City	Yangon	Vientiane	New Delhi	Dakha
Wage	Worker	**82**	317	344	286	209	325	111	130	**68**	117.8	264	78
(Monthly, US$)	Engineer	204	619	973	641	414	403	297	286	176	217.7	807	251
	Middle-Management	663	1208	1926	1555	995	1069	731	704	577	360.7	1510	578
	Minimal Wage	55	237	-	136	167	153.4	95.05	95.05	-	78.2	98	39
Rent of the land in industrial estates (per sq.M, monthly, US$)		0.091	4.75	n.a	0.95	191	8	0.188	0.25	0.255	0.038	6.01	0.18
Utilities	Electricity (Corporate, per kWh, US$)*	**0.216**	0.12	0.09	0.14	0.08	0.16	0.11	0.11	0.12	0.063	0.08	0.09
	Water (Corporate, per cu.M, US$)	0.359	2.69	0.72	0.51	1.37	2.01	0.57	0.73	0.88	0.337	1.86	0.31
Logistics cost	Container transportation (from the nearest port to Yokohama, per 40ft, US$)	**1350**	480	888	1120	800	830	1100	500	**1400**	**2309**	**1850**	**1290**
Taxation	Corporate Tax (%)	20	25	25	23	25	30	25	25	30	28	30	37.5

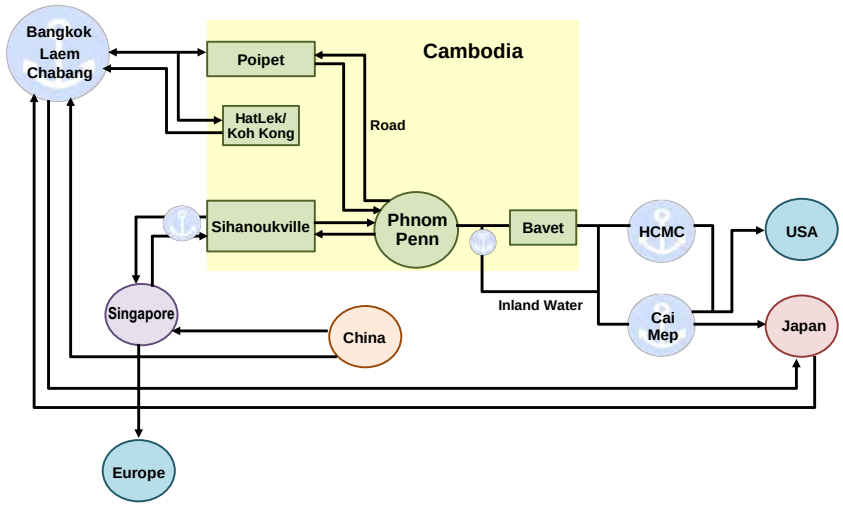
Note1: Highest rates are indicated if there are more than one tariff for electricity and water. The basic fees are not included. For Vietnam, the tariff as of July 1, 2012 is used (calculated at the rate of USD 1=VND 21,000). The price of transportation of one container is from the nearest port to Yokohama.
Note2: Minimum wages of Phnom Penh and Bangkok are as of August 2012. Other items under wage are, however, as indicated in the JETRO survey.
Source: JICA Study Team based on JETRO (2012), The 22nd Survey on Investment Related Costs in Asia and Oceania

(4) Evaluation on the Logistic Infrastructure

Based on the interviews with Japanese FIEs in Cambodia, the position of Cambodia within the production and logistic network in East Asia can be simplified and depicted in the figure below. The raw

materials and parts and parts are procured from Japan, China, and ASEAN members such as Singapore, Thailand, and Vietnam. The port of entry or border points for these goods are as appeared on the figure. After crossing the border at Poi Pet-Aranyaprathet, Hat Lek-Kho Kong, Sihanoukville, and Bavet, the consignment will be delivered to the production base either in Phnom Penh or to other locations of the factories.

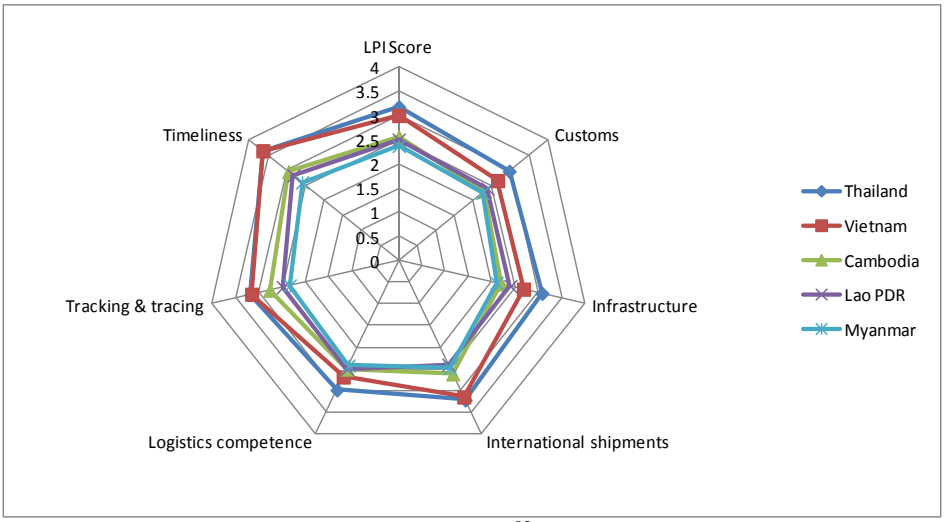
Products are exported to East Asian countries including ASEAN countries, North America and Europe via Sihanoukville and Singapore. However, for Japan and North America, the route may be via Cai Mep through either inland water transportation from the Phnom Penh Port or by road. In addition, the locations of major crop or resources producing areas as well as the connectivity with these major routes. An important factor in determining the lead time will be reviewed including the conditions of the hard and soft logistics infr



Source: JICA Study Team

Figure 4-13 Structure of Cambodia's Industrial Sites and Logistic Network

The Logistical Performance Index（LPI）constructed by World Bank indicates the overall evaluation of the quality of logistics. The comparison between Cambodia and Thailand, Vietnam, Myanmar, and Lao PDR are shown in Figure 4-14. The score of Cambodia is lower than those of Thailand and Vietnam in many benchmarks such as custom administration, international logistics, and timeliness but does not have much difference with Lao PDR.



Source：World Bank, Logistics Performance Index[85]

Figure 4-14 Comparison of Logistics Performance Between Cambodia, Thailand, and Vietnam

The experts of the third world countries evaluated the quality of institutions and infrastructure regarding logistics. Compulsory warehousing and trans-loading and pre-shipment inspection are widely recognized as the sources of major delay[86].

Though it was not able to capture the entire picture of the problems, a few points were identified through the survey regarding the matters which may affect the delay in logistics in reality.

First, some of the FIEs interviewed raised the problems related to the Master List. They claimed that the procedures and management of the Master List for duty free importation of production-related equipment and raw materials and parts are not clear. The interpretation of the range entitled to exemption causes ambiguity and inconsistency. Moreover, revising the list in order to import newly added goods requires a lengthy process. As pointed out in the World Bank's Doing Business, the price of domestic transportation is also very high. This is partially due to the smallness of demand for domestic logistics and insufficient competition among logistics companies, which may be improved with the industrial development with increased demand for logistics[87]. However, it is still necessary for the simplification and acceleration of the process at the border points.

Second, the exportation procedures and some part of importation may be done by one-stop services (OSS) if the company is located in SEZ. However, the free traffic based on the CBTA should be further expanded through bilateral negotiation as well as the GMS-wide efforts. In general, Custom, Immigration and Quarantine (CIQ) and the management regarding the vessels and cargos at international ports are neither integrated nor managed electronically except the custom process.

In terms of custom procedures, the introduction of Automated System for Custom Data (ASYCUDA)

[85] LPI Website URL: http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE/0,,contentMDK:23188613~pagePK:210058~piPK:210062~theSitePK:239071,00.html

[86] Based on the percentage of experts of logistics who answer the specific issues as "often" or "nearly always". "Mandatory warehousing, transloading at the border"70%, "pre-shipment inspection" 60%, "other criminal acts (such as stealing of loaded consignments)40%(LPI(2012) Domestic LPI Environment and Institution)

[87] Based on the interview with Japanese logistics companies.

integrated the processes of custom declaration, valuation, calculation of the amount of duties payable, and management of trade statistics. Starting from the Sihanoukville Port as a pilot basis, the nationwide deployment has been completed. Together with the process, the Single Administrative Document (SAD) to simplify the documentation for custom process was also introduced. However, currently, the entry of data is only possible at custom offices. Another problem is that the export permit for those goods exported from Sihanoukville has to be obtained in Phnom Penh[88]. In order to take advantage of the on-line system, it may require additional work to integrate the systems as well as to restructure some procedures to simplify and reduce the time required on the business side.

For the pre-shipment inspection, the improvement of the system was introduced with proper risk management when ASYCUDA was introduced. It was expected to streamline the physical inspections at the border points. However, in practice, the number of the physical inspection may be reviewed whether it complies with the designated rules for risk control to reduce unnecessary transactions. For example, all the consignments are subjected to scanning regardless of the results of risk evaluation. The fee is charged to the importers. On the other hand, the scanning for the exporting consignments are not don, which reduce the efficiency of the process and hazardous from the aspect of security.[89]

In addition to the custom procedures, demarcation between Cambodia Import Export Inspection and Fraud Repression Directorate General (CAMCONTROL) under the Ministry of Commerce and the ministries and agencies which carry mandates in setting mandatory standards including food safety and SPS are not clear.

Under the current circumstances in Cambodia, the improvement of the logistics network in total is important. However, it would require some time to induce the development for the private logistics industries to be effective and efficient. As a part of the stimulant provided within the capacity of the government for logistics and industrial development, administrative procedures at important border points and international ports should target the highest quality and efficiency as possible.

4.3.2 Comparison with Thailand and Vietnam

Japanese FIEs' investment trends may indicate that the major objectives of Japanese FDI are risk hedging, establishing production base in Southeast Asia, sourcing of low-cost labor, and expanding markets to the newly emerging countries. While Cambodia may be fit to their objective of securing low-cost labor, it may require ways to complement its underdeveloped domestic industries which can serve as supporting industries for FIEs. Although it may be possible either through nurturing domestic industries or promoting supporting industry FDI, it may be more efficient to utilize the already-established industries based in other ASEAN countries.

[88] JICA/Overseas Coastal Area Development Institute of Japan/Oriental Consultants/Nippon Koei/Ides(2012), "Draft Final Report for the Project for the Study on Strengthening Competitiveness and Development of Sihanoukville Port in the Kingdom of Cambodia"

[89] Based on the information of JETRO Website and JICA/OCDI/JMS（2007）"Final Report of the Master Plan Study for Maritime and Port Sector Development".

On the other hand, competition with the rival economies with potential of providing low-cost labor and provision of new markets such as Myanmar has started. This section compares the investment climate of Phnom Penh and the cities located inside Thailand and Vietnam but relatively remote areas from the center. Based on the analysis, the gap of these cities and of Cambodia are analyzed to identify the probability of connecting the industrial hubs and the necessary points of improvement to maximize its benefit.

(1) Comparison of Investment Climate with the Northeast Region in Thailand

Despite the large increase of the minimum wage in the surrounding areas of Bangkok and the major damage caused by the flood in 2011 together with the recent political unrest, the existing investors may still see Thailand as a major hub for their production and operation in ASEAN under the process of launching AEC. The major favored investment destination has been the eastern region apart from the flood-hit Ayutthaya and the area in the vicinity of Bangkok. The northeast region with less developed infrastructure including the prepared industrial sites accommodated limited amount of FDI due to the distance of an international hub port from Bangkok and Laem Chabang.

The labor demand in the industrial areas has been filled by the labor supply from the Northeast region. In this analysis, two cities namely Nakhon Ratchasima and Khon Kaen are reviewed. These two cities are located in BOI Zone 3. The Nakhon Ratchasima (Korat) with good accessibility via highways is relatively close to Bangkok. It accommodates around 35 Japanese FDI located in two industrial parks, Suranaree and Nava Nakorn[90]. Because of its proximity with the Eastern Seaboard, various sectors are found such as parts for automobile, electrical, and electronics including other supporting industries such as molding, plastic forming, rubber products, press, and cutting work.

On the other hand, Japanese companies in Khon Kaen are rather limited in addition to the manufacturing engaged in the production of brake system for automobiles, electrical, and electronics (switch and relay, and coil production), a major seed and plant company has its research firm outside of the city[91]. The table below summarizes the characteristics of the two cities and the sectors of Japanese FDI located in those cities.

Table 4-13 The Characteristics of the Cities in the Northeast Region in Thailand (Nakhon Ratchasima and Khon Kaen) and the Sectors of Japanese FIEs Operating in the Cities

City	Characteristics	Japanese FIEs Operating Sectors
Nakhon Ratchasima	・ Proximity of both industrial parks to the major labor source (the northeastern region) ・ Proximity to Bangkok (about 150 min via highway) ・ Already operational industrial zones ・ Relatively favorable FDI incentives (BOI Zone 3)	・ Production and assembly of automotive, electrical and electronic parts ・ Various works done : includes casting, press work, cutting, and grinding ・ Production of die and molds ・ Plastic and rubber products as parts ・ Food processing ・ Paper and packaging

[90] Based on JETRO (2011), "Taikoku Kougyou Danchi Chousa Houkokusho (Survey Report on the Industrial Estate/Parks in Thailand)", JBIC (2010), "Tai no Toushi Kankyou (Investment Climate in Thailand)", BOI Website.

[91] ASEAN Center, "Tai Toushi Jouhou Mission Houkokusho 2010 (Investment Information Mission Report 2010) (Accessed from the ASEAN Center website: www.asean.or.jp) , Website information of FIEs in operation in the cities.

Khon Kaen	・ Remote from the major industrial sites (approximately 450 km from Bangkok) ・ Availability of cheap and abundant labor force (However, in 2013, the minimum wage will be increased to the level of Bangkok.) ・ The limited number of Japanese FDI	・ Automotive parts (break system) ・ Parts for electrical appliances (switch and relay products, coil) ・ Machinery parts ・ Agribusiness (research farm for seeds)

Source: JICA Study Team

The Table 4-15 and 4-16 compare the costs related to production, logistics, and other factors related to trade and investment between Phnom Penh, Bangkok, Nakhon Ratchasima, and Khon Kaen. The result of the analysis using these data is summarized as follows:.

