ERIA RESEARCH PROJECT REPORT 2008 No. 5

RESEARCH ON DEVELOPMENT STRATEGIES FOR CLMV COUNTRIES

Project Members

Dr. Akifumi Kuchiki
Professor, College of Bioresource Sciences, Nihon University, Japan
Dr. Shuji Uchikawa
Senior Researcher, Bangkok Research Centre, Japan External Trade Organization
Dr. Ikuo Kroiwa
Director, Institute of Developing Economies, Japan External Trade Organization
Mr. Masami Ishida
Director, Institute of Developing Economies, Japan External Trade Organization
Mr. Toshihiro Kudo
Director, Institute of Developing Economies, Japan External Trade Organization
Dr. Sau Sisovanna
Senior Research Fellow, Cambodian Institute for Cooperation and Peace
Mr. Syviengxay Oraboune
Division Chief, National Economic Research Institute, Lao PDR
Mr. Moe Kyaw
Managing Director, Myanmar Marketing Research and Development Ltd
Ms. Dinh Hien Minh
Deputy Director, Department for Trade Policy & International Integration Studies, Central Institute for Economic Management, Vietnam
Mr. Souknilanh Keola
Researcher, Institute of Developing Economies, Japan External Trade Organization

CONTENTS

EXECUTIVE SUMMARY

Akifumi Kuchiki

Shuji Uchikawa

1. AIM OF THE STUDY AND BACKGROUND

One of the main roles of the Economic Research Institute for ASEAN and East Asia (ERIA) is to study three topics for the regional integration of East Asia. The topics are deepening integration, narrowing gaps and having sustainable growth. The topic on narrowing gaps has focused on the development of Cambodia, Lao PDR, Myanmar, and Vietnam (CLMV). In 2006, per capita GDP figures in Cambodia, Laos, Myanmar and Vietnam were US$598, US$736, US$216, and US$837, respectively. While these levels are much lower than those in other countries, the GDP growth rates in the former (except Myanmar), however, are higher than those in the others (Table 1). The economies of CLMV are in fact growing dynamically and the share of secondary industries in the GDP in these countries has clearly risen in the last two decades (Table 2). This is significant since acceleration of industrialization is deemed to be critical in order to sustain a stable economic growth.

Table 1. Per Capita GDP and GDP Growth Rates in ASEAN

	Per Capita GDP in 2006(US$)	Annual GDP Growth between2000-2007 (%)
Brunei Darussalam	31,076	7.8
Cambodia	598	10.0
Indonesia	1,920	5.1
Lao PDR	736	6.6
Malaysia	6,880	5.7
Myanmar	216	NA
Philippines	1,653	5.2
Singapore	35,206	5.1
Thailand	3,740	5.0
Vietnam	837	7.7

Source: Website of ASEAN Secretariat

Table 2 Industry-wise Share in GDP (%)

	1990			2000		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
Cambodia	55.6	11.2	33.2	37.9	23.0	39.1
Lao PDR	61.2	14.5	24.3	52.6	22.9	24.6
Myanmar	57.3	10.5	32.2	57.2	9.7	33.1
Vietnam	38.7	22.7	38.6	24.5	36.7	38.7
	2006					
	Primary	Secondary	Tertiary			
Cambodia	31.7	27.6	40.8			
Lao PDR	42.6	31.8	25.6			
Myanmar	NA	NA	NA			
Vietnam	20.4	41.5	38.1			

Source: Asian Development Bank, *Key Indicators for Asia and the Pacific 2008*.

This study aims to examine the present business environment in the manufacturing sector in the CLMV countries and provide policy recommendations to promote industrialization in these countries.

In this study, the focus is on how the CLMV countries can participate in production networks organized by multinational enterprises (MNEs) and form competitive industrial clusters. The study conducted two surveys: interview survey on the basis of the flowchart approach and firm-level questionnaire survey. These surveys will reveal the bottlenecks being faced by the CLMV countries in attracting foreign direct investment, participating in production networks, and forming competitive industrial clusters. The surveys were conducted —with the results examined closely— by the respective CLMV research institutes.

The study also discusses the framework of industrial development strategy, with particular focus on economic corridors, Special Economic Zones (SEZs), border area development, and SME support.

2. STUDY METHODOLOGY

2.1 Flowchart Approach

The flow chart of the manufacturing industry cluster policy proceeds as follows. First, a local government establishes an industrial zone to attract foreign investors. Second, the

government builds capacity to improve the business and living conditions or environment for foreign investors. The elements of capacity building include: (1) constructing physical infrastructure, (2) building institutions, (3) developing human resources, and (4) creating living conditions amenable to foreign investors. Physical infrastructure refers to roads, ports, communications, and the like. Institution building, which is also crucial for the success in attracting foreign investors, includes the streamlining of investment procedures through one-stop services, deregulation, and the introduction of preferential tax systems. Human resources, which are usually an initial condition for foreign investors, include unskilled labour, skilled labour, managers, researchers, and professionals. An anchor firm will be ready to invest after this capacity building has been carried out. The anchor firm is defined as the high value of the backward linkage in the manufacturing industry.

The study carries out surveys of the industrial cluster policy to determine whether problems can be solved using the abovementioned flowchart approach. In the process, ten professionals were interviewed to help in looking for the appropriate policy prescriptions.

CLMV countries have SEZs and industrial zones. But the results of interview show that the efficiency of operation must be improved. The poor development status of infrastructure is the main hindrance to participation of these countries in the production and distribution networks in East Asia in spite of its abundant, reasonably well-educated and low-wage labour.

2.2 Business Environment Survey

When production fragmentation happens, a firm can save labour costs by transferring labour-intensive production activities (or production blocks) to low-wage countries. And while there are always incentives for a firm to do so, additional costs are also incurred in the process.

First, business setup costs are incurred when the firm sets up a new factory in the low-wage (less developed) country. For example, the firm needs to collect information on the regulatory framework and legal procedures, and obtain licenses and permits in the host country. These costs will be reduced substantially if the government of the host country provides efficient services such as one-stop location for services.

Second, additional business operation costs are incurred when the less developed country or host country of the investment has a less favourable business environment than the developed country. For example, infrastructure services such as utilities (electricity, water, and gas supply), transportation and communication services are less efficient and often more expensive in less developed countries. Institutions and governance are also generally weak in these countries, thereby giving the firm serious uncertainty in conducting business there. Typically lacking in the less developed countries is also a pool of qualified workforce, including engineers and middle management. However, if less developed countries can offer generous investment incentives, said additional business operation costs may be somewhat offset to a certain degree.

Third, additional service link costs or logistic costs are incurred when (as a result of production fragmentation) intermediate inputs are carried back and forth between the developed and less developed countries. Logistic costs include import duty and time cost for custom procedures. Moreover, communication costs are incurred in the coordination of the production activities internationally.

For production fragmentation to become economically feasible, these business setup costs, operation costs and logistics costs must be reduced substantially. The ERIA questionnaire survey, especially the questions in Sections 1, 2, and 3, is specifically aimed at finding how such costs may be reduced. The CLMV countries can increase their chances of participating in production networks by taking appropriate measures to reduce these costs.

The results of survey show common phenomena in CLMV countries. Unstable macro economies, government regulation and poor development of infrastructure particularly electricity are bottlenecks of doing business. At present, total additional costs including business set up, business operation and logistics exceeds net present value of the benefits by saving labour costs.

3. FINDINGS AND CONCLUSION

Liberalization in trade and investment was critical in the spread of production networks in Southeast Asia. Thus, it is expected that a similar development would happen in the CLMV countries in view of the economic transition taking place in their countries since the mid-1980s and their accession to the World Trade Organization (WTO) and participation in Free Trade Agreements (FTAs) since the late 1990s.

Considering the two constraints that the CLMV countries face, namely, shrinking policy space and limitations in state capabilities, generic policies that improve the overall business environment in the host countries should be given priority. Consequently, measures that promote the industrial clustering of specific industries may become more relevant as industries become more mature and upgraded, and if, at the same time, the institutional capability of the state sufficiently grows.

In Southeast Asia, production networks expanded in the electronics and automotive industries. In particular, the electronics industry developed dense production networks and became a leading force of economic integration. The CLMV countries are already involved in the apparel production network but it is becoming difficult for them to be engaged in other promising industrial activities. Their governments thus need to adopt clear and decisive policies to attract as many production blocks as possible and to diversify and upgrade their industrial base. Specifically, Lao PDR, Cambodia and Myanmar need to improve their business environment and attract more production blocks while Vietnam should give more attention to industrial cluster development since its lack of a strong industrial base affects the competitiveness of its industry.

Meanwhile, four “categories” of areas that may be considered as potential candidates in the setting up of SEZs have been identified. These include “metropolitan” and “port and harbour” areas, examples of which may be provided by the experiences of the forerunners among the ASEAN countries. ”Border area” and “junction”, on the other hand, are defined in accordance with the design of economic corridors of the Greater Mekong Subregion Economic Cooperation Program (GMS-ECP).

The metropolitan area is important as a market and a production location supplying labour force. As for the port and harbour areas, while depth is important, the

industrial development in the surrounding areas is equally important because the shipping frequency becomes small if the quantity of goods to convey is small. A port city is not attractive to investors if the shipping frequency is small and thus, the economic scale around the port and harbour should be large. For the border area, it can utilize better infrastructure such as electricity and access to harbours of relatively developed countries as well as enjoy the benefits of a cheaper labour force and preferential treatment of relatively less developed countries. And junctions of major roads, on the other hand, can be utilized as a dry port or inland container depot.

Several areas have been identified and enumerated in the CLMV countries in terms of how they may suit or fit such categories. Per the descriptions and characteristics indicated in the survey questionnaire and in the flowchart-based survey, potential locations have been identified and issues on what may cause bottlenecks for the CLMV countries to meet the requirements as well as recommendations on what possible country strategies the CLMV countries may adopt have been put forward.

Underdeveloped infrastructure, including transportation, communications and electricity, and poor business and investment environment hinder the CLMV countries from participating in such networks in East Asia. Service link costs and other business costs in the CLMV countries have not become low enough to realize total cost reduction.

In this regard, border area development can offer a solution. The CLMV economies can be connected to the regional and global economy through their borders with their neighbours, Thailand in particular, which already have logistic hubs such as deep-sea ports, airports and trunk roads as well as reasonable and reliable utility services. The border areas could be an effective candidate for industrial clusters in the CLMV countries.

Experience in the Vietnamese motor cycle industry shows that expansion of demand and competition would encourage entry of local small and medium enterprises (SMEs). Policies cannot control demand but they can facilitate imports of components and capital goods and exports of products. It is thus important to develop local SMEs to accumulate skills and know-how. There are two possibilities of new entry. One, domestic-oriented SMEs like replacement parts manufacturers can join supporting industries. And two, employees in existing factories of MNEs can set up their own

enterprises to supply components to them. In both cases, however, there are bottlenecks in terms of low technology, unskilled management and unskilled workers.

Most of the SMEs in the CLMV countries belong to domestic market-oriented industries and cottage industries. The most serious problem is that they are not registered and are operating illegally. To address this, tax concession might serve as incentive to registration.

Most of the cottage industries depend on middle persons to procure material and sell products. Moreover, middle persons are playing an important role in informal financing to help augment household budgets. The distribution of cottage industries should be modernized in order to have a dynamic development of markets. And since public organizations can and should substitute for middle persons only in the marketing promotion in the domestic and export markets, microfinance and cooperative societies should therefore also support the households of the crafts manufacturers.

4. POLICY RECOMMENDATIONS

Promotion of industrialization is necessary to maintain stable economic growth. To join production networks is an efficient way to push for industrialization in the CLMV countries. On the basis of their geographical proximity and significant wage gaps, the CLMV countries are well located to attract production blocks especially from neighbouring East Asian countries. In this connection, this study hereby recommends two basic strategies as shown below.

4.1 Improvement of Business Environment

It is more practical for the CLMV countries to focus on the improvement of the overall business environment such as preparation of the legal framework, macroeconomic stability, provision of general infrastructure, and free trade and open investment policies. Because human development is important for industrialization and engineering and vocational education is a base, institutions for training should therefore be established. These conditions are necessary for the development of a private sector, including foreign firms, in the CLMV countries.