Table 4-14 Comparison between Phnom Penh and Cities in the Northeast Region in Thailand

Population and Labor Force
・ The Northeast region of Thailand are endowed with a large population, i.e., with large market and labor force. ・ The rise of the minimum wage and subsequent rise of the actual wage are expected. Cambodia's labor cost competitiveness is strengthened. ・ The Northeast region of Thailand has the system of organizing workers based on past experiences by providing workers to Bangkok and Eastern Seaboard. Cambodia may require some kind of system to utilize untapped labor force in rural areas.
Logistics
・ Accessibility between Nakhon Ratchasima and Bangkok is relatively high with good road network including highways. ・ The lead time from Khon Kaen to some industrial centers and ports around Bangkok is long due to the geographical distance. The travel time from Khon Kaen to Bangkok is around 5.5 hours, whereas it only takes 3.8 hours from Aranyaprathet to Laem Chabang and 4.7 hours from Hat Lek. With the full-fledge implementation of CBTA and utilization of incentives of SEZs located near the border, Cambodia's border areas with Thailand may have better condition to connect to the Eastern Seaboard than Khon Kaen.
Access to Land
・ Foreigners can own land if their investment projects are approved by BOI. It is relatively cheaper in the area than Bangkok and the surrounding areas. ・ A few industrial parks have been developed in Nakhon Ratchasima, but not confirmed in Khon Kaen.
Energy
・ The electricity tariff is not high. Further discounts are provided by some industrial parks from the tariff of the public utility company.

Taxation
・ The corporate income tax will be reduced in Thailand in 2013 and the new rate will be the same as that of Cambodia.
Incentives
・ No significant difference between Cambodia and Thailand. ・ Thailand has incentive schemes targeting specific industries and activities such as investment promotion policy with incentives for sustainable development, research and development activities, skills development activities, and setting up of regional operating headquarters.
Investor Service
・ BOI has branch offices both in Nakhon Ratchasima and Khon Kaen. Application of the investment projects can be done at the regional offices as well as some information gathering.
FTA/EPA
・ Thailand with multiple bilateral trade agreements has duty free or preferential treatment access to some countries. ・ For the EU market, Cambodia is granted for the preferential treatment of EBA.

Source: JICA Study Team

Table 4-15 Comparison of the Investment Climate between Phnom Penh and Cities in the Northeast Region in Thailand (Nakhon Ratchasima and Khon Kaen)-1

		Phnom Penh	Bangkok	Nakhon Ratchasima (Northeast Region, Thailand)	Khon Kaen (Northeast Region, Thailand)
Population (1000 persons)		1,328	8,200	2,522	1,735
Wage (US$/month)	Worker	82	286	-	-
	Engineer	204	641	-	-
	Middle-Management	663	1555	-	-
	Minimal Wage*1	**61**	**193**	**165**	**150**
Rent/lease of the land in industrial estates (US$/sq.M/momth)		0.091/month	0.95/month	-	-
Price of the land (US$/sq.M)		-	-	29	-
Utilities	Electricity (Corporate, per kWh, US$)	**0.216**	0.14	0.09	0.09
	Water (Corporate, per cu.M, US$)	0.359	0.51	0.59	-
Logistics cost	Container transportation (from the nearest port to Yokohama, per 40ft, US$)	**1350**	1120	-	-
Distance from the nearest major ports (km)		Sihanoukville: 250 Caimep: 390	-	Laem Chabang: 275 Khlong Toei: 245	Laem Chabang: 500 Khlong Toei: 400
The nearest international airports (km)		Phom Penh International Airport	Suvarnabhumi International Airport	Suvarnabhumi International Airport: 270km, Nakhon Ratchashima Airport in the vicinity	Khon Kaen Airport in the vicinity
Other remarks on transportation		-	-	150min to Bangkok by road (via highway)	-

Note 1 : The population of Nakhon Ratchasima and Khon Kaen are the ones of the whole districts
Note 2 : The minimum wage will be raised to the level of Bangkok in January 2012.
Source: JICA Study Team based on JETRO(2012), The 22nd Survey on Investment Related Costs in Asia and Oceania, JETRO (2011), "Taikoku Kougyou Danchi Chousa Houkokusho (Survey Report on the Industrial Estate/Parks in Thailand)", JBIC(2010), "Tai no Toushi Kankyou (Investment Climate in Thailand)", BOI Website. The land price is referred to the data of the Nava Nakorn Nakhon Ratchashima.

Table 4-16 Comparison of the Investment Climate between Phnom Penh and Cities in the Northeast Region in Thailand (Nakhon Ratchasima and Khon Kaen)-2

		Phnom Penh	Bangkok	Nakhon Ratchasima (Northeast Region, Thailand)	Khon Kaen (Northeast Region, Thailand)
Taxation	Corporate Tax (%)	20	23	23	23
Incentives		QIP(depending on the category): - Corporate tax holiday up to 9 years - Duty-free import of production machinery and equipment - Duty-free import of raw materials for export use QIP in SEZ: VAT exception for imported materials and equipment for setting up the production fuctions, raw materials if for the exported goods.	(1) BOI Zoning: Zone 1 - Corporate tax exemption 8 years 1) 50% reduction if located in Industrial Estates or BOI approved industrial zones/parks for 5 years after 8-year-exemption 2) 25% of construction of infrastructure & factories to be added to the depreciation in addition to the BOI 8-year exemption - Duty-free import of machinery and facilities - Duty-free import of raw materials for 5 years (possibility of extension) for exported products (if located in the industrial estates, zones/parks approved by BOI, 75% duty reduction for raw materials not produced in Thailand for the product sold domestically	(1) BOI Zoning: Zone 3 - Corporate tax exemption 8 years 1) 50% reduction if located in Industrial Estates or BOI approved industrial zones/parks for 5 years after 8-year-exemption 2) 25% of construction of infrastructure & factories to be added to the depreciation in addition to the BOI 8-year exemption - Duty-free import of machinery and facilities - Duty-free import of raw materials for 5 years (possibility of extension) for exported products (if located in the industrial estates, zones/parks approved by BOI, 75% duty reduction for raw materials not produced in Thailand for the product sold domestically	(1) BOI Zoning: Zone 3 - Corporate tax exemption 8 years 1) 50% reduction if located in Industrial Estates or BOI approved industrial zones/parks for 5 years after 8-year-exemption 2) 25% of construction of infrastructure & factories to be added to the depreciation in addition to the BOI 8-year exemption - Duty-free import of machinery and facilities - Duty-free import of raw materials for 5 years (possibility of extension) for exported products (if located in the industrial estates, zones/parks approved by BOI, 75% duty reduction for raw materials not produced in Thailand for the product sold domestically
Remarks on Services for Investors		CDC	BOI, One Stop One Start Investment Center	BOI Regional Investment and Economic Center	BOI Regional Investment and Economic Center
FTA/EPA		Regional FTA/EPA: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand	Regional: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan, India, Australia, New Zealand, Peru	Regional: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan, India, Australia, New Zealand, Peru	Regional: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan, India, Australia, New Zealand, Peru
Custom Tariff		Import: 0, 7, 15, 35% Export: 10-20% for agricultural products (lubber, timber), fishery products, and mineral and ors.	Categories: General, ASEAN (CEPT), FTA/EPA, GSP, GSTP	Categories: General, ASEAN (CEPT), FTA/EPA, GSP, GSTP	Categories: General, ASEAN (CEPT), FTA/EPA, GSP, GSTP

Source: JICA Study Team based on JETRO(2012), The 22nd Survey on Investment Related Costs in Asia and Oceania, JETRO (2011), "Taikoku Kougyou Danchi Chousa Houkokusho (Survey Report on the Industrial Estate/Parks in Thailand)", JBIC(2010), "Tai no Toushi Kankyou (Investment Climate in Thailand)", BOI Website. The land price is referred to the data of the Nava Nakorn Nakhon Ratchashima.

(2) Comparison of Investment Climate with South East Vietnam and the Southern Part of Central Vietnam

The major destination of Japanese investment is HCMC and the surrounding areas comprising Dong Nai, Long Anh, Binh Duong, and Ba Ria-Vung Tau provinces where development of the port of Cai Mep is progressing. A number of industrial parks has been planned and constructed in these areas. Together with the Mekong Delta Region, the population is 3.1 million forming a large market as well as the basis of labor supply. However, the rise in labor wage has been perceived in 2011 and wage adjustment was done twice to match with the high inflation rate. Another alarming issue is the electricity price. Due to the bad financial situation of the state-owned power company (Vietnam Electricity: EVN), the tariff of electricity was raised gradually since 2011.

Rather limited information is available about the areas outside of the abovementioned newly developing industrial areas. The industrial agglomeration surrounding HCMC itself is still expanding within the areas mentioned above. In Mekong Delta region, Can Tho is now connected by road with HCMC. It is one of the major cities in the region. Although there are some moves in searching the region's potential as the next investment destination, the actual investment materialized by Japanese is limited[30]. In the Central Region between HCMC and Da Nang, a few Japanese FDIs are found along the coast, mainly dealing with forestry and fishery related processing. This section reviews the data of Qui Nhon located about 625 km from HCMC with a few industrial zones and economic zones. The table below summarizes the characteristics of the two cities of Can Tho and Qui Nhon and the sectors of Japanese FDI found within the cities.

Table 4-17 The Characteristics of the Cities in the Mekong Delta and Central Regions in Vietnam (Can Tho and Qui Nhon)

City	Characteristics	Japanese FIEs operating sectors
Can Thou	・ Around 5 hours from HCMC; Accessible by road through the newly constructed bridge ・ Abundant labor force	・ Leather products
Qui Nhon	・ Remote from HCMC (625 km) ・ Relatively cheap labor force ・ Deepwater port and airport connecting major locations in Vietnam	・ Garment

Source: JICA Study Team

It is also noted that some food processing FDI are found utilizing the vegetables in the highlands of the Central Region. These kind of resource-based industries are not really the extension of the industrial agglomeration in HCMC, but rather resource-based industries.

Table 4-19 compares the costs related to production, logistics, and other factors related to trade and investment between Phnom Penh, Bavet, Da Nang, Can Tho, and Qui Nhon. The result of the analysis using these data is summarized as follows:

[30] JBIC(2009), "Vietnam no Toushi Kankyou (Investment Climate in Vietnam) "

Table 4-18 Comparison between Phnom Penh, Bavet and Cities in the Mekong Delta and Central Regions in Vietnam

Population and Labor
・ Population in the southern part of Vietnam around HCMC is large together with the Mekong Delta supplying labor force. The region forms a large market. ・ Labor cost is cheaper in Phnom Penh, but the difference may be lesser with cities outside of the HCMC Metropolitan Area and some major cities.
Logistics
・ Many industrial zones and single FIEs outside of the industrial zones are located along the national road No. 1, 13, and 22 in HCMC and the surrounding areas. ・ It is about 70 km from HCMC to the border of Cambodia. The distance from HCMC to Hu Mi in Ba Ria-Vung Tau is 75 km. Due to the distance, the lead time from two cities based on the analysis are longer than one from Bavet, but shorter than from Phnom Penh (5 hours from Can Tho to HCMC). ・ The port of Qui Nhon is one of ten largest ports in Vietnam. Data on the logistics cost was not obtained, but with regards to the cost per container from Da Nang to Japan, the degree of advantage is not clear. ・ Despite the computerized customs process, the actual time required for processing remains long both in HCMC and outside of HCMC like in Dong Nai[31]. The custom office and the bonded warehouse are also available in Qui Nhon, but the information on the efficiency is not known due to the limited information.
Land
・ There is a small difference in the land lease rates between the two cities and Phnom Penh. ・ Foreigners are not allowed to own land in both Vietnam and Cambodia.
Energy
・ Despite a few times of rise in tariffs for electricity since 2011, the price in Vietnam is still cheaper. However, the tariff is in the same level with Vietnam in Bavet with the electricity purchase from Vietnam. ・ The supply of electricity in Cambodia and Vietnam is not good in general.
Taxation
・ Lower corporate income tax rate in Cambodia. ・ The environment of tax payment in Vietnam may be less competitive than in Cambodia with the time required for processing[32].
Incentives
・ Incentives involving tax and customs exception and reduction are provided only to limited areas such as the economic zones and the areas with difficulties in social and economic development. ・ However, FIEs raises the issues of the ambiguity as well as the framework of taxation may be

[31] JBIC (2009)

[32] According to the data comparison using Doing Business 2012, a corporate uses 941 hours per year to process corporate income tax, workers' income tax and VAT (173 hours for Cambodia).

actually taxing burden the costs on them cancelling the incentives.
Services to Investors
・ Application for the approval of new investment projects are handled by authorities in the provincial level. These authorities may have some capacity in providing information relevant to investments[33]; however, in general, the quality of services of the provincial windows may require a substantial improvement. Based on the request from the Japanese side, the improvement of the functions of investment-related windows for foreign investors are included with the action plans in the Vietnam-Japan Joint Initiative Phase 2 (2006～2007) and Phase 3 (2008～2010). ・ Apart from the mandate given to the Provincial-Municipal Investment Sub-Committee (PMIS) for the processing of application for QIP with limited amount of investment, investors' services in provincial level are not well facilitated in Cambodia.
FTA/EPA
・ Cambodia has the GSP status with the EU and Japan. However, through bilateral EPA, the status of two countries in terms of customs tariff with Japan is almost the same. ・ Vietnam started the FTA negotiation with the EU.

Source: JICA Study Team

Table 4-19 Comparison of the Investment Climate between Phnom Penh and Cities in the Mekong Delta and Central Regions in Vietnam (Can Tho and Qui Nhon)-1

		Phnom Penh	Bavet (Svay Rieng)	Da Nang	Can Tho	Qui Nhon (Bihn Dinh Province, Vietnam)
Population (1000 persons)		1,328	483	926	1,197	1,490
Wage (US$/month)	Worker	82	82	200	-	-
	Engineer	204	204	250	-	-
	Middle-Management	663	663	400	-	-
	Minimal Wage*1	**61**	**61**	**85**	**85**	**66**
Rent/lease of the land in industrial estates (US$/sq.M/momth)		55 0.091/month	-	0.188/month	50	22 (lease until 2048)
Utilities	Electricity (Corporate, per kWh, US$)	**0.216**	**0.115**	0.11	0.11	0.11
	Water (Corporate, per cu.M, US$)	0.359	-	0.47	-	0.4
Logistics cost	Container transportation (from the nearest port to Yokohama, per 40ft, US$)	**1350**	**600 (from Bavet to HCMC)+500 (From HCMC to Yokohama)**	1000	-	-
Distance from the nearest major ports (km)		Sihanoukville: 250 Caimep: 390	Saigon: 90 Caimep: 170	-	Saigon: 170	Caimep: 630(by road) Qui Nhon Port: in the vicinity
The nearest international airports (km)		Phom Penh International Airport	Tan Son Nhat International Airport: 80	Da Nang	Tan Son Nhat International Airport: 175	Tan Son Nhat or Da Nang, Phu Cat Air port in the vicinity
Other remarks on transportation		-	Transportation from Bavet to HCMC: By Truck	-	-	Qui Nhon is one of the 10 largest ports in Vietnam.

Source: JETRO Website, JBIC(2011), "Vietnam no Toushi Kankyou (Investment Climate in Vietnam)", Website of Viettrade (Vietnam Trade Promotion Agency). Data of Qui Nhon is based on the information of Phu Tai Industrial Zone.

[33] Same as above

Table 4-20 Comparison of the Investment Climate between Phnom Penh, Bavet and Cities in the Mekong Delta and Central Regions in Vietnam (Can Tho and Qui Nhon)-2

		Phnom Penh	Da Nang	Can Tho	Qui Nhon (Bihn Dinh Province, Vietnam)
Taxation	Corporate Tax (%)	20	25	25	25
Incentives		QIP: Corporate tax holiday up to 9 years, duty-free import of raw materials for export use QIP in SEZ: VAT exception for imported materials and equipment for setting up the production fuctions, raw materials if for the exported goods.	For Economic Zone and/or priority sectors: Corporate Tax deduction (10% for 15 years)	For Economic Zone and/or priority sectors: Corporate Tax deduction (10% for 15 years)	For Economic Zone and/or priority sectors: Corporate Tax deduction (10% for 15 years)
FTA/EPA		Regional FTA/EPA: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand	Regional FTA/EPA: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan	Regional FTA/EPA: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan	Regional FTA/EPA: AFTA (ATIGA), AJCEP, ACFTA, AIFTA, ASEAN-Korea, ASEAN-Australia, New Zealand Bilateral EPA/FTA: Japan
Custom Tariff		Import: 0, 7, 15, 35% Export: 10-20% for agricultural products (lubber, timber), fishery products, and mineral and ors.	Import: 4 categories (normal tariffs are 50% higher than the priority tariffs.) The tariff rates are different depending on the commodities. Export: 5-20% mainly for mineral resources and agricultural unprocesses/semi-processed products	Import: 4 categories (normal tariffs are 50% higher than the priority tariffs.) The tariff rates are different depending on the commodities. Export: 5-21% mainly for mineral resources and agricultural unprocesses/semi-processed products	Import: 4 categories (normal tariffs are 50% higher than the priority tariffs.) The tariff rates are different depending on the commodities. Export: 5-22% mainly for mineral resources and agricultural unprocesses/semi-processed products
Other remarks		If the SEZ located within 20km from a border: No custom inspection at the border for imported goods. The truck can reach the factory directly. For exportation, complete custom procedures at SEZ.			

Source: JETRO Website, JBIC(2011), "Vietnam no Toushi Kankyou (Investment Climate in Vietnam)", Website of Viettrade (Vietnam Trade Promotion Agency). Data of Qui Nhon is based on the information of Phu Tai Industrial Zone.

4.4 Overview of Industrial Sites and the Current Situation of SEZs

4.4.1 Institutional Framework of SEZ and the Current Situation in Cambodia[34]

(1) SEZ in Cambodia

There are different frameworks and concepts for SEZs. Some may grant incentives such as duty free access of imported goods, tax exemption, and discount based on the location of the production facilities by designating specific geographical areas. Some may have an arrangement on relaxed specific regulation or even deregulation to meet the demand of specific industrial development purposes.[35]

Twenty three SEZs have been approved in Cambodia. All except one (Sihanoukville Port SEZ) are projects by private developers. The definition of SEZ and the condition of approvals are as stated below:

Definition
- Special area for the development of the economic sector which brings together all industrial and other related activities.
- Includes general industrial zones and export processing zones.
- Each SEZ shall have a production area, and may have free trade area, service area, residential area, and tourist area.

[34] The trend of investment to SEZ are reviewed and summarized in Section 3.2.2 in Chapter 3.

[35] The basic attributes of SEZs defined by World Bank (2008) are the following: i) geographically delineated area; ii) single management and administration; iii) eligibility of benefits based on the physical location, iv) separate customs areas (duty free areas) and streamlined procedures. It also listed the following types: Free Trade Zone、Traditional Export Processing Zone (EPZ), Hybrid EPZ, Free Port, Enterprise Zone/Empowerment Zone/Urban Free Zone, Single Factory EPZ, Specialized Zones(World Bank (2008)"Special Economic Zone: Performance Lesson Learned and Implications for Zone Development"

Conditions

- More than 50 ha with precise location and geographic boundaries.
- Surrounding fence (for export processing zone, free trade area, and premises of each investors in each zone.
- Management office building and zone administration offices (one-stop function), road network, water supply, water sewage network, waste water treatment network, location for storage and management of solid wastes, environmental protection measures, and other related infrastructures as deemed necessary.
- Depending on the situation, SEZ can allocate the areas to residential areas for workers and managers and other facilities such as medical facilities, public parks, vocational schools, filling stations, restaurants, shopping centers, and supermarkets.
- Compliant with technical requirements, regulations, and basic rules on construction, environment, and other obligations in the development of SEZ as denied instruction issued by relevant ministries or institutions taking into account the geography and specific size of each zone and pursuant to the existing laws, and national and international standards.

Source: Sub-decree No.148 ANKr..BK on the Establishment and Management of the Special Economic Zone, JICA (2012), Investment Guidebook

For establishing SEZ, the specific project should be approved as a QIP. The application should be submitted to the Cambodia Special Economic Zone Board (CSEZB). The additional incentives and treatment for SEZ developers and investors which are not entitled to those outside of SEZs can be summarized as follows:

Zone Developers

- QIP equivalent corporate income tax exemption (up to nine years);
- Duty free import for the facilities and construction materials for infrastructure development in SEZ; and
- Obtain land concession and may lease from zone investors.

Zone Investors

- VAT exemption for production facilities and raw materials and parts for products to be exported[36].
- For importation of goods into the SEZs located within 20 km from the official border, the goods can be transported via the seamless route and send directly to the factories with prior verification of custom officials[37]. For exportation, customs procedures can be conducted within SEZs for these SEZs.

In order to receive the duty free treatment for the imported goods for production, zone investors are required to submit the following documents to CDC or CSEZB, namely: i) annual master lists with such information as types of raw materials and parts, the quantities, and prices; ii) quarterly reports of the results in terms of the actual quantities and prices of imported raw materials and parts; and iii) the performance of the exportation (invoice number, date of shipment, country of origin, and details of customs declaration for exportation). The master lists and the reports are circulated to the General Directorate of Customs and Excises (GDCE) and General Department of Taxation. While GDCE checks with the records on importation, CDC verifies the records of the Department of Taxation with factories' records[38].

[36] The Prime Minister's Notation on Letter #2128 SHV (MoEF) March 2, 2010, Cited from Cambodia Investment Guidebook
[37] Prakas No.734 MEF September 11, 2008
[38] JICA (2012), Cambodia Investment Guidebook

The following issues should be raised in terms of the actual performance of SEZs.

1) No development after approval

Out of 23 approved SEZs, the actual ones with operational factories is confirmed only in seven SEZs. Some SEZs have been left undeveloped even after several years of approval. Regarding the situation with the failing of meeting the requirement of completing 30% of the construction works within 365 days after the approval as designated in the Prakas, the CIB took a step forward by withdrawing the license of S.N.C. SEZ after designating it as "non-active project"[39].

2) Inadequate conditions of infrastructure of existing SEZs

The Prakas on SEZ orders the obligation of SEZ developers to facilitate necessary electricity supply, road network, solid and liquid waste disposal facilities, and other necessary infrastructure. Some SEZs are reported to be unable to fulfill these requirements with provision and maintenance of necessary infrastructure[40]. Some SEZs do not have a proper functioning OSS[41].

3) Land ownership

The land registration was severely damaged by the civil war and the cadastral maps have been destroyed. Although the land registration has been done in most of the urban areas with the support of donor agencies, some non-urban areas are still left unregistered. Due to this fact, the land ownership in some areas may be ambiguous. Foreigners are not allowed to own land. With insufficient development of the administrative structure of land ownership registration, the leasing agreements have not been backed up by proper legal background owing some risks[42].

4) Institutional framework and designs which do not fit to the needs of the investors

The design of the institutions and actual physical facilities may not match with the specific requirements or needs of investors of sectors which the SEZs may target. This is due to the lack of clear target sectors to be promoted. The expected roles of the SEZ tenants in the industrial development are also not clear vis-à-vis the companies located outside of SEZs. For example, the original institutional design envisions the promotion of export-processing type sectors. However, the actual incentives and benefits provided in the SEZs are not necessarily preferable than those provided outside of SEZs. As well as all QIPs, those

[39] JICA/Nippon Koei/KRI/VPI(2010), "The Study on National Integrated Strategy of Coastal Area and Master Plan of Sihanoukville for Sustainable Development Final Report (Book II)"

[40] In 2012, Japanese tentant companies in Tai-Seng SEZ in Bavet submitted the request of improvement of the situation of SEZ to the Special Economic Zone Trouble Shooting Committee (SEZ TSC). According to the request, the SEZ has not facilitated the required infrastructure with proper conditions: such as the areas to be rectified as OSS has not been installed, malfunction of waste collection with the waste scattering on the roads of SEZ, unstable electricity supply with sudden and hour-lasting outages. The condition of infrastructures severely affects the operation of the tenant factories. According to the interview with investors in other SEZs, they are also experiencing frequent sudden outage of electricity supplied by own generator of the SEZ.

[41] JICA/Nippon Koei/KRI/VPI(2010) reported that OSS is only available at Phnom Penh SEZ and Manhattan SEZ. According to the interview with Japanese investors, Sihanoukville SEZ also provides the service. However, Tai-Seng SEZ is not providing it properly.

[42] JICA/Nippon Koei/KRI/VPI(2010), World Bank (2011) , "Promoting Special Economic Zones for Export Development in Cambodia"

located in SEZs are granted with duty free importation of raw materials and parts for exported products by submitting Master Lists. However, it takes as same duration of time as it does to the investors outside of SEZs to make the amendment of Master Lists involving lengthy process. The design of the institutions has not incorporated the specific needs and situations of the targets[43].

(2) Thai and Vietnamese Investment Promotion by Designating Geographic Areas

The table below summarizes the investment promotion schemes of Thailand and Vietnam limiting to the specific geographic areas. The institutional designs of two countries are not necessarily comparable with the type of institutions as SEZs in Cambodia. Both countries do not have the specific and notable incentive schemes granted to specific areas as industrial estates/zones. Apart from these incentives, these two countries have incentives based on the type of industries and businesses.

Table 4-21 Area-based Investment Promotion in Thailand and Vietnam

	Types		Incentives in General	Incentives (Corporate Income Tax)	Incentives (Custom Tariff)
Thailand	General Industrial Zone in Industrial Estate		Foreigners allowed to own land, possible to hire foreign technical personnel, expedited process for issuing visas for foreign technical personnel, experts, and their accompanying family members, possible to remit using foreign currency	Incentive according to BOI Zones	Incentive according to BOI Zones
	IEAT Free Zone in Industrial Estate		Foreigners allowed to own land, possible to hire foreign technical personnel, expedited process for issuing visas for foreign technical personnel, experts, and their accompanying family members, possible to remit using foreign currency, goods related to the export do not have any limitation based on the domestic regulations and rules regarding import permits and quality certifications except the matter related to customs.	Incentives according to BOI Zones	Incentives according to BOI Zones For exported good, customs on importation and VAT exempted
Vietnam	Economic Zone, High-Tech Zone, Regions with difficult socio-economic conditions	Coastal EZ(15 zones), Border EZ(28 zones), High-Tech Zone(3 zones)	exemption of the Land Withholding Tax (up to 11 years)	For new projects: Corporate Income Tax(10%) for 15 years For newly established corporate: 4 yeas of Corporate Income Tax exemption, 9 years of 50% reduction (Tax rate with 10%)	Custom exemption of importation of raw materials, supply, parts for the investment for regions with difficult socio-economic conditions
	Regions with especially difficult socio-economic conditions	Designated by the Decree No. 108/ND-CPAppendix 22 September 2006	exemption of the Land Withholding Tax (up to 11 years)	For new projects: Corporate Income Tax20%) for 10 years For newly established corporate: 2 yeas of Corporate Income Tax exemption, 4 years of 50% reduction (Tax rate with 5%)	Custom exemption of importation of raw materials, supply, parts for the investment for regions with especially difficult socio-economic conditions

Source: JICA Study Team based on information of JETRO website

Vietnam, which had the incentive schemes targeting industrial zones and export processing zones until recently, amended the law and abolished the incentives previously being provided to FIEs in these zones. The incentives of exemption or reduction of corporate income tax and duty exemption for imported materials are granted to the limited areas as Economic Zones (43 in total), High-Tech Zones(3 in total), and the regions with difficult or especially difficult socio-economic conditions.

In Thailand, three tracks of incentives are provided depending on the BOI zones. “Industrial Estates” are the industrial sites developed and managed by the Industrial Estate Authority of Thailand (IEAT) or developed by private investors and managed by IEAT. Although it is not clearly mentioned in the table above, the incentives of corporate tax exemption is granted only upon approval of the investment projects by BOI. Therefore, there is not much difference in the incentives between those inside and outside of the industrial estates.

The current situation of SEZs in Cambodia is almost the same situation in two countries in terms of the incentive scheme provided to zone investors. The situation of SEZs in terms of the physical infrastructure

[43] Ibid.

and other services are reviewed from the aspect of the responsiveness to FDI's needs.

(3) Overview of Industrial Estates/Zones in Thailand and Vietnam with the Comparison with Cambodia

In Thailand, there are about 60 industrial estates or industrial zones/parks developed for industrial use[44]. Although industrial estates are either directly developed by IEAT or developed by the private developers and managed by IEAT, those developed and managed by private sector are called industrial zones or industrial parks.

In Vietnam, more than 280 were approved. There are already 180 that have been in operation and 100 more are being developed. In 2020, the total area of these zones/parks is expected to be three times more than the size of the existing area (20,000 ha). On the other hand, due to the hazardous impacts on the land cost and the management quality, the Government of Vietnam started the review on the conditions of industrial zones in terms of infrastructure and occupancy rate. Reportedly, the prime minister directed to cancel the approval if the actual development cannot be completed[45].

Table 4-23 shows the comparison of infrastructure and facilities of sample industrial zones or SEZs in northeast Thailand, south and central Vietnam, and Cambodia.