To minimize business setup costs, operation costs, and service link costs, regional integration through the ASEAN Free Trade Area (AFTA), preparation of transportation infrastructure like economic corridors, and implementation of the GMS Cross Border Transport Agreement (CBTA) is important. Some big cities are located near borders. In Lao PDR, in particular, one of the bottlenecks for SME development is limited demand which has also been enhanced by fragmented domestic markets. Lao PDR should therefore make effort to shift from limited domestic demand to much larger foreign demands.

4.2 Promotion of Industrial Clustering

4.2.1 Short-term Strategy

It is difficult to improve business environment at the whole country level due to constraints in resources. Hence, this study recommends that operating SEZs are to be given priority in resource allocation. MNEs will hesitate in making additional investments due to the current world economic crisis. Official development assistance (ODA) from donors may also be reduced. Thus, SEZs can be a show window to attract FDIs. If efficient administration like the presence of one-stop shops for services and , the effective and efficient delivery of infrastructure services like electricity, water supply and telecommunications are secured in the SEZs, then more foreign firms may set up factories in the area in the future.

4.2.2 Long-term Strategy

Before the world economy recovers and MNEs restart to increase FDIs, the CLMV countries should prepare to accept such situation. . The SEZs can become the starting point of industrial clustering. The CLMV countries should set up new SEZs in the future plan and improve business environment at the country level.

4.3 Present Bottlenecks in the Formation of Industrial Clusters

At present, Phnom Penh, Sihanoukville, Vientiane, Savannakhet, Yangon, and Danang are facing the following bottlenecks.

Phnompenh and Sihahoukville

- Regarding SEZs, the need to provide more attractive non-fiscal incentives, that is, to improve transparency on fees and charges, introduce the unified employment contract, reduce costs for vocational training, exempt investors from advanced profit tax, and allow semi-annual payment of the said tax. There is also a need to give more favourable conditions to zone investors or to allow investors to freely import production inputs, apply a "single window" system for exports-imports control, apply the post-clearance audit method to all imports, exempt on-site inspection before packing, and restrict labour strikes inside the zones.
- Regarding water supply, the need to clean up water sources to ensure food safety and better livelihoods in accordance with the Cambodian Millennium Development Goals (CMDGs), and preserve the ecosystem of unpolluted water and clean environment.
- Regarding electricity supply system, the need to increase electricity supply capacity and reduce tariff to an appropriate level while strengthening institutional mechanism and management capacity.
- Regarding telecommunication infrastructure, the need to develop the post and telecommunication system and promote the development of information and communication technology to ensure a high quality that conforms with international standards, low price and reasonably nation-wide coverage.
- Regarding transport infrastructure, the need to give high priority to the maintenance of national roads, and the reconstruction of provincial and rural roads, expand ports and rehabilitate railways in order to connect to the rail network of the neighbouring countries within the Greater Mekong Sub-region (GMS) framework. There is likewise a need to privatize the operations of the Cambodian railway and encourage private sector participation in the rehabilitation of infrastructure and transportation services.
- Regarding governance reforms, the need to enhance effectiveness in the implementation of policy and delivery and management of public goods. There is also the need to improve the quality of education services, paying more attention to information, technical and vocational training, and higher education. Moreover, there should be more attention paid to technician and engineer training through the

establishment of technical and vocational training schools and higher education.

Vientiane

- Regarding industrial zones, the need to invest in infrastructure in the zone and institute laws and regulations on industrial zones.
- Regarding water, the need to expand the water supply system.
- Regarding electricity, the need to increase power supply and to control prices.
- Regarding transport, the need to develop transport channel options for exporters, dry ports for exporters, and road networks connecting to neighbouring countries.
- Regarding social infrastructure, the need to improve school infrastructures, quality of education, hospital infrastructures, and quality of health care services.

Savannakhet

- Regarding industrial zones, the need to invest in infrastructure in the zone and institute laws and regulations on industrial zones.
- Regarding water, the need to expand the water supply system.
- Regarding electricity, the need to increase power supply and to control prices.
- Regarding transport, the need to develop transport channel options for exports.
- Regarding social infrastructure, the need to improve school infrastructures, quality of education, hospital infrastructures, and quality of health care services.
- Regarding skilled labour, the need to improve quality of vocational training curriculum
- Regarding unskilled labour, the need to improve quality of vocational training curriculum and labour regulation

Yangon

- Regarding roads, the need to construct highway 1 to link Mue and Myawaddy, new express way to link Yangon and Mandalay, and road to link Yangon and Thilawa Port.
- Regarding electricity supply, the need to increase power supply, and install new transmission lines and transformers.
- Regarding ports, the need to upgrade Yangon Ports.

- Regarding institutional reforms, the need to relax trade procedures, and introduce quick processes and online licensing.
- Regarding unskilled labour, the need to employ labour from rural areas.

Danang

- Regarding the transportation system in general and the road transportation system in particular, the need to improve roads connecting Danang city with neighbouring provinces and to build highways from Danang to the Dung Quat finery factory;
- Regarding electricity, the need to increase power supply particularly during peak season, sich as summer.
- Regarding ports, the need to increase water depth, to build roads, railways and warehouses and set up logistics service companies in order to improve efficiency of Danang port.
- Regarding regulations, the need to improve transparency and inconsistency as well as their enforcement.
- Regarding human resources, the need to improve quality of education and training system. Local governments can support this endeavor providing more incentives to firms to train their workers on the job. They should also provide incentives to companies to attract more professionals and engineers to work in Danang. Curriculum reform should be pursued alongside overseas education and training in some cases

Chapter 1

INDUSTRIAL DEVELOPMENT STRATEGY IN CLMV

Ikuo Kuroiwa

ABSTRACT

This chapter seeks to provide a framework of industrial development strategy in Cambodia, Lao PDR, Myanmar, and Vietnam (CLMV). In considering appropriate industrial development strategy, two constraints on industrial policy—shrinking policy space and the constraints on state capability—seem to be critical. In particular, the World Trade Organization (WTO) and free trade agreements (FTAs) have narrowed policy space and made many of infant industry protection policies illegal. On the other hand, it is still uncertain if CLMV are endowed with sufficiently strong institutional capabilities to implement industry-specific policies. This chapter discusses an alternative industrial development strategy whereby participation in production networks and formation of competitive clusters play a critical role.

INTRODUCTION

In East Asia, a rapid decline in trade and transport costs due to liberalization in trade and investment as well as infrastructure improvement and technological progress has facilitated multinational enterprises (MNEs) to organize production networks internationally. Many MNEs have shifted labor-intensive production activities to less developed countries. Local firms are able to participate in these networks and obtain not only market access but also technological transfer from MNEs. On the other hand, the relocation of production activities by MNEs would invite other production activities via vertical (backward and forward) linkages.

To encourage the above processes of production networking and industrial clustering, heterogeneity and geographical proximity are crucial. Such characteristics are observable in less developed countries in Southeast Asia especially CLMV. The significant wage gap between CLMV and the more developed East Asian countries induce MNEs to shift labor-intensive activities to the former. Moreover, CLMV are

located in the center of East Asia, sharing borders with China and Thailand. Such geographical proximity is propitious in facilitating the movement of goods, services, investment, and natural persons, especially now that border barriers are being removed with the support of the ASEAN Free Trade Agreement (AFTA) and other regional frameworks. Furthermore, infrastructure development, such as the East-West, North-South, and Southern Economic Corridors, are significantly reducing transport cost and time in this region. Eventually, it will lead to the reconfiguration of corporate activities, so that production networks can spread into less developed regions.

This chapter seeks to provide a framework for industrial development strategy in CLMV focusing on the following: (1) review of industrial policies in Southeast Asia ; (2) two constraints on industrial policy—shrinking policy space and the constraints on state capability; (3) introduction of theories of production fragmentation and concentrated dispersion; and (4) re-examination of industrial policies in CLMV particularly policy measures on participation in production networks and the formation of competitive industrial clusters.

1. INDUSTRIAL POLICIES IN SOUTHEAT ASIA

Similarities exist in industrial policies in Southeast Asian countries. Table 1 shows that Singapore was the only country which switched to an export-oriented industrial (EOI) policy after its independence from Malaysia in 1965. On the other hand, other larger economies adopted an import substitution industrial (ISI) policy in the 1950s or 1960s before proceeding to secondary ISI policies. Although Malaysia switched to an EOI policy in the 1970s, its ISI policy has continued simultaneously. In the middle of the 1980s, after Southeast Asian countries faced adverse economic conditions such as declining and fluctuating prices of primary commodities and limited success of ISI policies, all of these countries started to liberalize trade and investment.

As shown below, EOI policies or liberalization in trade and investment was critical in assisting the spread of production networks in Southeast Asia, and similar development is expected to happen in the late-coming countries, because of their economic transition since the mid-1980s.

Table 1: Evolution of Industrial Policies in Southeast Asia, 1950s-1990s

Economy	1950s	1960s	1970s	1980s	1990s
Singapore	1950s IS (while still part of Malaya)	1960s-1980s EO			1990s Strategic independence (high technology and services) Regionalization
Malaysia	1950-70 Moderate IS Added EO		1971-85 Continued IS EO		1986- Liberalization
Thailand		1961-71 IS	1971-86 IS (capital goods, beginning in 1981)		1986- EO Technology-incentive Industries Some EO
Indonesia		1967-73 Stabilization Beginning IS	1974-85 Strong IS		1986- Liberalization EO
Philippines	1950- IS	Continued IS		1980s Liberalization (political instability)	1990s Continued liberalization (strengthened political stability)

Note: IS-import substitution, and EO-export orientation
Source: Masuyama, Vandenbrink and Chia (1997); Table 1.1

Since the mid-1980s, CLMV have been undergoing economic transition in various ways: from central planning to market economies, from inward-looking to outward-looking economic development strategies, and from close economic relations with the Soviet bloc to closer economic relations with market economies (Chia 2006). Moreover, CLMV adopted trade and investment liberalization policies practiced by the more advanced Southeast Asian countries, (i.e. removal or relaxation of foreign ownership restrictions and performance requirements and various investment incentives such as tax exemptions, duty drawbacks, and the establishment of export processing zones. Vietnam, for example, undertook substantial trade reform during its Doi Moi process in the late 1980s by addressing the anti-export bias in its earlier protective regime and introducing privatization. (Chia 2004; Narjoko and Amri 2007).

2. SHRINKING POLICY SPACE

Since the late 1990s, economic reform in CLMV has been accelerated by their accession to the WTO and the establishment of FTAs. Myanmar joined the WTO in 1995, Cambodia in 2004, and Vietnam in 2007. Lao PDR applied for WTO membership in 1997 and negotiations are still ongoing. On the other hand, Vietnam joined the Association of Southeast Asian Nations (ASEAN) and signed the ASEAN Free Trade Area (AFTA) agreement in 1995; Myanmar and Lao PDR in 1997; and Cambodia in 1999. Unlike economic reforms undertaken by countries at their own initiative, the forces establishing liberalization under the WTO and FTAs are formal and rule-based. Therefore, rules are more stringently enforced and policy space, which defines a range of policy choices available to member countries, is constrained accordingly.

The impacts of the WTO on the industrial policy instruments, such as tariff protection, Subsidies and Counterveiling Measures (SCM), Trade-Related Investment Measures (TRIMs), Trade-Related Aspects of Intellectual Property Rights (TRIPS), General Agreement on Trade in Services (GATS) and others are summarized in Table 2. On the other hand, FTAs seeks to remove trade barriers within the specified region, but as ASEAN integration moves from AFTA to the ASEAN Economic Community (AEC), the policy space available to each ASEAN country will be constrained further, because the AEC aims to liberalize not only trade but also service trade and investment.

In such a context, the traditional debate about efficacy of infantry industry protection has become less relevant, as many of these policies are illegal under the rules of the WTO and FTAs (Bora, Lloyd, and Pangestu 2000; Strugeon and Lester 2004). It is more relevant to explore the industrial policies that are effective in the age of market liberalization and globalization, when participation in the WTO and FTAs are becoming the norms.

Table 2: Impacts of the WTO Rules on Industrial Policy Instruments

WTO rules	Impacts on industrial policy instruments
1. Tariff protection	Average tariff protection has declined except for certain sensitive industries
2. The Agreement on Subsidies and Countervailing Measures (SCM)	The Agreement on Subsidies and Countervailing Measures (SCM) prohibits export subsidies by countries with income per capita above US$1,000. Subsidies that are conditional on exports are prohibited, as are subsidies that encourage the use of domestic rather than imported inputs.
3. The Agreement on Trade-Related Investment Measures(TRIMs)	Under the TRIMs Agreement, a number of investment performance-related measures that have an effect on trade are prohibited. Such measures include local content requirements, trade balancing requirements, technology transfer, local employment and R&D, and so on.
4. The Agreements on Trade-Related Aspects of Intellectual Property Rights (TRIPS)	The required strengthening of protection of intellectual property rights under the TRIPS agreement increases a need for local companies to innovate and compete dynamically; reverse engineering and imitation have become less feasible. Trade sanctions can now be applied to countries deemed to be deficient protecting intellectual property rights.
5. General Agreement on Trade in Service (GATS)	The GATS allows sectoral commitments to be made for the four modes of supplying services: cross-border, consumption abroad, commercial presence, and movement of natural persons. Through the inclusion of commercial presence as a mode of supply, rules on foreign investment in services have now become part of the multilateral trading system.
6. Infant Industry Protection	GATT Article XVIII, Section A and C, allows members that are in early stages of development to use trade barriers to protect domestic industry. As tariff bindings expand, developing countries may have to rely increasingly on Article XVIII, along with safeguards and domestic subsidy programs, to protect domestic industry.
7. Special and Differential (S&D)Treatment by WTO	The WTO has numerous special and differential treatment provisions in favor of developing countries. The approach to S&D treatment in the WTO, however, has typically been limited to transitional arrangements, complemented by the de minimis provisions.

Source: Bora, Lloyd, and Pangestu (2000), Pangestu (2002) and Lall (2003)

3. CONSTRAINTS ON STATE CAPABILITIES

One of the important lessons learned from the public policy dispute in the 1990s was the importance of institutional capabilities in considering appropriate industrial policies. For example, if the institutional capability of the state is too weak, then any selective government intervention, which gives government officials strong discretion over which industries to be protected by the state will not work or may simply induce opportunistic activities, such as rent-seeking, and lead to allocative inefficiency. The costs of government intervention (i.e., loss in economic efficiency due to government failures) may exceed its benefits (i.e., gain in economic efficiency due to correction of market failures). Thus, to prevent government intervention from becoming too costly, it is urged to match the state's role with its capability (World Bank 1997).[1]

State capability relevant to industrial policy is not easy to assess where ordinary governance indicators, such as corruption and the rule of law, may not be appropriate. In fact, the Asian newly industrialized economies (NIEs)—such as Korea and Taiwan—were not free from corruption in their early phase of development but still enjoyed rapid economic growth. On the other hand, McKendrick et al. (2000) argues that two sets of related institutions are important for successful implementation of industry policy—cohesive and autonomous bureaucracies and mechanisms for public and private sector consultation. It is also important to establish a well-organized monitoring system for promoted industries and avoid political intervention.

Although more efforts must be made to assess institutional capabilities of less developed Southeast Asian economies, it is still uncertain if they are endowed with sufficiently strong institutional capabilities. In fact, some economists including Ohno argued that Vietnam lacks state capability for industrial policy where recommendations were made regarding institutional reforms in the government sector. According to Ohno

[1] This approach was officially demonstrated by the World Bank's two-part strategy (World Bank 1997). The two-part strategy has two elements. Matching the state's role to its capability is the first element. In particular, where state capability is weak, how and where the state intervenes should be carefully assessed; many states try to do too much with little capability and often do more harm than good. The second element of the strategy is to raise state capability by reinvigorating public institutions.

(2003), Vietnam's policy process has no effective mechanisms for collecting detailed and up-to-date information on domestic industries and global markets. Thus, he urged the government to institutionalize regular dialogue between policymakers and domestic and foreign firms for policy formulation. He also pointed out the lack of coordination among sectoral ministries and urged the concentration of authority by setting up a special team under the Prime Minister.

In considering the efficacy of industrial policy, the above two constraints—shrinking policy space and the constraints on state capability—are becoming increasingly important. Below the author discusses an industrial development strategy whereby participation in international production networks and the formation of competitive industrial clusters plays a critical role. In this strategy, liberalization in trade and investment, which has been accelerated by the WTO and FTAs, is fully incorporated and even encouraged to seize opportunities provided by the momentum of market liberalization.

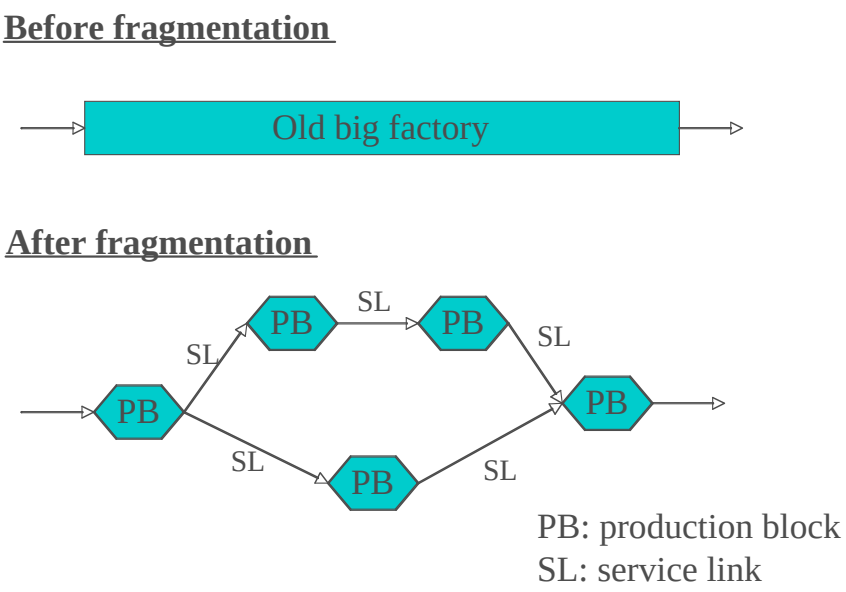
4. FRAGMENTATION

The production of a final product usually consists of a number of processes that are vertically integrated. Production fragmentation means to divide such vertically integrated production processes into separate production blocks (PBs) and to locate them at various sites that are most suitable for each activity (Figure 1). Jones and Kierzkowski (1990) present an initial framework for analyzing production fragmentation. They formulated an analytical framework in which an increase in the number of production blocks lowers total production costs; lower production costs are realized especially when a labor-intensive production block is relocated to a lower-wage country. On the other hand, an increase in the number of production blocks incurs additional fixed costs (i.e., setup costs of a new factory in the lower-wage country) and higher service link costs[2] (i.e., costs for transporting intermediate inputs and coordinating production activities across

[2] Production blocks are connected via service links such as bundle of activities consisting of transportation, insurance, telecommunication, quality control, and management coordination to ensure that the production blocks interact in the proper manner (Arndt and Kierzkowski 2001).

borders) are required to join up distant production blocks. Therefore, insofar as the setup costs and service link costs are reduced substantially, previously vertically integrated production processes are fragmented into separate production blocks, and activities of firms are dispersed geographically.

Figure 1: Before and After Fragmentation



Source: Kimura (2008).

It is, however, notable that production fragmentation does not occur in all industries. According to Lall et al. (2004), the intensity of fragmentation differs according to industry, depending on four factors: (1) technical 'divisibility' of production processes; (2) differing factor intensity of production processes (only labor intensive processes can be efficiently relocated to lower-wage sites); (3) technological complexity of each process (only simple and stable process can be efficiently relocated); and (4) the value-to-weight ratio of the product (only light weight and high value-added products can be shipped long distances to exploit cost differences).

In a separate article, Lall (2003) argued that in high-technology industries, fragmentation is strong in electronics; in medium-technology industries, fragmentation is strong in automotives but the weight of the product and its high basic capability

requirements mean that it only extends to a few proximate, relatively industrialized locations; and in low-technology industries, production fragmentation is strong in clothing, footwear, sports goods, and toys.

Empirical studies show that production fragmentation in East Asia has been driven by machinery industry. In particular, the electronics industry established a dense production network and became a leading force of economic integration in East Asia. This occurred because many parts and components in electronics are small and light. At the same time, they have relatively high added value, so that they can be shipped long distances (Kuroiwa 2008; Ando 2009).

On the other hand, many parts and components in the automotive industry are bulky and heavy. Therefore, automotive assemblers have strong incentives to save on transport and inventory costs by procuring their parts and components locally. In addition, just-in-time production may increase the importance of geographical proximity. The empirical studies show that its dependency on imported inputs were relatively low, with production networks extending only within the ASEAN region after the introduction of regional frameworks such as the Brand to Brand Complementation (BBC), the ASEAN Industrial Cooperation (AICO) Scheme, and AFTA (Kuroiwa 2008, 2009).

Sewing and assembly of garments accounts for 80 percent of all labor costs in clothing manufacture (Dicken 2007). Thus, such an extremely labor-intensive process is separated from other processes and shifted to low-wage countries. Empirical studies, however, show that in recent years the wearing apparel production network did not expand in leading Southeast Asian countries. This occurred because high income Southeast Asian countries were no longer competitive in the wearing apparel industry, and thus there was no strong incentive to expand the production network. Instead the industry's network expanded into less developed countries, including CLMV (Kuroiwa 2009).

Production networks in the Southeast Asian countries expanded in the automotive and electronics industries. In particular, the electronics industry, which had established a dense production network, became a leading force of regional integration. On the other hand, the wearing apparel industry did not expand network in high income Southeast Asian countries.

5. AGGLOMERATION AND CONCENTRATED DISPERSION [3]

There is a significant difference in labor costs between neighboring countries in Southeast Asia. For example, labor costs in Thailand are 4.8-8.0 times higher than in Lao PDR (Suzuki 2009), and the worker's minimum wage in Singapore was 5.4 times as high as in Batam in 2006 (JETRO 2008). Thus, the firm always has a strong incentive to extend a production network into less developed countries. In particular, if the industry has weak agglomeration economies, production blocks are dispersed geographically. For instance, labor-intensive activities such as garment sewing are constantly relocated to low-wage countries. In this case, the industrial location closely reflects the regional structure of comparative advantage, and it changes as the endowment structure evolves over time.