[44] JBIC(2011)

[45] JIC/MRI(2012), "Asia Chiiki Vietnam oyobi Indonesia Kougyoudanchi eno Honpou Chuken/Chushoukigyo Shinshutu nikakaru kisojouhou shushukakuninchosa (Data Collection and Survey on the Industrial Zones in Vietnam and Indonesia for Accommodating Investment by Japanese Small and Medium Enterprises)"

Table 4-22 Infrastructure and Facilities of Industrial Zones (SEZ) in Cambodia and Provincial Areas in Thailand and Vietnam

	Cambodia	Thailand (Nakhon Ratchasima)	Vietnam (Qui Nhon)
Developer	Private	Private	Private
Rental Factory	Available	Available	Not known
Services Related to Administration and Import/Export Procedures	-OSS for import/export －Support to obtain other certifications, licenses, and registration -If within 20km, custom clearance at the factory premises	Not knowns *IEAT Industrial Estate OSS: construction permits, factory permit, any approval related to the Urban Planning Law Custom office in IE	OSS *Some with custom houses
Logistics	SEZ dry port	Not known *Some industrial zones have facilities and service desk of Japanese logistics companies	Not known
Housing for Workers	Some facilities within the premises. Independent residential area development is included also in the M/P	Not in the premises *Other site may have residential areas for foreigners, experts for short-term assignment	Workers dormitories constructed by the provincial government, EZ and industrial zone.
Recruitment	SEZ staffing services	Announcement Board *Some attach vocational school and recruited from the graduates	Services by local authorities
Other Facilities	Restaurant, Canteen for workers	ATM	Commercial area, Restaurant, Bus Transportation within the Zone
Source of information	Phnom Penh SEZ	Nava NaKorn Nakornratchasima	Phu Tai Industrial Zone

Source: Phnom Penh SEZ presentation material, JETRO (2011), "Taikoku Kougyou Danchi Chousa Houkokusho (Survey Report on the Industrial Estate/Parks in Thailand)"、JETRO (2011), "Vietnam Hokubu/Chubu Kougyoudanchi Data shu (Data on Industrial Zones in Northern and Central Vietnam)"

It should be noted that the conditions of the industrial zones/parks or SEZs are not consistently good even within a country. It is especially alarming in Vietnam and Cambodia. In Vietnam, Japanese FDI concentrates more on the industrial zones developed by Japanese developers. Moreover, the investment of Japanese assembly manufacturing company accelerated further the investment of suppliers. This implies the necessity of industrial real estate quality development by experienced and technically competent developers with sufficient financial capacity.

Another issue is the environment surrounding the industrial sites. Due to the high concentration of the industrial zones located in the areas where proper housing or other public facilities are insufficiently provided, the frustration among the workers have come to the point of pressuring the operation of the factories through labor strikes in Vietnam. Taking this matter at the Vietnam-Japan Joint Initiative, infrastructure development for workers' living environment in the neighboring areas of industrial zones has

been promoted throughout phases 3 and 4[46]. In Vietnam, FIEs started to prepare dormitories or residential arrangement for workers in order to keep them. Moreover, taking other urban management issues into account such as orderly land use, solid and liquid waste management, and allocation of other public facilities, the situation may consider more comprehensive measures in light of urban and regional development for accommodating further growth of the manufacturing sector[47].

(4) Concluding Remarks

Although the quality of one limited sample SEZ may display the sufficient quality as compared with the equivalent facilities in Thailand and Vietnam, the supply of quality industrial sites as a whole is not sufficient in Cambodia. The problem found in Cambodia is the lack of private developers with technical and financial capacity on industrial site development. This, however, does not say that the development should rest entirely on the responsibility of the government including sourcing of finance. The role of the government should be generating the environment for these developers to be attracted and to provide facilities with quality.

In terms of the incentive scheme, it should be understood that the current investment scheme has been fully discussed with limitations on the government budget. In addition, the framework of ASEAN Plus 1 may decrease the significance of incentives currently provided for the importation of the raw materials and parts.

More importantly, the current SEZ related regulatory framework is based on the decree without solid basis by a law. Therefore, the binding power for what is stipulated should be ensured through establishing the SEZ law in consistency with existing LOI, other relevant rules and regulation as well as internationally observed rules. It is understood that the drafting of the law with the leadership of CDC has started. The process should be expedited in light of the necessity of the law[48].

The following areas are specifically identified for improvement.

1) Establishing and improving the institutional framework of SEZs and its management and administrative capacity building.

In addition to the necessity of establishing the SEZ law, designing of actual procedures and capacity building are required for screening and monitoring, taking enforcement measures, and other necessary arrangements[49]. In practice, the following should be undertaken:

- Understand the situation of SEZs' operation, provide necessary guidance, order, and implement any legal actions if necessary; and
- Reduce the hazardous pressures on the effective land use by eliminating non-development projects.

[46] The Embassy of Japan in Vietnam HP
[47] JICA/Nippon Koei (2010), "Vietnamkoku Kougyoudanchi Shuhen no Kyojukankyou Chousa Houkokusho (Final Report of the Survey on the Living Environment of the Surrounding Areas of Industrial Zones in Vietnam)"
[48] Referred to the information of "Cambodia Investment Guidebook 2012", JICA/Nippon Koei/KRI/VPI(2010)、World Bank (2011)
[49] World Bank (2011) suggests setting up an Special Operating Agency

The increase of land acquisition without effective development will not only complicate the shortage of industrial sites but will also deprive opportunities for other use. Moreover, it may cause the increase of land price. Therefore, it is necessary to implement measures to reduce non-development projects.

On the other hand, the measures to ensure the supply of quality-based infrastructure for industrial operation are important to generate investor's confidence. As seen in Thailand, the expansion of the production capacity with second and third factory constructions may easily occur within the same national boundary. This is not only because of the structure of supply chain and logistics issues requiring geographical proximity of each production facilities, but also due to the management structure of companies (based on the location of regional operation headquarters, necessity of obtaining corporate status and other reasons). Furthermore, it requires the motivation on reducing the costs which has to be allocated to familiarize the administrative and business-related know-how. It is therefore important to build the confidence of foreign investors for new investment and easeness of doing business is important to reduce costs. The confidence towards Thailand has been built overtime, whereas Cambodia has just embarked on the phase where new industries started investing. If the current quality-control system does not function well with market mechanism, the government should take necessary measures to correct the mechanism within their capacity.

2) Infrastructure development of SEZ and the surrounding areas

Although private sector remains the driving force for SEZ development, the infrastructure deficit in the SEZs and the surrounding areas should be filled in the shared contribution between private and public sectors. It should also be aligned in the context of urban and regional development in the areas.

It is projected that good working and living conditions for workers would be a crucial issue for regional development and for micro-level factory management.

It is not only FDIs but also other businesses including supporting industries may be located in the surrounding areas of SEZs in future. It is important to have a land use plan to guide the location of these businesses from the aspect of SME development and maintenance of the living conditions.

3) Institutional designing matched with the needs of industries

Assuming the target industries for FDI promotion in short-term, their requirement should be primarily looked into. One of the major attributes expected to SEZs may be the nature of export processing zone. This attributes should be strengthened by adequate policy measures to meet the demand of FDIs. As reviewed earlier, the raw materials and parts take a significant portion of the cost. While preparing the domestic industrial capacity in taking part in the value chain to localize, it is also important to reduce the cost and lead times of importation and exportation.

As suggested in other forums, some measures to modernize, streamline, and increase transparency of customs procedures may be one possible area to consider. It may well be suggested to introduce free zone

and to access the Revised Kyoto Conventions of WTO[50].

Likewise, special rules and regulations to reduce administrative procedures drastically may be introduced to the designated areas.

4.5 Concluding Remarks

4.5.1 Comparison of the Investment Climate between Cambodia, Thailand, and Vietnam and the Possibility of Extension of Industrial Agglomerations in Thailand and Vietnam

This section summarizes (1) comparative advantages of investment environments in Cambodia, Thailand, and Vietnam; and (2) possible extension of the industrial agglomeration to Thailand and Vietnam based on the above analyses.

(1) Comparison with Thailand and the Possible Extension of the Industrial Agglomeration

It is observed that good logistics connection is a key to be connected and integrated into an industrial agglomeration. In the northeast region of Thailand, Nakhon Ratchasima with better access to Bangkok and the Eastern Seaboard accommodates a few industrial zones and more than 40 Japanese FIEs while Khon Kaen with less accessibility receives only a few Japanese FIEs. However, industrial agglomeration in Chiangmai which is also located in the same distance (700 km) from Bangkok is located around the airport. This is due to the city's good connection with Bangkok with frequent flights[51]. The physical distance and the time required from the border between Cambodia and Thailand have some advantage as compared with the ones in the remote areas in the northeast region of Thailand. The issue of administrative procedures at the border is one of the key targets to take advantage of the areas near the border.

Low-cost labor force of Cambodia may remain an advantage regarding the fact of the wage increase expected in January 2013 in the northeast region in Thailand. The production of labor-intensive and less technology-intensive technology (i.e., with relatively small consumption of electricity) has already been initiated through FDI in Cambodia. Furthermore, the customs tariff elimination within AEC may be another push factor for the production of any parts of automobile, electrical and electronics, and machinery with the above mentioned nature.

On the other hand, the northeast region has been the major supplier of labor force in Bangkok and the eastern region. The increased wage level may be another pull factor for immigrant workers from Cambodia and Lao PDR. Therefore, the capability of the northeast region of Thailand in securing labor force continues to be strong whereas the area near the borders may require improvement of the system to secure untapped labor force.

(2) Comparison with Vietnam and the Possible Extension of the Industrial Agglomeration

Vietnam's industrial agglomeration has been growing with infrastructure development such as

[50] World Bank (2011). The Law of Customs allows the introduction of the free zone.
[51] Actually, the flights between Bangkok and Chiangmai are mainly for passengers. Therefore, some companies use trucks for transportation which requires 7 to 8 hours to Laem Chabang (JBIC (2011))

construction of highways connecting the already existing industrial core and the surrounding areas. Despite the rise of electricity tariff due to the financial conditions of EVN, the level of tariff is still cheaper than Cambodia. Vietnam, under the process of forming the supporting industries, still imports majority of raw materials and parts. However, the efficient international logistics network may be developed taking advantage of the proximity to a main international course connecting the inbound flow of raw materials and parts from Japan, China, Thailand, and other countries and outbound flow to ASEAN countries and final market.

On the other hand, Vietnam's regulatory and administrative system may not be as responsive as Cambodia to the investors' needs. For example, the application for the approval of investment project has to be submitted to the authorities in the provincial level. Moreover, its readiness in understanding the regulations and requirements on approval as well as the amendment made recently is observed to be difficult. As mentioned earlier, this problem has been brought up at the Vietnam-Japan Joint Initiative so appropriate actions can be made to rectify it.

Vietnam experienced the major flow of FDI in 2008. However, capacity building and reform in the administrative system to reduce the burden of FDIs require further efforts. Despite the introduction of electronic data processing system of customs procedures, the data entry and processing has been delayed due to the limited capacity[52]. The knowledge and administrative capacity of window officers in contact with foreign investors on daily operation are required to be improved. The Vietnam-Japan Joint Initiative also agreed to implement the actions for organizational and human resource development by increasing the knowledge of window officers on the relevant regulations, and taxation at the provincial authorities and establishing a system to respond to investor inquiries[53].

As seen in the Doing Business indices, FDI in Cambodia may not have encountered some of the problems observed in Vietnam. However, it would not be adequate to compare the situation considering the large difference in the size of FDI inflows to both countries. It should rather be seen as lessons for Cambodia in the future.

While the level of wage may be one of the strong points of Cambodia, the possibility in sourcing the sufficient number of workers is another point which may determine the quality of improvement. In competition with the southern region of Vietnam, Cambodia has to perform effectively to source the workers at an equivalent level. The area surrounding HCMC is known for traditional labor migration mechanism from the Mekong Delta with large population endowment.

On the other hand, what might be the required measures to strengthen the connectivity with the industrial agglomeration around HCMC and draw the externalities inside of the border? For example, Linh Trung Export Processing Zone in Tai Ninh Province is located in the proximity of the border of Cambodia (from

[52] JBIC(2011)

[53] The relevant issues discussed and took some actions under the Joint Initiative are: clarification on the limitation related to Investment (Phase 2) for investment, consultation before the change in preferential taxation (Phase 2), clarification on the items regarded as deductible expenses (Phase 3), windows and functions for consultation on taxation from businesses (Phase 4) for taxation.

28 km from Moc Bai-Bavet gate) and 43 km from HCMC. The lease of the land is almost in the same level with Phnom Penh at USD 55 per square meter for a 40-year lease. There have been Japanese FIEs in light industries and simple manufacturing operations including manufacturing of working gloves, furniture, cable, wire harness, casting, and assembly of machinery. In order to connect with these areas, provision of at least the same and possibly better level of infrastructure and administrative support should be necessary not only in Phnom Penh, but also in Bavet. The eastern part of Cambodia is the area with relatively higher population density. However, the population of Svay Rieng province is only 480,000, which is small comparing with the size in the southeastern region of Vietnam.

To take advantage of the locations bordering Vietnam with potential good access to East Asian logistics network, the investors' confidence toward Cambodia should be crucial by providing even better operational environment than Vietnam to overcome some weaknesses. Continuous support to induce the satisfaction of already located investors as well as the support to prospective investors should be especially necessary at the bordering areas. Whereas the Vietnamese side may continue to be an investor-unfriendly environment with the need of provincial capacity development, it may be possible for the Cambodian side to concentrate on providing quality administrative support to these border areas. On the other hand, in terms of the infrastructural development, the supply of quality industrial sites in the area is also important.

4.5.2 Summing Up the Analysis on the Environment and Investment Climate of Cambodia

The SWOT analysis on the current investment climate is summarized below. As the micro-level competitiveness largely affecting strengths and weaknesses require further analysis, the summary focuses more on the external factors, opportunities and threats.