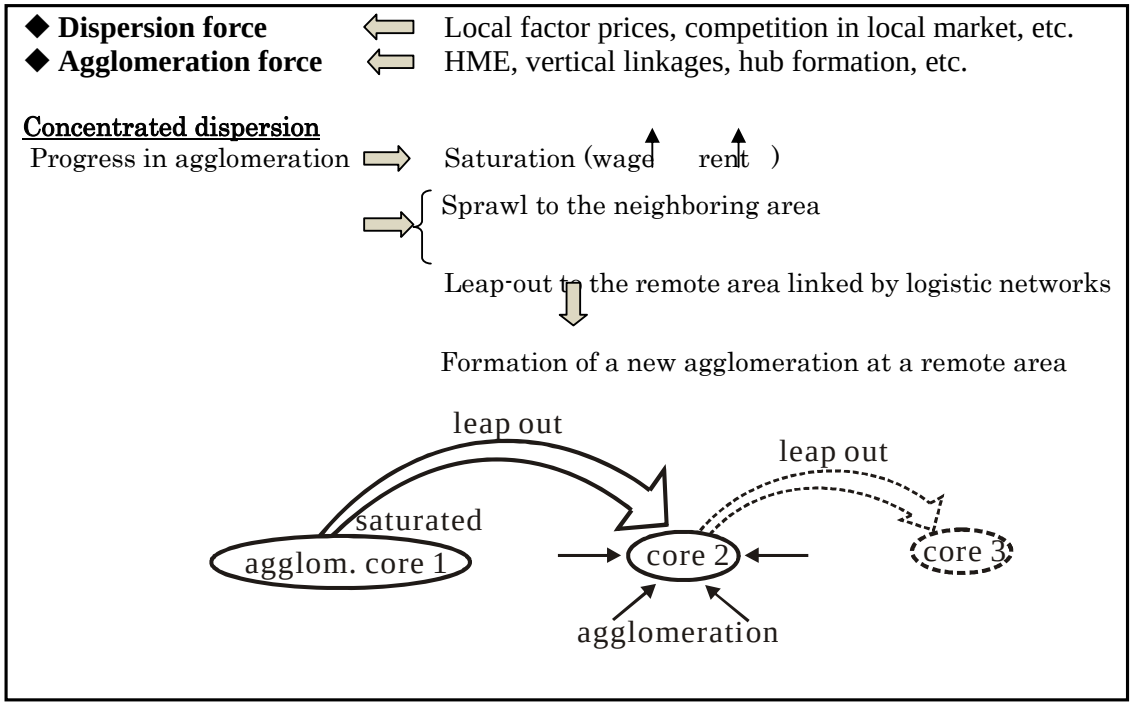
In contrast, if the industry has significant agglomeration economies, the industrial location may appear to be lumpy. Firms are likely to cluster in a limited number of attractive regions, leaving other regions sparse. In this case, the centripetal force of the agglomeration economies dominates the centrifugal force provided by low wages and rents in sparse regions. Classical examples of such agglomeration are: (1) the automobile industry clustered in Detroit and Aichi, Japan; (2) financial services in New York, London, Frankfurt and Tokyo; (3) IT industries in Silicon Valley, and so on. More recently, a growing number of industrial agglomerations have also been arising in the emerging countries of East Asia—for instance, the pickup truck cluster in Thailand, the IT cluster in Malaysia, the mobile phone cluster in Beijing-Tianjin, as well as the huge multi-industry agglomerations in the Zhu Jiang (Pearl River) and Chang Jiang deltas.

Several origins of agglomeration economies have been found in the field of spatial economics. Among them, (1) home market effects (HME); (2) vertical (backward and forward) linkages of industries; (3) formation of a specific input market; (4) hub formation; and (5) spillover of technical/market information are considered to be important sources of agglomeration economies (Nishikimi and Kuroiwa, 2009). Agglomeration economies usually arise in industries characterized by increasing returns

[3] This section on agglomerations and concentrated dispersion is based on Nishikimi and Kuroiwa (2009).

to scale (IRS) at the firm level and/or in those carrying the local externality among neighboring firms. The agglomeration tendency of IRS industries, however, does not imply that those industries are never influenced by dispersion forces. In fact, they may leave the agglomerate areas once they find that wages and rents in the less agglomerate area are sufficiently low to compensate less favorable business environment in the latter. Moreover, it is often observed that saturated agglomerates sprawl over neighboring regions or alternatively if some remote regions are connected with the agglomerated core via an efficient logistic network, the agglomeration may leap out along the network.[4] This phenomenon is often called *concentrated dispersion* or *linked agglomeration* (Figure 2).

Figure 2: Dispersion, Agglomeration and Concentrated Dispersion



Source: Nishikimi and Kuroiwa (2009).

[4] World Bank (2009) carries out comprehensive studies of the leaping-out process of industrial agglomeration. Moreover, the leaping-out of plant location may occur within a firm if its production activity is separable into several processes that are suitable for different production sites. Such a firm can gain production efficiency and profitability by relocating the separated processes to suitable production sites and connecting them with an efficient logistic network. This phenomenon is called "fragmentation" (Figure 1) and is widely observed in recent East Asia.

How concentrated dispersion may be lured into a particular country is probably the greatest concern for less developed countries which aim to industrialize their economies by participating in production networks and forming competitive industrial clusters.

6. INDUSTRIAL POLICY REVISITED

A. Attracting production blocks—from where?

Less developed Southeast Asian countries would have an opportunity for industrial development by participating in production networks. However, their engagement in these networks need not start from scratch. They can utilize existing networks based in the neighboring countries. For example, the Lao economy is already involved in the production networks of MNEs based in Thailand, brought about by geographical proximity as well as their cultural and linguistic affinity. Production networks in East Asia are becoming increasingly regionalized, whereas the market for their final products is more globalized, directed mostly to the developed world (Kuroiwa 2009).

As emphasized by Dicken (2007), “simple geographical proximity is, itself, a very powerful stimulus for integrating operations.” Geographical proximity, for example, reduces the time involved in managerial oversight, facilitates rapid resource exchanges, and lowers transportation and coordination costs (McKendrick et al 2000). It is thus important for less developed Southeast Asian countries to fully utilize these advantages.

In recent years, rising labor costs and an appreciation of currencies in neighboring countries, notably China and Thailand, have been pushing up production costs sharply. At the same time, investors would like to reduce their risks by investing in various countries.

B. Attracting production blocks—in which industry?

As shown above, in labor intensive industries of clothing, footwear, sports goods, and toys, many manufacturers have already shifted labor-intensive activities to low-wage countries, including CLMV. However, since these industries have weak agglomeration economies, they are footloose, meaning that they can easily leave the host countries once wages and rents start to rise.

Production blocks in other prospective industries such as electronics and automotive are more stable and give more repercussions on the local economy. However, since these industries exhibit substantial agglomeration economies and require more sophisticated technological capabilities, it is more difficult to attract them. In particular, the automotive industry is a typical IRS industry. Thus, large countries such as Vietnam, which can offer lucrative domestic market, have a strong advantage in attracting the industry, while it is far more difficult for Cambodia and Lao PDR to participate in the network.[5]

On the other hand, as in the case of more developed Southeast Asian countries, the production network in the electronics industry may spread more extensively. Empirical studies, however, show that Cambodia and Lao PDR had yet to be involved in the electronics production network; in a similar vein, Vietnam was not fully involved yet (Kuroiwa 2009). In view of the vast opportunities provided by the electronics industry, participating in such a network seems critical. The governments of those countries, therefore, need to adopt clear and decisive policies to attract as many production blocks as possible and to diversify and upgrade their industrial base.

C. Attracting production blocks—How?

To attract production blocks, the government needs to adopt appropriate policies to reduce additional costs incurred by production fragmentation, namely setup costs, operation costs, and service link or logistics costs (Chapter 5). When the industry has significant agglomeration economies, the attracted production blocks would invite other production blocks via vertical (backward and forward) linkages. Although these industries bring in more benefits, it is more difficult to attract them. Thus, more efforts must be made to improve the business environment in the host country.

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[5] Compared with the automotive industry, the motorcycle industry, for example, requires smaller setup costs, and the economy of scale is less significant. Therefore, the motorcycle industry seems to be more accessible and feasible in small countries. In fact, some motorcycle companies, including major Japanese companies, have already set up assembly plants in Cambodia and Lao PDR. However, such involvement in the network is fragile, given that (1) there is no competitive local parts supplier, and (2) completely built units (CBU) that are produced in the neighboring countries, such as Thailand, may become more competitive if the tariff barriers are removed by AFTA and other regional frameworks. In the end, industrial capability, which is strengthened by industrial clustering, will be critical to remain in the network.

In this context, regional integration must be accelerated to reduce service link costs. For example, AFTA and other regional frameworks are instrumental to remove trade and investment barriers within the region. Development of highway networks—notably the East-West Economic Corridor, the North-South Economic Corridor, and the Southern Economic Corridor—are crucial to reduce transport cost and time in CLMV. Moreover, cross border transport agreements, such as the GMS Cross-Border Transport Agreement (GMS CTBA), are becoming increasingly important to shorten the time for crossing borders.

On the other hand, the establishment of special economic zones (SEZs) is critical to improve the business environment. Since the resources are seriously limited, it is extremely difficult for less developed countries to improve the investment environment all across the country. For example, providing excellent infrastructure services nationwide is too costly and economically unfeasible. Human resources are seriously limited in less developed countries. It is strategically sensible to target specific locations and pour limited resources into the development of the designated areas. In particular, SEZs are quite instrumental to attract foreign direct investment (FDI). This is because (1) SEZs reduce the tax burden of firms owing to the tax holiday, import duty, and other tax exemptions; (2) SEZs provide excellent infrastructure services, including transportation, telecommunications, electricity, gas, and water supply; and (3) SEZs provide one-stop services for company registration, investment licensing, work permits, export and import permits, and so on, which will cut the additional costs incurred by production fragmentation.

Past experiences in East Asia indicate that the establishment of SEZs was effective in attracting the electronics and other machinery industries, which may require more sophisticated business environment than light industries, such as garment. SEZs are being developed in the less developed Southeast Asian countries. For instance, the government of Cambodia has approved 18 SEZs which are strategically located in areas such as Phnom Penh (capital), Sihanoukville (port area), and Bavet (Vietnam–Cambodia border area). In CLMV, these areas: (1) metropolitan area, (2) transport hub, and (3) border area, seem to be promising for attracting FDI. In particular, some specific metropolitan areas and transport hubs may have strong potential in the formation of industrial clusters.

D. Forming competitive clusters

The phase of participating in production networks is followed by a more difficult task of forming competitive clusters. A low labor cost production site can lose the competitiveness of industry if they fail to yield agglomeration economies such as the emergence of specialized personnel, parts suppliers, and technological spillovers. On the other hand, being located in an industrial cluster can enhance productivity, and improve the competitiveness of industry, even if wages are rising.

There are two categories of public policies relevant to cluster development. The first category relates to the overall business environment, such as macroeconomic stability, flexibility of labor markets, provision of general infrastructure, free trade and open investment policies. In addition, building human capital and ensuring good governance (establishing the rule of law, eradicating corruption, and so on) are particularly important to fill the initial gaps between developed and less developed countries. These generic policies are market-friendly and improve the overall business environment in the host countries, so that they can provide the baseline for entry into production networks and subsequent development of industrial agglomerations.

The second category involves measures which promote agglomeration of specialized personnel, suppliers, and information spillover in specific industries so that industrial clusters become more competitive and stable. These policy measures include generous tax incentives and business facilitation for specific industries, building sophisticated physical infrastructures (especially transportation and communication network facilities, industrial parks, and public utilities), providing access to capital, upgrading industry-specific skills and the capacity of local suppliers, and active R & D promotion in specific industries.

However, these policy measures are highly selective in targeting specific industries and demand greater institutional resources. Many developing countries lack strong institutional capabilities and have failed in implementing industry-specific policies. It is therefore more practical for less developed Southeast Asian countries to focus on generic policies. Then, as the industry becomes more mature and upgraded with institutional capability of the state growing sufficient, the measures that promote industrial clustering of specific industries may become more relevant.

Specifically, Lao PDR, Cambodia, and Myanmar need to improve their business environment and attract more production blocks, while industrial cluster development in Vietnam should receive more attention in terms of strengthening the industrial base to increase competitiveness of industry.

CONCLUSION

Since the mid 1980s, CLMV have been undergoing economic transition from central planning to market economies. Moreover, economic reforms in these countries have been accelerated by their accession to the WTO and FTAs. Such economic reforms will increase opportunities to attract production blocks, especially from neighboring East Asian countries.

In Southeast Asia, production networks expanded in the electronics and automotive industries. In particular, the electronics industry diversified procurement of inputs and became a leading force of economic integration. CLMV are already involved in the apparel production network, but it is becoming crucial for them to be engaged in other promising industrial activities. Thus, the governments need to adopt clear and decisive policies to attract as many production blocks as possible and to diversify and upgrade their industrial base.

The two constraints—shrinking policy space and the constraints on state capability—must be considered in exploring the feasible and appropriate industrial policies. Many of those policy measures that focus on participation in production networks and the formation of competitive clusters are market-friendly and seem to conform to the constraint on shrinking policy space. However, the generic policies should be given priority for the less developed Southeast Asian countries, taking into account both their institutional capabilities and stages of economic development. The measures that promote the industrial clustering of specific industries may become more relevant, as the industry becomes more mature and upgraded, and if, at the same time, the institutional capability of the state grows sufficient.

AFTA and other regional frameworks will be instrumental to remove trade and investment barriers. Moreover, infrastructure development such as the East-West,

North-South, and Southern Economic Corridors—in tandem with GMS Cross-Border Transport Agreement—will significantly reduce transport cost and time. The establishment of SEZs seems to be effective in attracting the industries which may require more sophisticated business environment than light industries, such as garment.