Table 4-23 SWOT Analysis on Competitiveness Environments in Cambodia

Strength	Weakness
・ Cheap labor ・ Relatively simplified procedures and fast approval for the application of QIP ・ Relatively good incentive schemes.	*Human Resources* ・ Low productivity of labor ・ Insufficient human resource for management *Infrastructure* ・ Insufficient supply of industrial sites with quality infrastructure ・ High electricity price & High logistics cost *Size of market* ・ Size of the domestic market is limited compared with other countries such as Myanmar, Thailand, and Vietnam *Business-related regulatory framework and administrative procedures* ・ Insufficiency in business-related legal system, complicated and inefficient administrative transaction *Basic frameworks for industrial activities* ・ Insufficiency in institutional capacity, administrative procedures and physical infrastructure related to standard, metrology, quality certification *Domestic manufacturing sector* ・ Underdeveloped technically and with limited production capacity

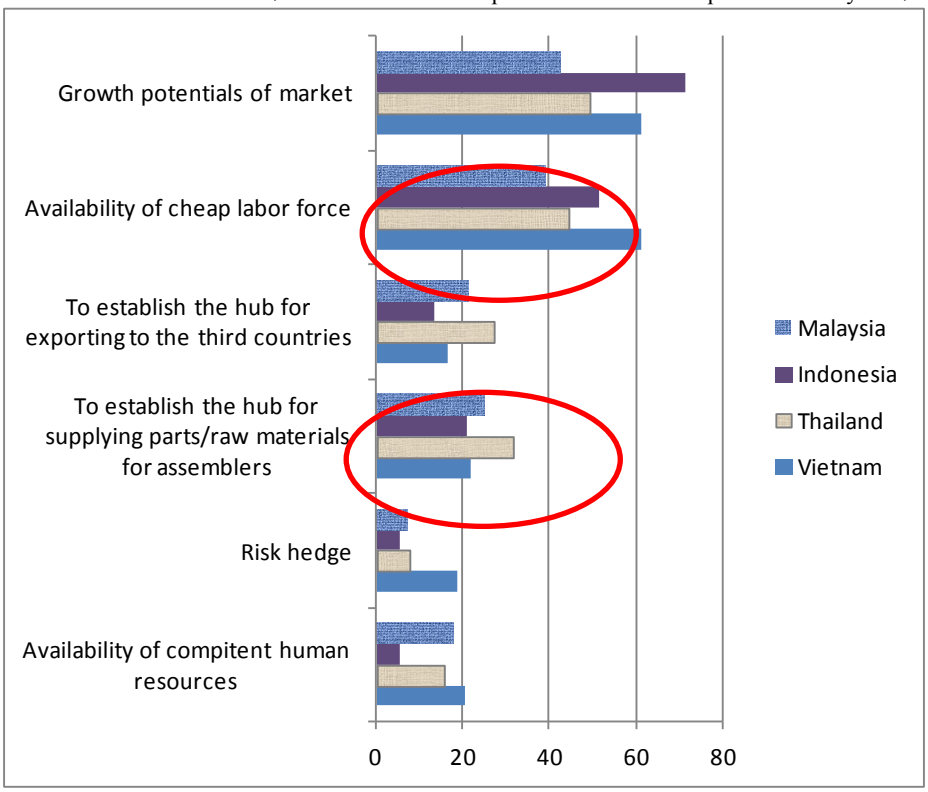
Opportunities	Threats
ASEAN Plus1 and regional market integration ・ Utilizing such schemes as the Regional Value of Content for the Rule of Origin, back-to-back, re-invoice, the industrial agglomeration or the sales and logistical functions in some selected areas will be strengthened. Geographical proximity to these centers of agglomeration may provide the opportunities for Cambodia to be a part of the production function of the agglomeration and, therefore, the access to greater markets. ・ Increase the attractiveness of ASEAN which induces the investment in general in the area. ・ Easier access to the parts and raw materials and parts produced within ASEAN or any other "plus 1" countries. ・ Increase the access to the greater market with FTAs/EPAs. *Development of SEC* ・ Easier access to the growing industrial agglomeration in Thailand and Vietnam and the possibility of being integrated into the supply-chains where Bangkok and the vicinities or HCMC are the cores. ・ Increase access to the greater market utilizing the port facilities of other countries along SEC such as Cai Mep or Laem Chabang and Dawei in the future. *Changes in investment climate in neighboring countries* ・ With the surge in wage of labor in Thailand and Vietnam, Cambodia may be regarded as the next investment destination with its cheaper labor force. *Investors' behavior* ・ Risk hedge from concentrating to one country (e.g., China and Thailand) and choose Cambodia as an option. ・ Current push factors affecting Japanese manufacturing sectors to shift a significant portion of production functions to abroad.	*ASEAN Plus1 and regional market integration* ・ Inflow of the price-wise and quality-wise competitive products from other more industrialized countries. ・ Due to rather limited trade liberalization, the effect may be also limited to ASEAN 6 countries. The effect on CLMV and ASEAN 6 after wider tariff elimination under ACFTA and AFTA may be larger than as experienced by ASEAN 6 so far. *Development of SEC* ・ The stagnant situation in harmonizing and simplifying trade related procedures can constrain the impact of the improvement of connectivity. ・ The infrastructure development as well as the institutional arrangement may not progress as planned due to the domestic policy priorities and political conditions of the countries along SEC. *Growth of the industrial sector in neighboring countries* ・ Whereas the countries with some basis of industrial development may accelerate further development attracting investors with the industrial agglomeration, the countries such as Cambodia with weak industrial basis cannot attract the investors. ・ Will not be able to change overdependence on imported materials and domestic industries *Changes in investment climate in neighboring countries* ・ Investment climate ameliorated in Myanmar and other rival countries with better political economic conditions with infrastructure development as well as regulatory and administrative framework established and improved to receive FDI

Source: JICA Study Team

4.5.3 Positioning of Cambodia's Manufacturing Sector and the Direction for Strengthening Competitiveness

Figure 4-15 is the based on the data presented at 4.4.2 (2). The Cambodia's current competitiveness lies on cheap labor force and the setting up of production base for certain parts. The comparative advantage of Cambodia may be low-cost labor as well as the production bases for parts used in industrial hubs or other markets. Integrating into GVC by connecting and utilizing the functions of Thailand and Vietnam as well as other logistics and industrial hubs such as Singapore may be realized through strengthening ports and transportation network with industries located in the optimal industrial sites.

（unit: ratio of the respondents chose the specific country : %）



Source: JICA Study Team based on the data of JBIC (2012), "FY2011 the Survey on Overseas Business Operation of Japanese Manufacturing Companies"

Figure 4-15 Promising Investment Destination in the Medium-term for Japanese Manufacturing Companies and the Reasons of the Selection

CHAPTER 5 Conclusion-Industries in Cambodia toward the Next Step

5.1 Cambodia's GDP per Capita Over USD 1000

(1) Achievements and Issues on Growth

It has been 20 years since the Kingdom of Cambodia was established in the early 1990s. During the period, the economy of Cambodia grew rapidly and got through the 2008 Global Financial Crisis (GFC). The GDP per capita of Cambodia will reach to USD 1000 level soon. Once its per capita reaches that level, it will grow out of the list of less developed countries (LLDC) and will become one of the lower middle income countries (LMIC). Therefore, the country is required to reduce its dependence on foreign grant aids and needs to strengthen self-help and independence in this sense.

The Cambodian economic foundation of self-help and independence is still fragile. The four leading industrial sectors namely agriculture, garment, tourism, and construction are the growth engine of the economy. A wide variety of the manufacturing sectors have played a pivotal role in East Asian economies, while the garment and footwear sectors are still the mainstay of the Cambodian economy. Therefore, there is a strong need to diversify and upgrade the manufacturing sector in order to strengthen the fragile economy.

(2) Three Traps that Cambodia is Facing

Cambodia is facing three traps: 1) over-employment trap at present, 2) free trade trap in the short- and medium-term, and 3) middle-income trap in the long-term.

1) Over-employment trap

As of 2008, approximately 80.5% of Cambodians lived in rural areas. A growing number of the youth need to be engaged in agriculture because employment opportunities in the non-agricultural sector are limited, and the number of the over-employment population has increased (see 2.1.2 of Chapter 2 in Part 1). In urban areas, on the other hand, the number of workers on the streets and/or in the informal sector has increased (i.e., street vendors) and a growing number of people go to neighboring countries to work. Therefore, there is an urgent need to generate more employment opportunities in the modern formal sectors for the youth in Cambodia. The way to avoid the over-employment trap is to encourage the migration of labors from rural to urban formal/industrial sectors.

2) Free trade trap

ASEAN integration and facilitation of free trade in the region have positive and negative impacts on Cambodia. According to an estimate with the use of the applied general equilibrium model, the impact of regional free trade on the real GDP in Cambodia is approximately a 21% increase. Cambodia has the potentials to benefit from the regional free trade. According to another estimate, given the enhancement of connectivity of the Southern Economic Corridor (SEC), Cambodia's GDP will be increased by 76.5% in the period 2011-2022 (see 4.2.1 of Chapter 4 in Part 1). However, the free trade trap has to be taken into consideration. Despite a large amount of trade and current account deficits, the garment and footwear

sectors are the main exporting industries.

As mentioned earlier, there is a production network, or global value chain (GVC), of the assembly and processing sectors (labor-intensive products/parts in the first stage) across East Asia. Cambodia needs to enhance its international competitiveness as well as to be integrated into the network as soon as possible through the diversification of its industrial structure. Once the market is liberalized, more foreign products and parts will pour into the Cambodian market making the current industrial structure firmly fixed in which the garment and footwear sectors are centered. The free trade trap has to be avoided.[54]

3) Middle-income trap

SNEC[55] points out that it is important to help Cambodian workers to acquire the necessary techniques and technology for long-term economic growth in order to avoid (lower) middle-income trap. After reaching the middle-income level, however, its economy could remain stagnant for a long time if Cambodia fails to enhance the technological and technical levels of its workers ("middle-income trap[56]").

Therefore, it is necessary to generate domestic value-added and to diversify its industrial structure by upgrading from the labor-intensive to technology- and knowledge-intensive sectors. It is also necessary to promote the agglomeration of the simple assembly and processing sector, as well as to develop local human resources for industry.[57]

5.2 Key Factors - Industrialization and FDI

(1) Industrialization and FDI

The one and only way to avoid the above-mentioned three traps is industrialization through technical and technological development. More specifically, by diversification and upgrading of the manufacturing sector, the country should (i) encourage the labor migration from rural to urban areas in order to deal with over-employment situation, (ii) avoid the free trade trap by improving export capacity, enhancing competitiveness, and obtaining new comparative advantages, and (iii) breakthrough in the middle-income trap by intensifying technical and technological capacity. It is essential to prepare feasible industrialization strategies with a view to long-term continuous economic growth. In other words, the structure of production and export should be transformed from lower to higher value-added and the core industrial sectors should be developed which have a leading role to play in the Cambodian economy so as to turn its trade deficit into a surplus.

A basic viewpoint of this study is foreign direct investment (FDI) and it is one of the key factors of industrial strategy. The garment and footwear sectors, the manufacturing of which was relocated to

[54] Tran Van Tho (2010) "Development and Transition in the Vietnamese Economy" Keiso Shobo
[55] SNEC (04 November 2011) "Outline for Industrial Development Policy (IDP) Report – Priority Sectors and Issues", SNEC (25 June 2012) " The Concept Note for Industrial Development Policy in Cambodia" etc.
[56] See Tran Van Tho (2010), Kenichi Ohno (2009) "Supporting Industries in Vietnam", Akira Suehiro (2009) "Thailand – Groping Middle-income Countries" Iwanami Shoten etc
[57] Kenichi Ohno (2006) " Vietnam's Industrial Policy Formulation: To Become a Reliable Partner in Integral Manufacturing" PPT material <http://www.grips.ac.jp/vietnam/KOarchives/doc/JS01_COESympo.pdf>

Cambodia through FDI, are among the central pillars of the economy. FDIs of the following assembly and processing sectors (especially, labor-intensive processes) are expected: garment, footwear, automobiles, motorcycle, electrical and electronics (E&E), precision instruments and parts, etc. Furthermore, each of these should be upgraded to technology- and knowledge-intensive sectors. In order to avoid middle-income trap, it is necessary to be able to manufacture and export higher value-added products/parts in the near future. Japanese FDI can play a leading role in such development process.

(2) Japanese Companies and "Quality FDI"

In recent years, there have been growing expectations for Japanese FDI and it is characterized by the following points; (i) Japanese FDI is export-oriented and its manufacturing sector ratio out of the total export is high. Japanese manufacturing sectors were called the "assembly and processing" sectors and were export-oriented; (ii) There is complicated and various production fragmentation across East Asia. Japanese FDI has provided a host country with an opportunity to become integrated into GVC; (iii) Through technology transfer, the relocation of Japanese manufacturing facilitates localization of production and development of the supporting industry. As a result, trade is also facilitated between a host country and Japan (see 3.1.4 of Chapter 3 in Part 1). These characteristics meet the requirement of quality FDI.

Quality FDI contributes not only to overcome over-employment trap by generating employment opportunities and income but also helping the country to avoid free trade trap and middle-income trap. Therefore, the Royal Government of Cambodia (RGC) is required to listen to the views of Japanese companies and to identify their strategies and interests in Cambodia. In this sense, it is important to strengthen the function of the existing public-private dialogue mechanisms (e.g. the Government-Private Sector Forum [GPSF] and the Japan-Cambodia Public-Private Joint Meeting). In coordination with quality FDI of Japanese manufacturers, it is crucial to deal with the five following points: (i) improvement of the conditions of physical infrastructure, (ii) human resource development for industry, (iii) enhancement of product quality, (iv) upgrading of technology and managerial capacity, and (v) development of the supporting industry.

(3) Development of Industrial Linkage and Modernization of SMEs

Although the industrialization strategies focus on FDI, domestic SMEs are another key factor. On the contrary, the strategies aim to modernize the SMEs by making full use of FDI because they are part of economic foundations. Their modernization is one of the most important medium- and long-term issues of Cambodia's industrial policy. Foreign manufacturers, or foreign invested enterprises (FIEs), should not be stand-alone. It is vital to bridge the gap between FIEs and local SMEs. It is also important to form the interlinkage between the two.

The majority of small- and medium-sized manufacturers are engaged in food processing. Although assembly and processing firms has sharply increased in number lately, their share in the manufacturing sector is still insignificant. However, some of the supporting industries (e.g. corrugated board and plastic

products) have begun to provide their products/parts for foreign manufacturers.[58] In this context, from the standpoint of investment management, it is necessary to attract first- and second-tier foreign suppliers. Some local firms are expected to grow into the supporting industry as third-tier suppliers (see 2.2 of Chapter 2 in Part 1). If technology transfer is carried out through various channels, SMEs can be a solid and firm economic foundation to break through the middle-income trap.

For the purpose of counterbalancing a variety of disadvantages of SMEs (especially small-sized firms), there is also a need to encourage the establishment of industrial associations, to facilitate the standardization of production processes, and to improve access to technology and finance.

5.3 Comprehensive Improvement of Investment Climate

Considering a rapid increase in the inflow of FDIs, it is important to review the policies with a view to attracting quality FDI in line with the preceding discussions. A set of industrial policies are two-fold; one is direct policies and the other is indirect and cross-cutting policies.