REFERENCES

Ando, Mitsuyo (2009). "International Production/Distribution Networks in East Asia". Unpublished manuscript.

Arndt, Sven W. and Henryk Kierzkowski (2001). "Introduction". In *Fragmentation: New Production Patterns in the World Economy*, ed. Sven W. Arndt and Henryk Kierzkowski. Oxford: Oxford University Press.

Bora, Bijit, Peter J. Lloyd, and Mari Pangestu (2000). "Industrial Policy and the WTO". Policy Issues in International Trade and Commodities Studies Series No. 6. Geneva: United Nations Conference on Trade and Development.

Chia Siow Yue (2004). "Integrating East Asia's Low Income Countries into the Regional and Global Market". Paper presented at OECD Research Project on The Impact and Coherence of OECD Country Policies on Asian Developing Economies, 10-11 June. Paris.

_____ (2006). "*Integrating the Mekong Region into ASEAN*". Paper presented at the seminar on Accelerating Development in the Mekong Region: The Role of Economic Integration, 26-27 June. Siem Reap, Cambodia,

Dicken, Peter (2007). *Global Shift: Mapping the Changing Contours of the World Economy (5th Edition).* London: SAGE Publications.

JETRO. Comparison of Investment Cost, JETRO-FILE. http://www3.jetro.go.jp/jetro-file/cityselect.do (accessed on 20 February, 2008).

Jones, Ronald W. and Henryk Kierzkowski (1990). "The Role of Services in Production and International Trade: A Theoretical Framework". In *The Political Economy of International Trade: Essays in Honor of Robert E. Baldwin*, ed. Ronald W. Jones and Ann Kruger. Oxford: Basil Blackwell.

Kimura, Fukunari (2008). "The Mechanics of Production Networks in Southeast Asia: The Fragmentation Theory Approach". In *Production Networks and Industrial Clusters: Integrating Economies in Southeast Asia*, ed. Ikuo Kuroiwa and Toh Mun Heng. Singapore: Institute of Southeast Asian Studies.

Kuroiwa, Ikuo (2008). "Cross Border Production Networks in Southeast Asia". In

Production Networks and Industrial Clusters: Integrating Economies in Southeast Asia, ed. Ikuo Kuroiwa and Toh Mun Heng. Singapore: Institute of Southeast Asian Studies.

_____ (2009) "Production Networks and Industrial Policy in Less Developed Southeast Asia In *Plugging into Production Networks: Industrialization Strategy in Less Developed Southeast Asian Countries*, ed. Ikuo Kuroiwa. Singapore: Institute of Southeast Asian Studies, forthcoming.

Lall, Sanjaya (2003). "Reviving Industrial Strategy: The Role of Government Policy in Building Industrial Competitiveness". *G-24 Discussion Paper 28*, April.

Lall, Sanjaya, Manuel Albaladejo, and Jinkang Zhang (2004). "Mapping fragmentation: electronics and automobiles in Southeast Asia and Latin America". *Oxford Development Studies* Vol. 32, No.3, September: 407-32.

Masuyama, Seiji, Donna Vandenbrink, and Chia Siow Yue (ed.) (1997) *Industrial Policies in East Asia.* Singapore, ISEAS; Tokyo: Nomura Research Institute.

McKendrick, David G., Richard F. Donner, and Stephan Haggard (2000). *From Silicon Valley to Singapore: Location and Competitive Advantage in the Hard Disk Drive Industry.* Stanford: Stanford University Press.

Narjoko Dionisius A. and Puspa Delima Amri (2007). "The Development Gap between the ASEAN Member Countries: The Perspective of Indonesia". *ASEAN Economic Bulletin 24*, No. 1:45-71.

Nishikimi, Koji and Ikuo Kuroiwa (2009). "Analytical Framework for East Asian Economic Integration: Dispersion, Agglomeration and Concentrated Dispersion". Unpublished manuscript.

Ohno, Kenichi (2003). "Vietnam's Industrialization Strategy in the Age of Globalization." <http://www.grips.ac.jp/module/vietnam/main_en.pdf> (accessed on 20 February, 2008).

Pangestu Mari (2002). "Industrial Policy and Developing Countries". In *Development, Trade, and the WTO: A Handbook*, ed. Bernard Hoekman, Aaditya Mattoo, and Philip English. Washington DC: World Bank.

Sturgeon, Timothy and Richard Lester (2004). "The New Global Supply-base: New Challenges for Local Suppliers in East Asia". In *Global Production Networking and Technological Change in East Asia*, ed. Shahid Yusuf, M. Anjum Altaf and Kaoru Nabeshima. Washington DC: World Bank.

Suzuki, Motoyoshi (2009). "Industrialization Strategy of Laos: Agglomeration and Fragmentation". In *Plugging into Production Networks: Industrialization Strategy in Less Developed Southeast Asian Countries*, ed. Ikuo Kuroiwa. Singapore: Institute of Southeast Asian Studies, forthcoming.

World Bank (1997). *World Development Report 1997: The State in a Changing World*. Washington DC: World Bank.

_____ (2009). *World Development Report 2009: Reshaping Economic Geography.* Washington DC: World Bank.

Chapter 2

SPECIAL ECONOMIC ZONES AND ECONOMIC CORRIDORS

Masami Ishida

ABSTRACT

Various reports show that special economic zones (SEZ) have become a prime catalyst for regional development in developing countries such as China and the ASEAN countries. The SEZ can be defined as a specific geographical region with economic laws that are more liberal than a country's typical economic laws. Many SEZs have characteristics of bonded zones, export processing zone (EPZ) or free trade zones and provide special incentives, including tax exemption or reduction to investors. The purpose of the paper is to enumerate the candidates for SEZ in Cambodia, Laos, Myanmar, and Vietnam (CLMV countries) according to four types: "metropolitan areas," "ports and harbors," "border areas" and "junctions or intersections." The first two types are based on the experience of forerunning ASEAN countries and the latter two are based on the economic corridors of the Greater Mekong Subregion Economic Cooperation Program. The paper concludes by identifying locations for the questionnaire and flowchart approach-based surveys, and presenting country-specific strategies.

INTRODUCTION

The East Asian countries have attained remarkable economic growths in these 30-40 years. One of the major factors of economic growths in forerunning ASEAN countries (Singapore, Malaysia, Thailand, the Philippines, and Indonesia) and China can be attributed to their massive foreign direct investment (FDI) in specific areas.

In the forerunning ASEAN countries, industrial estates had been built mostly in the suburban areas of capital cities, and their governments have given several incentives to investing companies; as a result, many foreign companies set up their factories in these industrial estates since the second half of the 1980s. The government of China designated five cities as Special Economic Zones (SEZ)[1] and later, 14 open coastal

[1] It is said that this is the origin of Special Economic Zones (SEZ). Since then, such SEZs have been established in several countries. Characteristics of SEZ are diverse, but it can be defined as a specific

cities (OCC) at the first half of 1980s. These areas have received a huge FDI, especially after 1992[2]. At present, these areas in the ASEAN and China are connected by container ships and have formed an industrial production network.

Recently, however, modes of transport have diversified. The day when companies can choose the most efficient mode of transport---via sea, air, roads and railways---will soon be realized. As a matter of fact, economic corridors have been developed under the Greater Mekong Subregion Economic Cooperation Program (GMS-ECP), where major roads have connected the ASEAN and China and will be connecting ASEAN and China with Southern Asia. With the additional options provided by roads or railways, companies' behavior will change, and the importance of Cambodia, Laos, Myanmar, and Vietnam (CLMV) as connecters of the three regions will increase.

The purpose of this study is to search for the candidates for SEZ in CLMV after classifying SEZs into four types. Section 2 identifies two types of SEZ from the experiences of the forerunning ASEAN countries. Section 3 introduces economic corridors of the GMS-ECP, recognizes two other types of SEZ, and explains the cross-border transport agreement (CBTA) as a measure for cross-border trade and transport facilitation. Section 4 searches for candidates of SEZ in CLMV and selects cities for the questionnaire survey and the flowchart approach-based survey. Section 5 concludes with country-specific strategies.

1. EXPERIENCES OF FORRUNNING ASEAN COUNTRIES

Forerunning ASEAN countries such as Malaysia, Thailand, and Indonesia have received massive FDIs from Japan and Asian newly industrializing economies (NIEs) such as South Korea, Taiwan, Hong Kong and Singapore since the middle of the 1980s. As a result, an international production and distribution network has been formed among the economies of Japan, Asian NIEs, China, and ASEAN countries. A review of the development of these forerunning ASEAN countries makes it clear that the areas that

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geographical region with economic laws that are more liberal than a country's typical economic laws. Many SEZs have characteristics of bonded zones, export processing zone (EPZ) or free trade zones and provide special incentives including tax exemption or reduction for investors.

[2] 1992 was a remarkable year: Deng Xiaoping visited southern China and appraised the progress of SEZ. That year, the 14th Congress of Chinese Communist Party came up with the term "Socialist Market Economy."

have attracted large investment are not many: For example, Kuala Lumpur, Selangor, Johor and Penang in Malaysia, Eastern Sea Board Area (Chonburi and Rayong), Bangkok and its neighboring prefectures (Ayutthaya, Pathumthani and Samutprakarn) in Thailand, Jabotabek (Jakarta, Bogor, Tangerang and Bekasi) area in Indonesia, and neighboring areas of Manila (Cavite and Laguna) in the Philippines (Figure 1)[3]. These areas have common characteristics: The distance from a port or harbor is relatively short, and the procurement of labor force is easy or the population is relatively large[4]. In addition, industrial estates and infrastructure such as highway, electricity, and water for

Figure 1: Forerunning ASEAN Countries: Areas that Received Substantial FDIs.

Source: Circles were added on the map of South-East Asia by the author.

[3] These areas are introduced as provinces, states or prefectures that had received a lot of investment from Japan (Ishida 2006).
[4] As an exceptional case, Lamphun, a province in the Northern part of Thailand, has already received huge FDI.

industrial use have been developed. Industrial estates or factories in the estates have often been designated as bonded zones or bonded factories, respectively. Finally, tax incentives were given to companies that invested in these areas.

Of the areas within CLMV where the distance to their port and harbor is relatively short and where labor force is available or the population is relatively large, Ho Chi Minh City and Hanoi and their suburban provinces (Dongnai and Binduong Province and Hai Phong, Hai Duong, Vinh Phuc and Bac Ninh Province) have been identified and in fact have already received huge FDIs. It is not easy, however, to find such areas with larger population and better access to deep ports in Cambodia, Laos, and Myanmar (CLM[5]). Thus, one needs to loosen the conditions for SEZ in this case as thus: If one---instead of both----conditions is present, then an area can be a candidate for SEZ. That is, if the population is relatively large and population is dense, or if the distance to any ports and harbors is relatively short, then an area can be a candidate as SEZ. Locations with the former characteristic are called “metropolitan areas”, while the latter is termed as a “port and harbor area” in this paper.

Aside from loosening the SEZ conditions, the CLMV countries have been benefiting from the development of the GMS-ECP economic corridors. Thus, in the next section of this paper, these economic corridors of GMS-ECP are introduced before the candidates for SEZ are enumerated.

2. ECONOMIC CORRIDORS OF GMS-ECP

2.1 Economic Corridors

The economic corridor is a concept introduced at the GMS Eighth Ministerial Meeting in 1998 at a time when the GMS-ECP implementation was stalled by the Asian Currency Crisis. Economic corridors were born to help the area rise above the difficulties after the crisis. The basic idea is to enliven economic activities along the major roads or the transport corridors. Concrete examples include the establishments of industrial estates on the borders, and the construction of telecommunication and

[5] This expression is sometimes used because the Vietnamese economic development is the most outstanding among CLMV countries.

electricity transmission cables, and natural gas pipelines and tourism activities along the corridors.