(1) Direct Industrial Policies

Since the industrial strategies focuses chiefly on FDI, continuous improvement of investment climate is of prime significance. In order to meet foreign manufacturers' requests, it is necessary for RGC to develop not only special economic zone (SEZ) *per se* but also its surrounding areas on the use of comprehensive regional development methodology. The service of investment promotion agency (IPA) should be improved to create a good reputation among foreign investors.

As for the implementation of policies and measures, the necessary conditions of FDI promotion include the streamlining of customs procedures and the abolition of unofficial costs to maintain transparency. In relation to FDI promotion, it is important to establish the interlinkage between industrial policy and FDI management, as well as to encourage public-private dialogues so that views and voices of foreign manufacturers (including potential investors) may be reflected in the process of policy formulation and implementation.

Furthermore, FIE's in-house training should be encouraged and supported so that various technologies and techniques may be transferred horizontally and vertically to related local SMEs. Technology transfer to them, which have the potential to grow into supporting industry, should also be facilitated. It is crucial to establish the system or mechanism of facilitating technology transfer and, as a result, the foundations of domestic industries will be strengthened.

In coordination with pro-active industrial policies to attract quality FDI, there is a strong need to implement comprehensive policies of SME promotion to address organization, production, technology, finance, etc.

[58] For this study's definition of the supporting industry, please refer to 2.2.3 of Chapter 2 in Part 1.

(2) Indirect Supporting Bases

Complementary to direct industrial policies, upgrading and improvement of comprehensive foundations for industrial development are necessary with the aim of attracting quality FDI.

According to Japanese firms, human resource development for industry is one of the most important necessities. Basic education should be strengthened across the country. Workers, technicians, and engineers should be provided for the foreign manufacturers through technical and vocational training education and training (TVET) in order to overcome the middle-income trap. Unless the capacity of electricity supply is stabilized and intensified and electricity costs are reduced, it is very difficult to reduce electricity consumption per product as well as to attract FDI of high-tech firms to Cambodia. Since Japanese firms view the convenience of logistics and distribution as crucial, the improvement of the conditions of trunk roads such as SEC should be prioritized and accelerated.

On the other hand, economic system should be improved and upgraded for industrial promotion. As for finance, it is essential to develop the mechanisms in which domestic savings are provided for local SMEs through indirect financial institutions.

(3) Long-term Economic Growth

Considering the relatively young composition of its population, high potential people, relatively flat and fertile land, and socio-political stability, Cambodia has potentials for long-term economic growth until the mid-21st century. It is high time for Cambodia to formulate the visions for industrial development.

Ishii (2003)[59] points out the six following factors of long-term development of latecomer developing countries. (i) human resource (system to foster workers to support modern development), (ii) infrastructure development (improvement of market access and of productivity), (iii) technological innovation (capacity to choose, absorb, and develop technologies), (iv) economic system (legislation system to ensure healthy transaction and investments), (v) social connectivity (systems to encourage people's participation in economic activities, etc.), and (vi) governance (governmental capacity to develop and manage various systems). These six factors have to be developed in a well-balanced manner through cross-cutting empirical analyses of developing countries in order to establish a base of long-term economic development.

On the basis of the results of this study, it is emphasized that, according to their own developmental stages, low-, middle- and high-income countries should focus on the development of human resource and infrastructure, technological innovation capacity, and human resource and economic institution. In this context, Cambodia should focus on human resource and infrastructure development and the enhancement of technological innovation capacity as a key to overcoming the middle-income trap.

[59] Ishii, Nahoko (2003) "Empirical Analysis on Long-term Economic Development" Nikkei Inc.

5.4 Challenges Toward the 2010s

(1) Making Good Use of Cambodia's Advantages

In recent years, Cambodia has attracted international attention as one of the promising investment destinations. There are three reasons; (i) Geographically, Cambodia is located along the SEC in the middle of Bangkok metropolitan and Ho Chi Minh City (HCMC) areas. In other words, the extension of these two major industrial agglomerations may have a production fragmentation effect upon Cambodia. It should be noted, however, that the fragmentation does not necessarily occur from Thai and Vietnamese agglomerations (see 4.4 of Chapter 4 in Part 1); (ii) Japanese firms' recent attention to Cambodia is attributable to their strategy of "China Plus One," to the risk diversification of overconcentration of production bases in China, and to Japanese domestic affairs (e.g. yen's appreciation and issues of electricity supply resulting from the March 2011 Great East Japan Earthquake). In order to win the competition in the international market, Japanese firms listed several candidates in which they would invest. Thus, Cambodia needs to improve investment climate to attract FDI; (iii) The other reason is the evaluation of Cambodia's advantages. They should include lower labor cost, abundant workers with good eyesight and dexterity, lower foreign exchange risk, social and political stability, and sound macroeconomic management.

Cambodia needs to strengthen its advantages and to remove the above-stated bottlenecks and obstacles.

(2) Winning a Race against Clock

It should be noted that, as investment destinations, more attention has lately been paid to Vietnam and Indonesia than Cambodia. Myanmar is one of the prime candidate destinations in the near future. Unless RGC improves its investment climate immediately, a flood of FDIs are likely to go to Myanmar. There is a pressing need for Cambodia to deal with them. In particular, the assembly and processing sectors are characterized as "footloose" and they shift their manufacturing to other countries in a short period of time if the investment climate is not favorable. Although labor cost is currently low in Cambodia, it will increase sooner or later. In short, the coming few years are of major importance and RGC should improve investment climate and address other key issues before the establishment of the ASEAN Economic Community (AEC) in 2015.

(3) Formulation of the Policy Package

For Cambodia, 2013 is a turning point for long-term economic development when Vision 2030, new Rectangular Strategy, and the National Strategic Development Plan (NSDP) will be released after the general election is held in the middle of the year. Together with them, SNEC's industrial policy will also be launched. In view of ASEAN integration, these overall policies give a new direction to the objectives and strategies of 2010 to the Cambodian economy. It is fully expected that the policy package, including industrial policy formulated by SNEC, will show the direction of FDI-led comprehensive industrial development.

Annexes

Annex 1

The Comparison of the Investment System and Investment Promotional Measurements between Cambodia, Thailand, and Vietnam

ANNEX-1 The comparison[1] of the Investment System and Investment Promotional Measurements between Cambodia, Thailand and Vietnam

	Thailand	Cambodia	Vietnam
Investment Promotion Organization	・Board of Investment（BOI） - “ONE STOP SERVICE CENTER”（In Charge of Visa, Labor Permission ） - “ONE START ONE STOP” Investment center.（OSOS） **- JAPANDESK** - ‘’Seven Provincial Representative Office”（Chiang Mai, Nakhonglachiang Mai、Kon Kaen、Chon Buri、Singola、Surat Thani、Phitsanulok） **- Tokyo, Osaka city** ・Industrial Estate Authority of Thailand IEAT）	・CDC: Council for the Development of Cambodia **- JAPANDESK**	・Ministry of the Investment Planning - Southern Part of Investment Planning division - Hanoi Investment Planning Division - Ho Chi Minh city Investment Planning Division ・Southern Industrial Ministry - Ho Chi Minh Division for Trade and Industry - Vietnam Chamber of Commerce and Industry（VCCI） **-Japanese Representative office** **- JAPANDESK** ・Export Processing Division of Hanoi / Industrial Estate Authority of Hanoi ・Export and Industrial Division of Ho Chi Minh City / The HCMC Export Processing and Industrial Zones Authority（HEPZA） **・Hanoi Trade Representative office branch in Tokyo** **・Japanese representative office in Danang City**

[1] Sources: JETRO home page, information from foreign investment environment reports of JBIC, and CDC Cambodia Investment Guidebook 2011, and other Web HPs.

Investment Related Law	- Law on Investment Promotion, 1977 year, (renewed in 1992) - Labor Law of Foreign Employees, 1972 year -（The law stated the labor restrictions of foreign employees. -Enforcement of labor law of Foreign Employees, 2000 year - Establishment of Investment Committee	- Law on Investment, 1994 year (renewed in 2003.) - Sub-Decree has approved on the Establishment of the Sub-Committee on Investment of the Provinces-Municipalities of the Kingdom of Cambodia - Sub-Decree No. 111 has established on the Implementation of the Law on the Amendment to the Law on Investment, 2005 year	-Law on Investment and Enterprise has established, 2006 year -Vietnam Foreign investment Law has issued in 1996 year -Issued the Domestic Investment Development Law, 1998 year Some renewal stated in the foreign investment law and some supplementary provisions are added. 2000 year
Foreign Investment percentage and other information	-Up to 51% of the investment is allowed in the listed area on 43th section of 3rd Provision, the Labor Law (The Article 99 of the Foreign Employees Law). The other area (see below) that is not restricted in the law is 100% allowed to be invested. -Industry of Agriculture, Forestry and Fisheries -The industry related to the national safety and tradition[2] ・The industry related to the inadequate area of the foreigners competition.(21rd Provision of the Law)[3]	- The Investment Restricted Area is legislated in Sub-Decree No. 111 and other areas are allowed 100% of foreign investment. Investment Restricted area: -Psychotropic medicine、an anesthetic and its trade and production, - A poisonous substance, an insecticide and other chemical products that are restricted in WHO - A power plant on the industrial waist -The reclamation restricted area that is stated in Forestry Law - The area that is restricted in other legislations	The rest area other than stated in below is 100% allowed to be invested（Decree No.108/ND-CP, Appendix C, Sept. 22, 2006） 1)The investment restricted area: ・National security, safety related ・The national heritage of history and culture ・National health and environment ・Disposal of Toxic waist 2) Conditional investment allowed area - National Security, safety - Bank and Financing - National Health - Culture, Information, Newspaper, Publication - A recreation - Real State - Natural Resource, Environment - Education, Training - The area listed in the special legislatures

[2] It will be allowed if permitted by the Minister of Commerce with the approval by the Cabinet.
[3] It will be allowed if permitted by the Director with the approval by the foreign enterprise committee.

Land owning	Not able to own the land[4]	Not able to own the land	Not able to own the land（Pay land lease fee for the country）
Regulation	1)The minimum amount of foreign investment is 2,000,000Baht（The minimum investment is 3,000,000Baht for the special permission needed industries that are stated in Foreign Employees Law.）（For Thailand Companies, there is no restriction in the amount of the investment） 2) The below conditions included in the incentive recipient, (Stated the Board of Foreign Investment): - The investment should be made 1,000,000baht at the minimum excluding land and work operating expense. - The project that is under 5 hundred million baht (excluding land and work operating expense) investment and has more than 20% value added sales income.	The foreign investment legislature is allowed in other areas that are not mentioned in the restriction area listed in the Sub-Decree No.111.（The conditions except the non-qualifying rules for well treatment measures）	There are special foreign investment regulations in every field of industries (there is no restriction in overall foreign investment.) The entrepreneur activity regulation: The minimum foreign investment of banking and financial companies would be correlated to one country's excessive demand. There is no special restriction on this field.
Localization Policy	1) The variation would be allocated on import tax of raw materials, parts, and end products 2)To keep 20% of value added tax in to promote the investment 3)To propose proper import tax and put restrictions to maintain safeguard policy of BOI 4) Promote the demand and request of local production authorized by BOI. (non- obligatory) 5) The privilege for local production development 6) Where approved, the promotion policy would		

[4] 4000 baht foreign investment should be made per 1600m2 in order to lease the land, stated in the renewed law 1999 year.

	be held on the local product supply.		
Business encouragement	7th section of 129 Article. (According to 2009 year) 1)Agriculture and agricultural products 2) Mining industry, Ceramics、Basic materials 3)Light industries 4) Metal Products, Machine、Transportation machinery 5)Electronic products and its production 6)Chemicals, Paper、Plastic 7)Service, Public institution	The Well investment promotional measurement is targeting the bigger scale investment projects, not solely an investor.（The projects should receive a license in order to present ‘’Qualified Investment Project” (QIP). - QIP is exempted from the corporate taxation, receives special tax redemption. -The special corporate taxation regulation (is called ‘’Tax Holiday’’) provided for the period such as 3 years Trigger period, 3 years of Priority Period（The maximum period of this tax redemption is for 9 years） - The Priority period consists from the below sections 1) Light Industry project 2) Heavy Industry project 3) Tourist Industry project 4)Agricultural project 5)Basic Infrastructure project - Tax redemption policy would be provided for the production of equipment or construction tools. 1)Domestically oriented QIPs: equipment production , construction materials and inputs for export products 2) Export oriented QIPs (Relates to Manufacturing Bonded Warehouse, if chosen other location the regulation does not affect) : production equipment, construction material, raw material、intermediate goods, by-products	Article 8: The Special Well Treated Investment Field is stated in 26th section. The Well Treated Investment Field is stated in 53 Section（The Standard Law of Investment, 2006 year）（Decree No.108/ND-CP, Appendix A, Dated Sept.22, 2006）The below are the details of the law on above law: 1) material, New energy development, High Tech, Biomass energy, IT 2)Industry of fisheries, aquatic vegetation, manufacturing, salt 3)Technology, Science R&D 4)Labor intensive industry 5)Infrastructure, Large Scale projects 6)Education, Training,, Medical field 7)Traditional Industrial Arts 8) Other development industries
Incentive measurement	1. Releasing import tax of equipment 2.Leseasing corporate tax（If investment fund is 100% , 8 years of period tax redemption） 2-1.There is not restriction in the industry of the national interest if the industry 3. The below three zones are included in Well Treated Measurement area. (Redemption of the import tax for importing raw material and processed material) Recently, Energy saving, An alternative energy source, Environment, New Products, Technology, Production Innovation, Corporate Tax,		**Special tax incentive**（Special investment promotional district：10% of tax exemption for 15 years、20% of tax exemption for 10 years for the Investment promotional district（Official Note; Circular 130/2008/TT-BTC） Depending on the condition, the overall tax is released for 4 years, tax is released by 50 percent for 5 years. （Official Note: Circular 130/2008/TT-BTC The Scientific Development Area, Environmental Protection Area will be available. The special tax reduction on the corporate tax,

	transportation, electricity and etc. are exempted from the taxation.(Investment Promotion for Sustainable Development, BOI Announcement as of April 23, 2010） 「2010-Royal Decree No. 508」has issued From the Regional Operating Headquarter (ROH) Investment Promotion Act has issued. Industrial Estate Authority Act has issued The Special investment measurements of district zones of BOI - Zone 1. Prefecture -6, Central city of Bangkok - Zone 2. Outskirt of Central city- Prefecture 11, and Phuket - Zone 3. Low income, Low Infrastructure developed area- Prefecture 59	3) Supporting Industry QIPs : Equipment production, construction material, raw materials, intermediate goods, production supplementary materials. If most of industries of QIP do not import 100 % of the production, the related import tax would be imposed. - The projects of above field and followed the regulation of above law would receive100% tax release. -The right and privilege of QIP is able to be transferred to other party if it is approved by CDC (the Council for the Development of Cambodia) or PMIS.	VAT, land lease registration tax and land lease taxes for the area. The below condition is stated in the Investment Promotional district area : (Decree, Sep 22, 2006, No.108/ND-CP, Appendix B) - The district that is economically and socially in poverty condition (stated as the Investment Promotional district) - The district that is economically and socially in special poverty condition. (stated as The Special Investment Promotional district) - Industrial complex, High Technological development district, Export production district, financial development district For internal and external companies, all import taxes are exempted for the fixed assets, special goods that are unavailable for the local production. The enterprises, invest in the Investment Promotional District, are provided tax exemption in the land lease fee. Moreover, it has exempted 10% of VAT for the Processing trade of Exporting goods.