The routes of the economic corridors are designated as follows (Figure 2):

East –West Economic Corridor

Danang (Vietnam) –Dongha – Laobao = Dengsavan (Laos) – Savannakhet = Mukdahan (Thailand) – Phitsanulok –Tak –Maesot =Myawaddy (Myanmar) –Paan –Mawlamyine

North –South Economic Corridor

Bangkok (Thailand) – Phitsanulok –Chiangrai;

Chiangrai – Chiang Khong =Huayxai (Laos) – Luangnamtha –Boten =Mohan(China) –Xiaomengyang (Laos Route);

Chiangrai –Maesai = Tachilek (Myanmar) –Kyaingtong –Mongla = Daluo (China) –Jinghong –Xiaomengyang (Myanmar Route);

Xiaomengyang – Simao –Kunming;

Kunming–Hekou = Laocai (Vietnam) –Hanoi –Haiphong;

Southern Economic Corridor

Bangkok (Thailand)-Aranyaprathet = Poipet (Cambodia) –Sisophon);

Sisophon –Battangban –Phnom Penh (NR 5 Route)

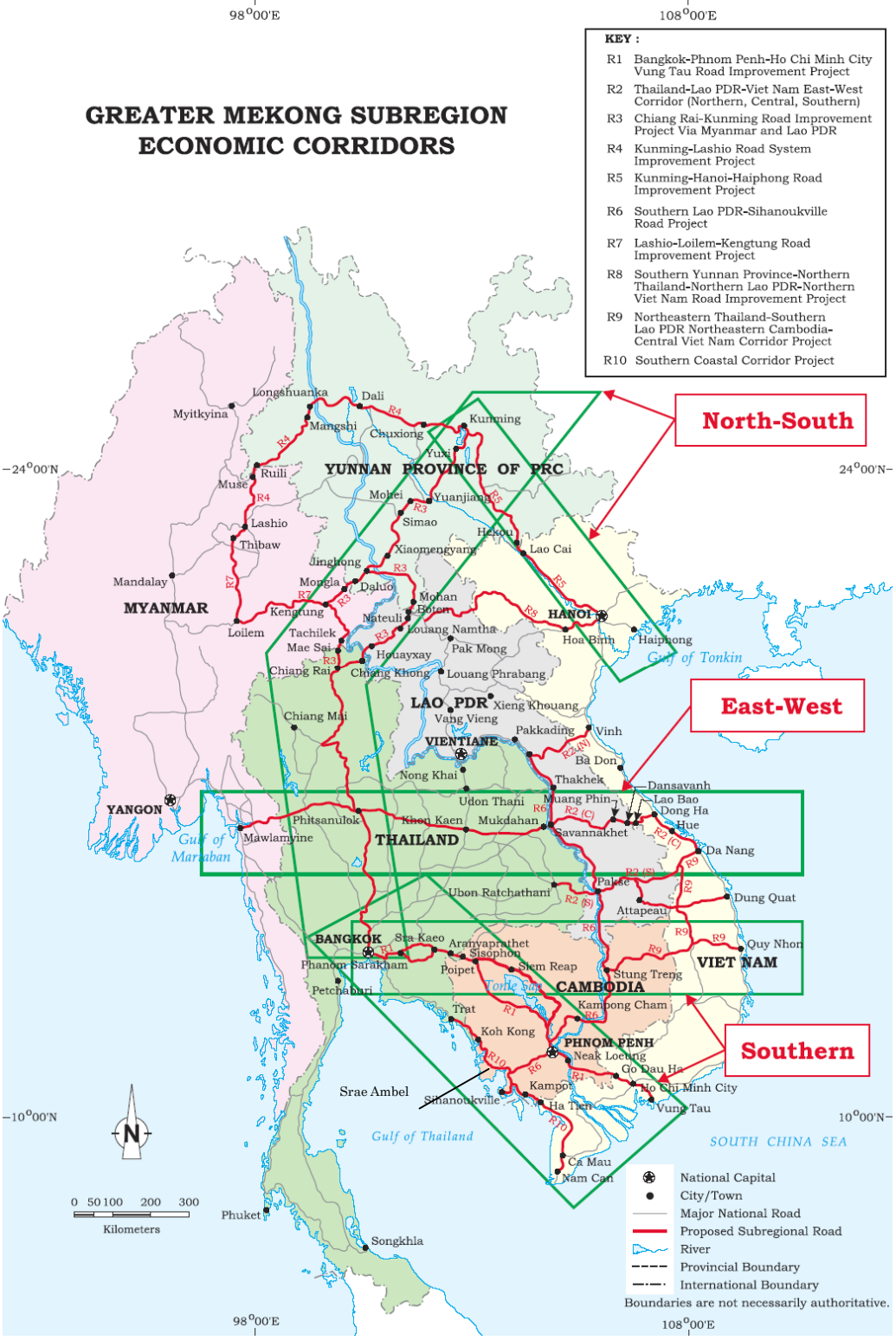
Sisophon –Siemreap –Phnom Penh (NR 6 Route)

Phnom Penh –Bavet =Mocbai (Vietnam) –Ho Chi Minh City –Vuntau

The East–West Economic Corridor (EWEC) is a simple route from Danang of Vietnam on the coast of the Pacific Ocean, to Maulamyine of Myanmar on the coast of the Indian Ocean. The North-South Economic Corridor (NSEC) is divided into sections: Bangkok–Kunming Road and Kunming–Hanoi–Haiphong Road. The Bangkok–Kunming Road has two routes between Chiangrai (Thailand) and Xiaomengyang (China), which are the Laos Route and the Myanmar Route. The Southern Economic Corridor (SEC) has two routes between Sisophon and Phnom Penh: the National Road 5 (NR5) route and the NR6 route.

Later, two subcorridors were added to the Southern Economic Corridor (SEC), and the route from Bangkok to Vuntau has been called the central subcorridor of the SEC. The new subcorridors are:

Figure 2: Three Economic Corridors in the Greater Mekong Subregion.



Source: ADB(2002).

Southern Coastal Subcorridor

Trat (Thailand) = Kohkong (Cambodia) –Kampot –Kep –Kampong Trach =Praek Chak (Vietnam) –Hatien –Rachgia –Namcan

Northern Subcorridor

Siemreap (Cambodia) –Stungtreng –Ban Lung =Ou Ya Dav (Vietnam) –Playku –Quynhon

With respect to the NSEC, the new route between Hanoi and Nanning (Guangxi Zhuang Autonomous Region) was added after the agreement to add the Guangxi Zhuang Autonomous Region to the GMS in 2005 was signed:

New Route of the North-South Economic Corridor

Hanoi (Vietnam)–Lang Song =Pingxiang (China) –Nanning

Fortunately, there are major Southern China Cities such as Guangzhou, Dongguan, and Shenzhen on the extension of the road.

The economic corridors connect major cities in GMS area such as Bangkok, Hanoi, Ho Chi Minh City, Phnom Penh, and Kunming. In fact, road transport has already connected Singapore, Kuala Lumpur, Bangkok, Hanoi, Nanning, Guangzhou, and Shanghai since the completion of the Second Mekong International Bridge between Savannakhet and Mukdahan, and an order-based transport service between Shanghai and Singapore has been provided by one Japanese logistic company. In short, the economic corridors of GMS have provided an additional transport option---i.e., via roads---to the companies that deliver goods between China and ASEAN countries or within the ASEAN. More importantly, it is impossible to connect Singapore, Malaysia, and Thailand to China by land transportation without going through at least one of the CLMV countries. The development of economic corridors will further connect China with Southern Asia, and the ASEAN nations with Southern Asia in the future. Roads created within the economic corridors of GMS brought with them two advantages to CLMV: “border areas” and “junctions”.

Border areas in the Mekong Region had been treated not only as peripheries but also as battlefields where opposing military forces faced each other prior to the 1992

GMS-ECP inauguration. Since the inauguration, these border areas have been given some attention because of their several and unique advantages. For example, in a project at the border between a higher income country and a lower income nation, the former can utilize the labor force of the latter at lower wages (compared to what such firm from the high income country used to pay). Another example pertains to the resource endowments between a country with better economic infrastructure and a country with poorer infrastructure. People from the latter can have access to the supply of energy, telecommunication lines, water, and ports. Accordingly, dynamism can be born out of differences in factors and resource endowments between the two countries at the border areas (Kudo 2007).

A junction or crossroad of major roads is a point that connects cities and villages along one major road and those along the other major road. Thus, freights are loaded and unloaded at the junction or the crossroad so as to change directions. In this case, junctions and crossroads are important as logistic bases.

2.2 Cross-border Transport Agreement

In support of the economic corridors, a cross-border transport agreement (CBTA) is introduced here as one of the major policy frameworks of GMS-ECP. The CBTA is an agreement to facilitate the cross-border movement of vehicles. It has been signed by six countries of GMS-ECP and is in the process of ratification. It is composed of the main agreement, 17 annexes and three protocols. Bilateral memoranda of understanding (MoU) for five borders in accordance with these documents have been signed by each pair of countries.

The gist of CBTA is mainly composed of two components. One is single-window inspection (SWI) and single-stop inspection (SSI). The SWI aims to unify the windows for customs, immigration and quarantine (CIQ) into a single window. For SSI, the process and inspection of CIQ is currently done twice: i.e., by the exit country and by the entry country. The SSI aims to unify the redundant procedures into a single step. Specifically, those processes will henceforth be done only in the entry country.

The other component is the exchange of traffic rights. Currently, goods are transferred from country A to country B at some border areas in the Mekong Region. This is because these countries do not provide traffic rights to each other. The CBTA

carries articles that assume the exchange of traffic rights among member countries. For example, vehicles, and their parts and machine tools are exempted from taxations. In the case of transit transport---for example from Thailand to Vietnam by way of Laos---the containers are exempted from inspection in the transit country provided the containers are sealed.

After the MoU was signed, it became effective in some borders, and should have already started per the MoU's schedule. Such has not been realized, however, except at the border of Lao Bao and Densavan between Vietnam and Laos on the EWEC, where the physical inspection for taxation purposes and then for quarantine have been unified.

There are several reasons for the delay. First, the thick CBTA documents, which are in English, are known to government officials who participated in the negotiation, but officials at border check points do not understand them. In short, the dissemination has not been done well. People in the countries at the Mekong Region do not speak English in daily life. The translation of the CBTA into each country's language as well as training of officials at the border check point on English as well as the language of a neighboring country are therefore necessary.

Second, the CBTA was signed by ministers of transportation. The National Transport Facilitation Committee (NTFC), which was built in each country, is composed of officials coming from related ministries such as taxation, health, agriculture, and homeland affairs. In other words, the NTFC was designed to avoid sectionalism. However, one financial minister was allegedly quoted as saying that he did not know anything about the signing of the CBTA by a transport-related minister. In this case, adjustment among related ministries with a leadership of the highest ranked official like a prime minister or a president is needed.

Third, there are several contradictions between the CBTA and domestic regulations. In addition, institutional regimes and facilities such as the common control area (CCA), a space for physical inspection by officials of both countries, have not been set up.

The realization of the CBTA in the future will surely facilitate cross-border trade and cross-border logistics. It can reduce the distance between factories and markets and is necessary for the development of CLMV.

3. CANDIDATES OF SEZ IN CLMV

Based on the experiences of forerunning ASEAN countries and China, and the possibilities provided by GMS economic corridors, the types of SEZ in CLMV can be classified as metropolitan areas, ports and harbors, border areas, and junctions or crossroads. Here we would like to search for candidates for the SEZ based on the four types.

3.1 Metropolitan Areas

Table 1 enumerates major cities in CLMV. A metropolitan area plays an important role as a potential market for goods produced in CLMV and as provider of abundant labor force. Hanoi, Ho Chi Minh City and their suburban areas have already been developed and received FDIs. Among the other metropolitan areas that have been left behind, Yangon and Mandalay of Myanmar have larger potential. Next to these cities, Phnom Penh and Kampong Cham also have a larger population but do not have many companies in manufacturing except traditional industries such as rice mills in Kampong Cham.

On the other hand, Vientiane and Danang have already received several FDI companies, but their population is less than one million each. However, if one were to factor in the suburban areas of the two cities, which are Vientiane Prefecture and Hue, with other provinces of the middle part of Vietnam, the potential population becomes bigger than one million.

3.2 Ports and Harbors

Ports are the gateways to export markets and play important roles in the procurement of raw materials and intermediate goods from other countries. The same is true with bringing the goods produced in the CLMV to the overseas market. Table 2 enumerates major ports and harbors in the CLMV. In the world of sea transport in East Asia, however, these ports work as feeder ports, and most of the ships from these ports gather at two major hub ports in Asia: Hong Kong and Singapore.

Table 1: Population and Economic Indicators of Metropolitans in CLMV.

		Area ($1,000 Km^2$)	Population (1,000 Persons)	Density (Persons/Km^2)	GPP/Cap. (US$)	GPP (million US$)
Phnom Phen	Cambodia	267.0	1,313.9	4,530.5		
Kampong Cham	Cambodia	9,799.0	1,857.5	189.6		
Vientiane	Laos	3,920.0	788.9	181.6	1,301.8	1,026.9
Yangon	Myanmar	10,166.9	6,460.0	4,258.8	274.8	1,775.4
Mandalay	Myanmar	37,008.1	7,739.0	1,401.7	169.3	1,310.1
Ho Chi Minh	Vietnam	2,095.2	6,107.8	2,909.9	1,110.4	6,782.1
Ha Noi	Vietnam	921.0	3,236.4	3,510.2	787.8	2,549.6
Danang	Vietnam	1,255.5	789.8	628.3	640.0	505.5

Notes: Data for the GPP per capita are very rough estimates. These were obtained using the following processes:

1) GPP and GPP per capita in Cambodia has not been published.
2) The data of GPP, GPP per capita in Laos are values for planning in 2006/2007 which are collected from the Provincial Offices of Laos. The population data are based on the yearbook.
3) The GRP per capita in Myanmar is based on monthly household expenditure values of 2004/2005 survey. Annual expenditure per capita was obtained by dividing the annual expenditure per household by the value of the averaged household size and multiplying its quotient by 12 months.
4) As for the exchange rate of Myanmar, it is calculated by dividing the value of GDP in Kyat by GDP per capita in US dollars published on the website of ASEAN Secretariat
5) The GPP per capita in Vietnam was obtained by multiplying monthly per capita income (based on 2006 household survey), with the population of provinces, by 12 months. The GPP is the product of GPP per capita and population.

Sources: Cambodia: National Institute of Statistics [2006] *Kingdom of Cambodia Statistical Yearbook 2006.*
Laos: National Statistical Center[2008] *Lao PDR Statistical Yearbook 2007*, Vientiane.
Myanmar: Central Statistical Organization[2008] *Statistical Yearbook 2006*.
Vietnam: General Statistics Office [2008] *Statistical Yearbook 2007*.

For cities and villages along the EWEC, Danang and Maulamyine ports are designed as gateways to the Pacific and Indian Oceans, respectively. Danang Port (Tiensa), specifically, was expected to be one of the deepest ports in Vietnam. However, the quantity of container cargos is less than those in Saigon and Haiphong, which are river ports that are relatively shallow. The smaller quantity of cargo reflects the level of industrialization in Danang City. If the port city is less industrialized, the quantity of cargos becomes smaller; thus, lesser ships dock in the port. Furthermore, lesser ship implies that the location is not attractive for an export-oriented investment. On the other hand, if the port city is industrialized, the quantity of cargos increase and the number of ships also rise and attracts more investors. The development of industries and the transport infrastructure must proceed hand in hand.

Table 2: Major Ports and Harbors in CLMV

Port	Country	Location	Depth (m)	Container Throughput (TEU/Year)	
Sihanouk Ville	Cambodia	Sea	8.3	231	(2006)
Phnom Penh	Cambodia	River	5	-	
Yangon	Myanmar	River	9	129	(1999)
Thilawa	Myanmar	River	10	-	
Maulamyaine	Myanmar	Sea	-	-	
Dawei	Myanmar	Sea	12	-	
Saigon	Vietnam	River	10	1,200	(2005)
Thi Vai & Cai Mep	Vietnam	River	15	-	
Qui Nhon	Vietnam	Sea	-	-	
Danang	Vietnam	Sea	12	34	(2005)
Hai Phong	Vietnam	River	8	400	(2005)
Cailan	Vietnam	Sea	12	-	

Sources: Ishida (2007), *Port Autonome de Sihanoukville*, web sites of Institution for Transport Policy Studies and *News Net Asia* on December 4, 2007.

The port of Maulamyine was expected to reduce the transport time of companies in Thailand in exporting to Europe and the Middle East because it can provide a route that is a shorter alternative than the Malacca strait route. As a matter of fact, it takes two or three weeks to go to the Indian Ocean from Siam Bay via the Malay Peninsula and the Malacca Strait. On the other hand, it takes only three or four days from Bangkok to Yangon by road even though the road condition in sections of Myanmar is extremely bad. However, the effectiveness of Maulamyaine as a sea port is suspected because the area is shallow and still needs to be dredged while it is one of large cities in Myanmar.

Dawei is another potential deep sea port. Thus, a road connecting Bangkok and Dawei has been planned as a new economic corridor despite the fact that it has only few companies in the modernized manufacturing sector.

As for the other ports and harbors, Thilawa, Thi Vai and Cai Mep, and Cailan Ports will be developed to serve as substitute sea ports of Yangon, Saigon and Hai Phong, respectively. Among these, the Thi Vai and Cai Mep ports have already attracted interests. Major container terminal operators in the world such as PSA International, SSA Marine, and Hatchison Port have decided to build container terminals by establishing joint venture companies with local partners since the Japanese government

had decided to give assistance and to dredge the ship route from the river mouth to the upstream (United Nations 2007). As to the Saigon and Hai Phong Port, both are river ports instead of deep sea ports, but they have been major ports in the Northern and Southern parts of Vietnam, respectively.

Lastly, Sihanouk Ville should be mentioned. It is not a deep port at 8.3 meters in depth. It should be noted, however, that it is Cambodia's sole sea port that is deep enough, considering the current scale of the Cambodian economy. In terms of the frequency of arrivals, nine liners drop by at Sihanouk Ville Port from/to Singapore, Thailand, Vietnam, Malaysia and Indonesia in a week[6]. Several industrial estates have been built as SEZ, one of which is supported by the Japanese official development assistance (ODA) program.

3.3 Development of Border Areas

Table 3 shows special economic zones at border areas that have been planned, some of which are already operating. In the Lao and Thai borders of Thanaleng-Nong Khai, manufacturing factories have been operating along the road between the center of Vientiane City and Mekong Friendship Bridge. Similarly, an industrial estate had been

Table 3: Realized and Planned Special Economic Zones at Border Areas

Borders		Provinces	Values in Border Provinces as of 2003					
			Populations (1,000 persons)		Densities (Persons/Km^2)		GPP/cap. ($US)	
Bavet–Mocbai	CV	Svay Rieng-Tay Ninh	538.2	1,046.8	181.4	259.4		522.9
Koh Kong–Trat	CT		191.5	219.9	17.2	78.0		2,025.8
Poipet-Aranya Prathet	CT	Banteay Mean Chey-Sa Kaeo	773.1	538.3	115.7	75.0		1,186.0
Denh Savanh– Lao Bao	LV	Savannakhet–Quang Tri	859.7	625.3	38.7	131.4	529.0	327.1
Savannakhet- Mukdahan	LT		859.7	335.4	38.7	77.0	529.0	791.7
Thanaleng - Nong Kai	LT	Vientiane-Nong Khai	711.9	899.6	181.6	123.0	1,301.8	805.2
Huai Xai - Chiang Khong	LT	Bokeo-Chiang Rai	149.6	1,225.7	22.8	105.0	406.3	929.5
Myawaddy - Mae Sot	MT	Karen–Tak	1,674.0	527.7	369.5	32.0	194.5	1,193.3
Tachilek - Mae Sai	MT	Shan-Chiang Rai	5,306.0	1,225.7	228.4	105.0	164.6	929.5

Notes and Sources: Same in Table 1 with respect to CLMV countries. As for Thailand, it is based on National Statistical Office[2007] *Statistical Yearbook Thailand 2007 (Special Edition)*.

[6] Based on an interview with a Japan International Cooperation Agency (JICA) expert at the Port Authority of Sihanouk Ville, dated November 15, 2007.

developed at Bavet in Cambodia by the Manhattan Development, Ltd., with several foreign companies operating. In Lao Bao, Vietnam, a special economic zone has also been built. Several manufacturing companies have been operating, and many imported goods are sold at duty free shops at the border. In Mae Sot, Thailand, Thai companies produce garments by employing workers from Myanmar at cheaper wages.

On the other hand, at Poipet and Koh Kong in Cambodia and Savannakhet in Laos, the enclosed lands have been developed, and several companies plan to establish factories after the area is designated as a SEZ. However, the population density of Koh Kong and Savannakhet is low, and both sites thus might face difficulty in hiring labor unless a large migration occurs in these areas. Meanwhile, it is possible that a new border area will be developed at Poipet since the current border sites do not anymore have enough vacant space due to the proliferation of casinos.

Meanwhile, the population density and gross provincial product (GPP) of border provinces in Table 3 revealed that provinces of the sides with operational special border economic zones have relatively higher population density (e.g., Bavet, Lao Bao and Thanaleng) than those of the other sides. An exception is the case in Mae Sot where garment factories hire legal and illegal migrant workers from Myanmar, causing population at the border area to increase. It is also important to consider that provincial data do not always reflect the actual situation at the border, particularly in big provinces (i.e., by area) such as Shan and Karen in Myanmar.

In terms of population density, Savannakhet as an industrial estate location is unlikely. Although it is the second largest province in Laos, its population density is low while its population is scattered. In fact, most investors planned to invest in plantation and agricultural sectors, while the number of approved investors dramatically increased in 2006 before the completion of the Second Mekong International Bridge (Keola 2007). The population of Koh Kong is also relatively small and is in a similar situation. Khon Kaen Sugar Industry Public Company, Ltd. (Thai company), shareholder of Savannakhet Sugar Corp. and Koh Kong Plantation Co., Ltd., has been granted concessions of 10,000 ha and 20,000 ha, respectively in Savannakhet and Koh Kong (*The Nation*, August 17, 2007).

Locating industrial estates at border areas with a relatively smaller population is not feasible if large-scale labor migration does not occur. Such an option will be unable to

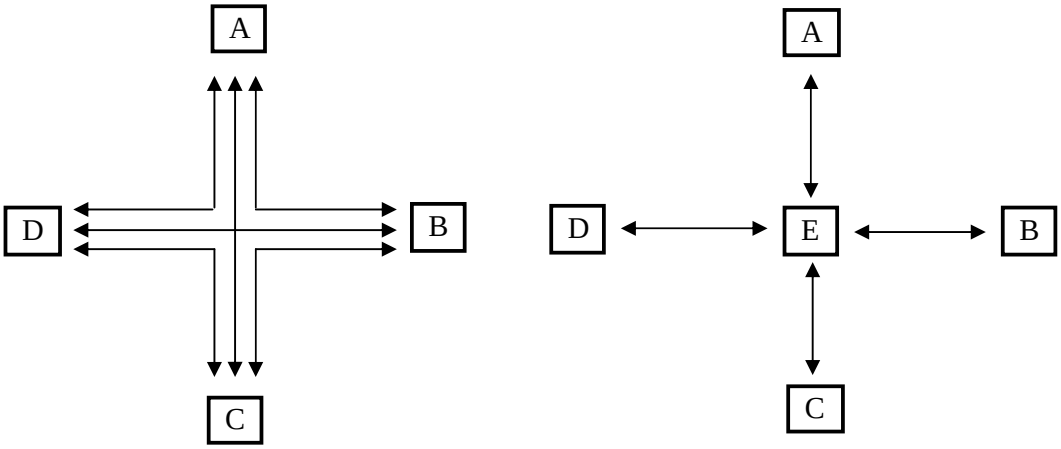
make use of abundant labor force at cheaper wages. Instead, such border areas should make use of other factor endowments with comparative advantages such as abundant land and natural resources. Needles to say, developing such border areas should be socially and environmentally sustainable.