Corporate taxation	Standard is 30%（Occurrence -2 times, during Discloser of Tax year） - New Companies corporate tax is 25%、From the second year 20% of tax, （3 years of duration. The taxation varies from the characteristics of the companies.	Corporate income Tax： - 20%（In the Investment Promotional District the taxation is from 0%-9% and it depends from the district condition. - 30%（For the natural minerals processing） - Dividend related additional income tax 20% ：0% for QIP 12.08% ：9% for QIP 0% ：20% for legal person	Standard Tax is 25% （Gasoline, Natural gas projects 32-50% of Tax）The tax will depend on the natural source of industry of products.
Other taxation	VAT 7% Personal income tax:（0～37%of Progressive taxation system） Special industry tax（0.11～3.4%）	Vat：standard - 5% Patent Tax: aprox.300USD	VAT: Standard-10%, Special development area imposes tax variation of 0%, 5%.（Raw materials, service field VAT will be exempted depending on the condition. Official Note: Circular 129/2008/TT-BTC） -Tax for the International Contractors -Environmental Protection Tax are also included in the tax redemption filed.
Customs Duty	General Tax CEPT：0% EPA/FTA	Import Tax：Varies in 4sections that it is separated （0,7,15,35%） Export Tax：General-10%	Import Tax： ・Standard Customs Tax Rate is above than 50% in comparison with the Well Treated Import taxation chart. ・The reciprocal taxation tariff is imposed to the all commercial products importing to Vietnam and stated in the Well Treated Customs Tax and General taxation ratio. The special customs fee is imposed for Well treated taxation area and also for special import products, within the area of international trade

			contracts. Moreover, for some products such as electrical products, auto vehicles and etc. are imposed the customs taxes that are regulated from the local taxation law. Customs Export Tax: Coconuts, Metal and Wooden materials are imposed 3～30% of tax
Special Economic Zones	1. New Industrial Estate Authority Act of Thailand (NIEAS) There is Investment Promotion System (IPS) based on the Industrial Estate Authority Act of Thailand. The Industrial Estate Authority Thailand (IEAT) is the organization that executes the activities for the IPS. IEAT has re-established in 2007 in order to promote competition between Industrial field companies and issued New Industrial Estate Authority Act of Thailand in January 1, 2008. In the IEAT, as similar as stated in BOI, investment projects, enterprises are well promoted in the areas of industrial development, technological and production development. Although the law restricts the companies that solely conduct harmless activity for the environment. IEAT separated the industrial complex into two zones: Owned, ruled and managed by private enterprise.	1. Cambodian Special Economic Zone Board: CSEZB In order to promote Cambodian Special Economic Zone, it has built the Cambodian Special Economic Zone Board (CSEZB) within CDC （Council for the Development of Cambodia） organization. Under every Special Economic Zone, CSEZB has built and it has duty of managing all the investment issues such as registration of investment project and providing the permission. By May 2012, there are 21 SEZ (Special economic zone) had received legal permission in Cambodia. The general condition for the SEZ is in the following: （Section 2 and 3.1.1 of the Act） -SEZ is connected with all industrial parks in order to develop the economic sector of the zone such as General Industrial Zones and (Export	The Well Treated Measurement regulation would be imposed for Investment Promotional District and it has stated in the Decree No.108/ND-CP, Appendix B, Sept. 22, 2006） There are 150 Industrial Complex in Vietnam. Each Complex has a Management committee that manages the Industrial Complex through its “One stop Service” policy. In north, there are 50 Complexes, in the central area, Danang -5 Complexes, and one is in High Tech industry. In southern region, there are 90 Complexes including High Tech Industry. The all industrial complexes owns the land that they are functioning.

	It is called Industrial Park or Industrial Zone. Generally, all the condition is the same as stated in IEAT, but it would be permitted by BOI. 2. As stated in New Industrial Estate Authority Act of Thailand: （1） GIZ：General Industrial Zone -Available to own a land in the industrial zone -Able to employ foreign specialist in the zone. -All the foreign specialist family, visa, etc. would be legally permitted. ・Foreign employee salary is able to be transferred Warehouse, Training center, Clinique service is able to be used and land is able to be owned for the above facilities. （2） IEAT Free Zone: -Special tax redemption provides for the import and export taxes, VAT, Commodity tax for the equipment, accommodation, raw material that are used for producing the product. -Land is able to be owned -Available to employ foreign specialist -All the foreign specialist family, visa, etc. would be available -Foreign employee salary is able to be transferred	Processing Zone (EPZ). Every SEZ is able to have Production Area Free Trade Area, Service Area, Residential Area and Tourist Area. -Above 50 hectare of well positioned and bordered land would able to be owned. - Able to have EPZ, Free Trade Area, and should be fenced outside border of zone. -The needed infrastructure such as Management, Administration office and etc. would be available. ・The infrastructure include the Drainage complex, Solid Waste Disposal storage, Management office, Environmental protection complex and etc. The zone itself aims to promote well development of SEZs that are owned by the government, public enterprises, or Joint venture companies. （SEZ Act, Article 3.1.2） 2. In the Investment legislature which is renewed in 2003, stated about a QIP in the SEZ. The renewed law has same policy as stated in the promotional measurement acts that are addressed to the QIPs (same as non SEZ ones) -Tax releasing policy is the same as other QIP. - VAT is 0% within SEZ investors, and the import tax is exempted for the local usage production materials. The import material's tax would be	

		released for the exporting the end goods. If the end product would be sold in local market, the related tax would be imposed. -The foreign investor/ SEZ entrepreneur is able to transfer the profit earned from the production held in SEZ. - The foreign investor / SEZ entrepreneur should have all the rights of commercial and other rights of the trade such as pricing the goods and selling in the local and international market. - 10% of foreigner is allowed in the management and technical professional position.（Act of SEZ Article-11 ） - Not impose VAT and commercial Tax for Special import products (the material and goods that will be used in local production for exporting good and other legally tax releasing goods.) - The customs clearance is simplified for the SEZ that is located 20km to the state boarder (The Ministry of Finance, Official note: 734 Sept. 11, 2008.) The SEZ has the following duty: - The SEZ entrepreneur would need to corporate with the Ministry of Labor of Cambodia and aim to educate, train the local people. It would to aim to promote technological development and provide new ability and professional development to the local staff.（Act of SEZ, Article 12）	

Note：Some of the above enterprises, areas and etc. are abbreviated.

Annex 2

Share of Intra/Extra ASEAN Trade to the Total Value of Trade (2010)

Annex 2 The Share of Intra/Extra ASEAN Trade to the Total Value of Trade (2010)

HS code	Description	Share of the Commodities in the Intra/Extra Trade (%)				Share to the Total Export/Import (%)			
		Intra-ASEAN		Extra-ASEAN		Intra-ASEAN		Extra-ASEAN	
		Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
01	Live animals	0.12	0.15	0.14	0.00	90.66	40.36	9.34	59.64
02	Meat and edible meat offal	0.04	0.03	0.04	0.01	52.98	3.94	47.02	96.06
03	Fish, crustaceans & aquatic invertebrates	0.37	0.40	0.39	1.05	10.61	23.62	89.39	76.38
04	Dairy produce; birds eggs; honey and other edible animal products	0.27	0.28	0.28	0.06	59.83	17.27	40.17	82.73
05	Other products of animal origin	0.00	0.01	0.01	0.01	15.94	8.79	84.06	91.21
06	Live trees, plants; bulbs, roots; cut flowers & ornamental foliage	0.02	0.03	0.02	0.03	17.03	38.55	82.97	61.45
07	Edible vegetables & certain roots & Tubers	0.18	0.20	0.19	0.24	19.83	18.60	80.17	81.40
08	Edible fruit & nuts; citrus fruit or melon peel	0.16	0.22	0.19	0.28	16.55	23.72	83.45	76.28
09	Coffee, tea, mate & spices	0.19	0.17	0.18	0.36	14.81	48.54	85.19	51.46
10	Cereals	1.03	1.35	1.19	0.62	35.63	32.47	64.37	67.53
11	Milling products; malt; starch; inulin; wheat gluten	0.16	0.24	0.20	0.13	29.03	28.98	70.97	71.02
12	Oil seeds & oleaginous fruits; miscellaneous grains, seeds & fruit; industrial or medicinal plants; straw & fodder	0.07	0.09	0.08	0.05	30.45	9.00	69.55	91.00
13	Lac; gums, resins & other vegetable sap & extracts	0.01	0.01	0.01	0.02	15.15	12.62	84.85	87.38
14	Vegetable plaiting materials & other vegetable products	0.02	0.01	0.01	0.01	31.38	50.06	68.62	49.94
15	Animal or vegetable fats and oils and their clevage products; prepared edible fats; animal or vegetable waxes	1.78	1.47	1.63	3.70	13.84	85.85	86.16	14.15
16	Edible preparations of meat, fish, crustaceans, mollusks or other aquatic invertebrates	0.11	0.13	0.12	0.94	3.68	7.81	96.32	92.19
17	Sugars and sugar confectionary	0.66	0.97	0.81	0.18	54.73	46.65	45.27	53.35
18	Cocoa and cocoa preparations	0.43	0.46	0.45	0.31	31.62	60.12	68.38	39.88
19	Preparations of cereals, flour, starch or milk; bakers wares	0.55	0.51	0.53	0.22	45.57	55.81	54.43	44.19
20	Preparations of vegetables, fruit, nuts or other plant parts	0.10	0.09	0.10	0.29	10.71	12.44	89.29	87.56
21	Miscellaneous edible preparations	0.57	0.57	0.57	0.19	50.45	42.83	49.55	57.17
22	Beverages, spirits and vinegar	0.73	0.34	0.54	0.12	66.28	28.01	33.72	71.99
23	Food industry residues & waste; prepared animal	0.21	0.30	0.25	0.19	27.36	13.15	72.64	86.85
24	Tobacco and manufactured tobacco substitutes	0.50	0.33	0.42	0.08	68.28	46.39	31.72	53.61
25	Salt; sulfur; earth & stone; lime & cement plaster	0.37	0.63	0.49	0.10	56.26	48.36	43.74	51.64
26	Ores, slag and ash	0.23	0.14	0.19	1.16	6.27	12.07	93.73	87.93
27	Mineral fuels, mineral oils & products of their distillation; bitumin substances; mineral wax	21.36	21.79	21.57	11.54	38.20	44.36	61.80	55.64
28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	0.29	0.28	0.28	0.19	33.41	12.86	66.59	87.14
29	Organic chemicals	2.25	2.19	2.22	2.14	25.95	29.71	74.05	70.29
30	Pharmaceutical products	0.29	0.27	0.28	0.65	13.02	11.06	86.98	88.94
31	Fertilizers	0.32	0.27	0.29	0.04	72.10	13.37	27.90	86.63
32	Tanning or dyeing extracts; tannins & derivatives; dyes, pigments & coloring matter; paint & varnish; putty & other mastics; inks	0.42	0.33	0.38	0.15	48.09	20.45	51.91	79.55
33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	0.81	0.71	0.76	0.39	41.33	33.96	58.67	66.04
34	Soap; waxes; polish; candles; modeling pastes; dental preparations with basis of plaster	0.37	0.36	0.37	0.23	35.49	37.73	64.51	62.27
35	Albuminoidal substances; modified starch; glues; enzymes	0.13	0.15	0.14	0.08	35.54	24.52	64.46	75.48
36	Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible	0.01	0.02	0.02	0.00	49.89	28.80	50.11	71.20
37	Photographic or cinematographic goods	0.08	0.04	0.07	0.02	56.01	11.89	43.99	88.11
38	Miscellaneous chemical products	0.92	0.75	0.84	0.81	27.47	21.55	72.53	78.45
39	Plastics and articles thereof	3.60	3.66	3.63	2.41	33.28	32.33	66.72	67.67
40	Rubber and articles thereof	1.76	2.22	1.98	3.91	13.06	31.80	86.94	68.20
41	Raw hides and skins (other than furskins) and	0.12	0.14	0.13	0.07	36.64	21.79	63.36	78.21
42	Leather articles; saddlery and harness; travel goods, handbags & similar; articles of animal gut [not silkworm gut]	0.12	0.06	0.10	0.19	17.89	11.28	82.11	88.72
43	Furskins and artificial fur; manufactures thereof	0.00	0.00	0.00	0.00	27.92	4.08	72.08	95.92
44	Wood and articles of wood; wood charcoal	0.45	0.61	0.53	1.28	10.54	43.09	89.46	56.91
45	Cork and articles of cork	0.00	0.00	0.00	0.00	48.46	30.01	51.54	69.99
46	Manufactures of straw, esparto or other plaiting materials; basketware & wickerwork	0.00	0.00	0.00	0.03	4.35	25.78	95.65	74.22
47	Wood pulp and waste of paper or paperboard	0.09	0.11	0.10	0.20	13.19	11.54	86.81	88.46
48	Paper and paperboard, articles of paper pulp	1.11	1.17	1.14	0.62	37.39	38.87	62.61	61.13
49	Printed books, newspapers, manuscripts, etc.	0.29	0.15	0.22	0.56	14.65	15.62	85.35	84.38
50	Silk, including yarns and woven fabric thereof	0.01	0.00	0.00	0.01	28.31	5.61	71.69	94.39
51	Wool & animal hair, including yarn & woven	0.00	0.00	0.00	0.01	5.11	4.76	94.89	95.24
52	Cotton, including yarn and woven fabric thereof	0.18	0.21	0.20	0.23	21.40	10.33	78.60	89.67
53	Other vegetable textile fibers; paper yarn and woven fabrics of paper yarn	0.00	0.00	0.00	0.01	2.63	2.56	97.37	97.44

HS code	Description	Share of the Commodities in the Intra/Extra Trade (%)				Share to the Total Export/Import (%)			
		Intra-ASEAN		Extra-ASEAN		Intra-ASEAN		Extra-ASEAN	
		Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
54	Manmade filaments, including yarns & woven	0.25	0.21	0.23	0.29	22.00	19.50	78.00	80.50
55	Manmade staple fibres, including yarns & woven fabrics	0.27	0.32	0.30	0.43	17.52	18.34	82.48	81.66
56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles	0.10	0.10	0.10	0.07	34.63	23.53	65.37	76.47
57	Carpets and other textile floor coverings	0.02	0.02	0.02	0.03	19.74	19.89	80.26	80.11
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	0.04	0.05	0.05	0.03	30.81	11.61	69.19	88.39
59	Impregnated, coated, covered or laminated textile fabrics; textile articles for industrial use	0.07	0.06	0.06	0.07	24.86	10.69	75.14	89.31
60	Knitted or crocheted fabrics	0.20	0.19	0.19	0.03	71.90	12.45	28.10	87.55
61	Apparel articles and accessories, knitted or	0.14	0.22	0.18	1.77	2.60	20.47	97.40	79.53
62	Apparel articles and accessories, not knitted or crocheted	0.15	0.12	0.14	1.41	3.52	13.58	96.48	86.42
63	Other textile articles; needlecraft sets; worn clothing and worn textile articles; rags	0.10	0.07	0.08	0.14	18.41	19.61	81.59	80.39
64	Footwear, gaiters and the like and parts thereof	0.17	0.15	0.16	0.97	5.39	19.42	94.61	80.58
65	Headgear and parts thereof	0.01	0.00	0.01	0.03	5.96	10.23	94.04	89.77
66	Umbrellas, walking-sticks, seat-sticks, riding-crops, whips, and parts thereof	0.00	0.00	0.00	0.00	19.15	8.28	80.85	91.72
67	Prepared feathers, down and articles thereof; artificial flowers; articles of human hair	0.00	0.00	0.00	0.04	1.33	4.80	98.67	95.20
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	0.17	0.19	0.18	0.07	45.54	33.36	54.46	66.64
69	Ceramic products	0.13	0.13	0.13	0.15	23.00	20.25	77.00	79.75
70	Glass and glassware	0.36	0.43	0.40	0.26	32.00	36.14	68.00	63.86
71	Natural or cultured pearls, precious or semiprecious stones, precious metals and metals clad therewith and articles thereof; imitation	1.52	1.52	1.52	2.39	17.55	17.05	82.45	82.95
72	Iron and steel	1.44	1.43	1.44	0.42	53.45	13.88	46.55	86.12
73	Articles of iron or steel	1.68	1.73	1.70	0.78	41.61	26.29	58.39	73.71
74	Copper and articles thereof	1.51	1.16	1.34	0.56	47.22	34.31	52.78	65.69
75	Nickel and articles thereof	0.02	0.01	0.02	0.25	3.12	5.12	96.88	94.88
76	Aluminum and articles thereof	0.55	0.53	0.54	0.31	36.92	18.09	63.08	81.91
78	Lead and articles thereof	0.05	0.04	0.04	0.01	61.85	13.37	38.15	86.63
79	Zinc and articles thereof	0.04	0.04	0.04	0.03	34.75	11.63	65.25	88.37
80	Tin and articles thereof	0.59	0.44	0.52	0.24	44.91	71.94	55.09	28.06
81	Other base metals; cermets; articles thereof	0.01	0.02	0.01	0.03	11.23	10.87	88.77	89.13
82	Tools, implements, cutlery, spoons & forks of base metal & parts thereof	0.24	0.15	0.20	0.16	33.68	13.34	66.32	86.66
83	Miscellaneous articles of base metal	0.27	0.26	0.26	0.13	40.85	28.74	59.15	71.26
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	13.41	12.00	12.72	11.33	28.32	22.45	71.68	77.55
85	Electric machinery, equipment and parts; sound equipment; television equipment	22.20	21.92	22.06	18.45	28.66	28.46	71.34	71.54
86	Railway or tramway. Locomotives, rolling stock, track fixtures and parts thereof; mechanical & electro-mechanical traffic signal equipment	0.03	0.04	0.03	0.01	44.71	17.84	55.29	82.16
87	Vehicles, (not railway, tramway, rolling stock); parts and accessories	3.67	4.75	4.19	2.38	33.96	32.60	66.04	67.40
88	Aircraft, spacecraft, and parts thereof	0.52	0.33	0.43	0.56	23.71	6.54	76.29	93.46
89	Ships, boats and floating structures	0.80	0.92	0.86	0.30	47.22	42.63	52.78	57.37
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments/apparatus; parts & accessories	1.84	1.41	1.63	1.89	24.59	17.47	75.41	82.53
91	Clocks and watches and parts thereof	0.35	0.27	0.31	0.09	55.87	39.85	44.13	60.15
92	Musical instruments; parts and accessories thereof	0.03	0.03	0.03	0.06	13.01	19.78	86.99	80.22
93	Arms and ammunition; parts and accessories	0.01	0.01	0.01	0.00	36.63	7.71	63.37	92.29
94	Furniture; bedding, mattresses, cushions etc; other lamps & light fitting, illuminated signs and nameplates, prefabricated buildings	0.32	0.33	0.33	1.05	9.31	24.33	90.69	75.67
95	Toys, games & sports equipment; parts &	0.16	0.09	0.12	0.23	18.73	11.25	81.27	88.75
96	Miscellaneous manufactured articles	0.10	0.10	0.10	0.11	23.95	17.80	76.05	82.20
97	Works of art, collectors' pieces and antiques	0.01	0.01	0.01	0.01	26.70	14.43	73.30	85.57
98-99	Others	2.54	3.56	3.04	16.33	4.93	7.70	95.07	92.30
	Unallocated2/	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		100.00	100.00	100.00	100.00	25.02	25.83	74.98	74.17

Top 10 commodities in each category (intra/extra import/export)
Over 85%

Annex 3

Economic Size of ASEAN Plus 1

Annex 3 Economic Size of ASEAN Plus 1

Country Name	GDP (current US$)	GDP per capita (current US$)	GDP growth (annual %)	Exports of goods and services (BoP, current US$)	Imports of goods and services (BoP, current US$)	Population (Total)	Population Ages 15-64 (% of total)	Population Age16-64
Brunei Darussalam	-	-	-	-	-	399,000	70.24	280,259
Cambodia	11,242,266,334	795	5.96	6,887,146,977	7,878,770,444	14,139,000	64.30	9,090,749
Indonesia	706,558,240,892	2,946	6.10	174,840,271,967	153,536,870,550	239,870,000	67.41	161,698,532
Lao PDR	7,296,361,374	1,177	8.45	2,257,398,891	2,323,546,717	6,201,000	61.62	3,821,014
Malaysia	237,796,914,597	8,373	7.19	231,714,166,030	189,498,832,712	28,401,000	64.89	18,430,500
Myanmar			10.42	8,197,939,424	5,172,575,227	47,963,000	69.23	33,206,312
Philippines	199,589,447,424	2,140	7.63	65,106,000,000	73,133,000,000	93,261,000	60.92	56,816,582
Singapore	208,765,019,308	41,120	14.47	470,792,640,356	408,189,832,721	5,077,000	73.59	3,736,160
Thailand	318,522,264,429	4,608	7.81	227,908,498,139	206,780,101,385	69,122,000	70.58	48,784,804
Vietnam	106,426,845,157	1,224	6.78	79,652,000,000	87,260,000,000	86,928,000	70.40	61,194,013
ASEAN	1,796,197,359,514	7,798	8.31	1,267,356,061,785	1,133,773,529,756	591,361,000	67.32	398,091,975
India	1,727,111,096,363	1,410	8.81	349,264,115,546	440,277,101,472	1,224,615,000	64.49	789,750,052
China	5,926,612,009,750	4,428	10.40	1,752,620,763,162	1,520,558,682,932	1,338,300,000	72.36	968,335,960
Japan	5,458,836,663,871	42,831	4.00	871,533,004,040	796,674,005,091	127,451,000	63.95	81,511,251

Source: World Development Indicator 2010

Annex 4

Overview of ASEAN Free Trade Agreement/Economic Partnership Agreement and its Implementation

ANNEX-4 Overview of ASEAN Free Trade Agreement/Economic Partnership Agreement and its Implementation

(1) ASEAN Economic Community (AEC) and Free Trade Agreement

Setting the goal of forming ASEAN Economic Community (EAC) at the ASEAN Summit in Bali in 2003, ASEAN member countries further developed the ASEAN Economic Community Blueprint to realize EAC by 2015. The blueprint envisages wider and deeper integration of the region through four major dimensions, namely: A. Single Market and Production Base; B. Competitive Economic Region; C. Equitable Economic Development; and D. Integration into the Global Economy. The measures for the Single Market and Production Base includes the free flow of goods, services and investment, trade facilitation through custom integration, the ASEAN Single Window, harmonization of standards and conformity assessment, improving the transparency of technical regulations, and free flow of skilled labor. Priority sectors are also selected to accelerate the integration[1]. To achieve B. Competitive Economic Region, such areas as competition policy, intellectual property, and infrastructure are listed for up-grading as a region.

The Agreement on the Common Effective Preferential Tariff Scheme for the ASEAN Free Trade Area (ASEAN-CEPT) has been signed and taken into effect since 1992. The framework under ASEAN-CEPT has already set the schedule for tariff reduction where ASEAN6 are to eliminate the tariff by 2010 and for the newly participating member countries (CLMV) by 2015. In 2004, the Priority Integration Sectors were decided and agree to eliminate the tariff by 2007 for ASEAN6 and by 2012 for newly participating. Improving ASEAN-CEPT, more comprehensive ASEAN Trade in Goods Agreement (ATIGA) was signed in December 2008 including trade facilitation, integration, harmonization of standards, conformity assessment, sanitary and phytosanitary measures, and trade remedy measures.[2]

(2) ASEAN-China Free Trade Agreement (ACFTA) and its implementation

ACFTA set Early Harvest Program (EHP) to quickly obtain the impact of FTA. Within the commodities included in EHP, there are some which indicates large increase in traded value. However, in general, the major part of the traded goods between ASEAN and China are intermediary goods which have already traded with concessional tariff rates through EPZ and other incentive schemes of both sides. In addition, the commodities with high trade volume between ASEAN and China such as textile, footwear, transportation machinery, machinery,

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[1] Electronics, e-ASEAN, healthcare, wood-based products, automotives, rubber-based products, textiles and apparels, agro-based products, fisheries, air travel and tourism. The tariff reduction are done for 9 sectors except air travels and tourism (ASEAN Secretariat, Media Release "ASEAN Accelerates Integration of Priority Sectors", 29 November 2004 (www.aseansec.org/16620.htm)

[2] "ASEAN Trade in Goods Agreement"

electrical machinery and electronics are categorized as sensitive lines (SH) or highly sensitive lines (HSL). The tariff reduction for these two categories is scheduled to start later than the normal track commodities (see Table3-3). Therefore, the major impact may be expected when ASEAN6 and China complete the tariff reduction/elimination for the SL commodities in 2012[3]. For CLMV, tariff reduction/elimination under AFTA and ACFTA will be expected simultaneously in 2015, which may entail large impact with some synergy.

(3) ASEAN-India Free Trade Agreement (AIFTA) and its implementation

The negotiation for AIFTA started in the beginning of 2000s. Despite the commencement of bilateral Early Harvest (EH) program between India and Thailand in 2004, the negotiation for the further tariff liberalization experienced difficulties mainly due to the skepticism in Indian side. The multilateral ASEAN-India FTA was finally concluded and took into effect in 2010. Out of Normal Track commodities (80% of the total number of commodity lines), 71% of the commodity lines are subjected to eliminate tariffs for ASEAN5 (Philippines with the different schedule) and India by 2013, and 9% by 2018. CLMV countries will eliminate the tariff of 71% of the commodity lines and 9% by 2018 and 2021, respectively. The agreement sets the Sensitive Track and Highly Sensitive Track with different schedule as well as the General Exceptions which are ruled out for the obligation of the tariff reduction[4].

India charges 10% as the Basic Custom Duty of the imported commodities, whereas the preferential tariff rate for ASEAN5 under the FTA is 5%. Taking the advantage of the preferential tariff scheme, some firms operating in ASEAN member countries have been started to export parts and assemble as a final products in India[5]. Despite the arrangement with rather large volume of negative list of commodity lines for tariff elimination from the Indian side, export quantities of the commodities under the normal track have increased after the tariff reduction. It is observed that the enterprises operating in ASEAN has started to explore Indian market through matching the local production and logistics functions in Indian and production functions in ASEAN.

(4) Japan-ASEAN Comprehensive Economic Partnership (AJCEP)

AJCEP has been signed and taken into effect in 2008. AJCEP introduced the idea of Regional Value of Contents in the calculation of the Rule of Origin. Therefore, the value of the contents added both in Japan and ASEAN member countries can be accumulated for applying for the preferential tariff. This system aims at benefiting the manufacturing industries both in ASEAN

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[3] Reference are made with the following literature: Fukuchi (2010), BTMU ASEAN TOPICS (No.2010/7), Dec.16 2010, Bank of Tokyo-Mitsubishi UFJ, and Sugawara(2010), ACFTA 1 year after taking into effect- The impact and utilization by Japanese firms, *Mizuho Report*, Mizuho Research Institute, August 2006

[4] "Agreement on Trade in Goods Under the Framework Agreement on Comprehensive Economic Cooperation between the Republic of India and the Association of Southeast Asian Nations"

[5] JETRO (2011), "Report of the Research on India/ASEAN Logistics Network"

and Japan which source the parts and raw materials from multiple countries and eventually assemble them in one country. According to the tariff elimination schedule, Japan eliminates the tariffs of 90% of commodity lines upon the Agreement going into effect. ASEAN6 also eliminate 90% of tariff lines either upon the time of the Agreement going into effect or within 10 years, Vietnam within 15 year, and CLM within 18 years.

Some impact the agreement has been already reported. Together with bilateral EPA, AJCEP can even more effective. For example, the apparel industry in Vietnam can import materials from other countries in ASEAN and export to Japan with zero tariff utilizing bilateral EPA between Japan. Utilizing this scheme, Vietnam's export of apparel products to Japan in 2010 recorded the increase by 21% comparing with the previous year[6]. The preferential treatment under the EPAs together with the bilateral FTA brings down the tariff to the equivalent level to the preferential tariff under the Generalized System of Preferences (GSP).

[6] JETRO (2012), *World Trade Investment Report 2011* , JETRO, Tokyo