3.4 Making Use of Junctions

The pre-investment survey for the EWEC in 2001 enumerates Phitsanulok, Khon Kaen and Dong Ha as intersection or junctions of the East-West Economic Corridor (EWEC) and the North-South Economic Corridor's (NSEC), National Road No. 2 (NR 2) of Thailand and the NR 1 of Vietnam, respectively. In Phitsanulok, specifically, commodities produced at cities or villages along the EWEC can be transported to cities and villages along the NSEC like Chiang Mai, Kunming, and Bangkok; the same can be done with commodities from the NSEC to the EWEC. Similarly, at Khon Kaen, the NR 2 of Thailand can transport goods to Vientiane, Nakhon Ratchasima, and Bangkok; and at Dong Ha, NR 1 of Vietnam can be used as passageway for goods to Hanoi and Ho Chi Minh City.

The effectiveness of junctions can be generalized. There are two cases shown in Figure 3. The left case is that from each point, goods can be delivered to three other points with the assumption that two sets of two points are connected by two lines and the lines cross each other at their middle points. The right-side case shows that goods

Figure 3: Effectiveness of Inland Container Depot at Junctions



Source: Author created.

can be delivered from each point *A*, *B*, *C* and *D* to point *E*. Such good is conveyed to each point after unloading and loading with the assumption that point *E* is located at the crossroad of two lines. The left case needs 12 tracks, and the total transportation distance needed is twice of the right case. On the other hand, the right case needs four tracks only but requires constant unloading and loading. The left case can be more effective than the right case in many situations.

In addition to the abovementioned junctions, Seno district in Savannakhet, where the EWEC crosses with NR 13 of Laos, is equally important. Savannakhet is designated as a special economic zone, and Seno was either mentioned alone or with Savannakhet. NR 13 is the most important passageway in Laos as it connects major cities such as Luang Phrabang, Vientiane, Savannakhet, and Pakse. The Japan Logistic System Corp established a joint venture with Logitem Laos GLKP Co., Ltd. to operate an innerland container depot (ICT) at Seno district on October 1, 2007. The joint venture transfers freights between Bangkok and Hanoi. This reinforces the fact that Seno is not only an important junction in NR 13 but also serves as transfer point for freights between Bangkok and Hanoi. Thus, Savannakhet remains a strategically important location even if it may not be an appropriate location for an industrial estate. Similarly, developing ICT has been planned at Khon Kaen and Phitsanulok (Tsuneishi 2007).

In addition to Savannhakhet, Luang Namtha can be another transportation hub of the NSEC. Because Luang Namtha is along the NSEC between Bangkok and Kunming, the road to Hanoi and road to Vientiane also gather at Luang Namtha. In fact, regular buses that connect Kunming and Vientiane by way of Luang Namtha have already been operating.

3. 5 Locations for surveys

Taking into consideration the areas enumerated so far as well as their number of existing firms, the locations chosen for the questionnaire survey are as follows:

Cambodia: Phnom Penh, Sihanouk Ville and Bavet
Laos: Vientiane and Savannakhet
Myanmar: Yangon, Mandalay and Myeik
Vietnam: Danang

And the locations for the flowchart approach-based survey are:

Cambodia: Phnom Penh and Sihanouk Ville
Laos: Vientiane and Savannakhet
Myanmar: Yangon
Vietnam: Danang

CONCLUDING REMARKS

Candidates as SEZs in the CLMV have earlier been enumerated. Based on the listed candidates, this paper concludes with the present country-specific strategies.

To develop Cambodia, this paper presents a strategy to develop Phnom Penh and Sihanouk Ville as one set. In Phnom Penh, the Phnom Penh SEZ has already been developed in 2008 and has several manufacturing companies operating. In Sihanouk Ville, some manufacturing companies were said to have already decided to invest in the SEZ. The advantage of Phnom Penh is its larger population, but the distance to Sihanouk Ville Port is about 220km. On the other hand, Sihanouk Ville is a port city, but its population is not large. Each of these locations satisfies only one of our two conditions (i.e., larger population and better access to deep ports) so together, they can complement each other. These two cities should attract suitable industries, respectively. For example, heavy industries like chemical resins and steel and iron, whose transport cost per weight is higher, are suitable in Sihanouk Ville. In addition, the industries that can substitute import with domestic production are possible in Sihanouk Ville Port. Such industries can maintain their economy of scale by exporting to foreign countries from Sihanouk Ville.

On the other hand, industries, whose transport cost per weight are lower (such as precision industry) or are labor-intensive, are suitable in Phnom Penh. Therefore, “a good combination of Phnom Penh and Sihanouk Ville” is the policy strategy for Cambodia.

Another strategy for Cambodia is to utilize the border areas. Bavet and Poipet have

relatively larger population and are situated on the central subcorridor of the Southern economic corridor. Thus, these two cities are good candidates as SEZ. On the other hand, Koh Kong is better off taking another direction; that is, it could instead focus on attracting agro-based industries.

Laos, Vientiane, Savannakhet, and Luang Namtha were mentioned in this study. Among the three cities, Savannakhet is on the EWEC, and Luang Namtha is on the NSEC, but Vientiane is not on the economic corridors. However, Vientiane is a city that holds the largest population per area and its access to Thailand by way of Friendship Bridge is better; thus, the city is suitable for the manufacturing industry. On the other hand, Savannakhet and Luang Namtha can increase their role as a junction of major roads and can attract agro-based industries. As a matter of fact, the population of Laos is not large. Manufacturing industries that need more labor force should be focused on Vientiane.

Therefore, this paper recommends that based on the above analysis, Vientiane, Savannakhet and Luang Namtha's specific functions should be strengthened.

As for Myanmar, three regions should be developed as SEZ candidates. The first is the Yangon and Thilawa region. This region has a larger population and its access to the harbor can be realized by improving the Thilawa port and the access road between the two cities. The second region is the west coastal area of Malay Peninsula, which includes Maulamyaine and Dawei. The advantage of this area can be realized by improving the road to Thailand. In addition to two port cities, Myeik should be added because this port is used by ships from/to Singapore and Malaysia, and fishery-related industries have been well developed. The third region is Mandalay and Sagine. This region is an inland region, but has a huge population and better road access to China.

As for Vietnam, Ho Chi Minh, Hanoi, and their suburban areas (including Hai Phong and Vuntau) have already been developed and have received substantial FDIs. The supporting SEZ strategy should be focused on the middle part of Vietnam, which includes Danang, Hue, Don Ha and Lao Bao. Here, a policy to strengthen the linkage between the EWEC and Danang Port is needed. As a matter of fact, the distance from Savannakhet to Danang is about 500 km---which is shorter than the 720-km distance to Laem Chabang Port in Thailand. A few transport operators in Laos, however, do not use the Danang Port. Among the reasons they do not use Danang Port are the strict

restriction on the road speed and the frequency of ship arrivals. The largest problem, however, is that it takes more than one month for Vietnam to act on the vacant container order of a transport operator in Laos. In contrast, Thailand's turnaround is two or three days only. Simplifying the cross-border processes, therefore, remains a challenge for Vietnam.

REFERENCES

Central Statistical Organization, Myanmar. 2008. *Statistical Yearbook 2006*.

General Statistics Office, Vietnam. 2008. *Statistical Yearbook 2003*.

International Monetary Fund. Various Years. *International Financial Statistics*.

Ishida, M. 2006. FDI from Japan to South East Asia. Presentation Material at a seminar on the European Economic Presence in South-East Asia: Empirical Observation and Analysis, held by Centre for European Studies, Bangkok and Research Institute of Contemporary South-East Asia (IRASEC) dated on November 16-17.

Ishida, M. 2007. *Danang Port as a Key of development of the East West Economic Corridor (in Japanese).* In Greater Mekong Subregion Economic Cooperation Program; Realizing Three Economic Corridors, ed. Ishida M. and T. Kudo, Chiba: Institute of Developing Economies.

Keola, S. 2007. East-West Corridor and Laos: What will change by the completion of Second Mekong International Bridge (in Japanese). *Greater Mekong Subregion Economic Cooperation Program: Realizing Three Economic Corridors*, ed. Ishida M. and T. Kudo. Chiba: Institute of Developing Economies.

Kudo, T. 2007. Border Industry in Myanmar: Turning the Periphery into the Center of the Growth. *IDE Discussion Paper No. 122*, Chiba: Institute of Developing Economies.

National Statistical Office. 2007. *Statistical Yearbook Thailand 2007 (Special Edition)*.

Tsuneishi. T. 2007. Thailand Economic Cooperation with Neighboring Countries and Its Effects on Economic Development within Thailand. *IDE Discussion Paper No. 115.* Chiba: Institute of Developing Economies.

United Nations. 2007. *Review of Maritime Transport 2007*.

Chapter 3

BORDER AREA DEVELOPMENT IN THE GMS: TURNING THE PERIPHERY INTO THE CENTER OF GROWTH

Toshihiro Kudo

ABSTRACT

Border area development is neither an original nor a brand new idea of the author. It has long been discussed in a variety of words including border industries, growth triangles, growth areas and economic corridors. The Greater Mekong Subregion (GMS) Economic Cooperation revitalized the border area development as a new development strategy for less developed countries such as Cambodia, Lao PDR and Myanmar. This chapter examined the location advantages of border areas, in particular of those between less developed regions and developed ones. They include complementary factor endowment, cross-border infrastructure services and the degree of economic integration and border barriers. The industry located in border areas has a growth potential, as it can exploit the location advantages of the abundant and cheap labor force in less developed regions, while avoiding high service link costs and unstable utility services that accrue from underdeveloped infrastructure in less developed regions, by utilizing cross-border infrastructure services. Special economic zones (SEZs) located in the border areas can effectively exploit such location advantages and contribute to the formation of industrial clusters in border areas.

INTRODUCTION

Three economic corridors in the Greater Mekong Subregion (GMS) are emerging as a multi-country transport artery across mainland Southeast Asia. The economic corridor approach was first discussed in the GMS programs in late 1998 as a key means of further developing cooperation in the GMS (ADB, 2001:xi). Three major routes were identified namely, North-South Economic Corridors, East-West Economic Corridors and South-South Economic Corridors. The infrastructure development of these economic corridors has steadily progressed. North-South Economic Corridors can connect Kunming to Bangkok if the remaining parts of Lao PDR and Myanmar are

completed. East-West Economic Corridors can connect almost all parts of the route except the Myanmar part of approximately 165 km long. Some logistics companies have also started commercial transport services through these economic corridors. For example, Dragon Logistics Co., Ltd., a Japanese-affiliated company, started its cross-border transport services for the route from Bangkok to Hanoi across the second Mekong Bridge connecting Mukdaharn in Thailand and Savannakhet in Lao PDR, taking four days. It also provides further transport services from Hanoi to Guangzhou and Hong Kong via Pingxiang-Lansong's Vietnam-China border gate. These two routes cover the four countries in the GMS.

However, the economic benefits arising from enhanced transport connectivity in the GMS may not be equally enjoyed by all the member countries, regions and cities. For example, increased cross-border traffic between Bangkok and Hanoi utilizing the EWEC may just pass through Lao PDR without bringing any meaningful economic benefit to this landlocked country. On the contrary, the increased traffic may become a burden on the Lao government due to the incurred road maintenance costs. Moreover, small and medium cities and towns may also face the possibility of being marginalized under the more integrated regional economy.

How to make the most of the economic corridors for the overall economic development in GMS countries remains an important task and challenge, particularly for least developed economies in the region, i.e., Cambodia, Lao PDR and Myanmar. The master plans of economic corridors included the so-called nodes development for industrial clusters as one of the effective measures for this purpose (See ADB's master plan, 2001). GMS countries, less developed regions in particular, will be able to tap the spillover effects of economic corridors into the rest of their economies through such nodes of industrial clusters.

Candidates of locations for nodes development include metropolitan cities such as national capitals, transport hubs and gateways such as sea ports and road and railway junctions, and border areas in the masterplan. It seems natural that metropolitan cities including national capitals and transport hubs and gateways are selected as candidate locations for potential nodes for industrial clusters.[1] However, why are border areas

[1] See Chapter 2 (Ishida) in this volume for details.

and/or towns selected as potential nodes of industrial clusters? What are the specific location advantages of border areas for industrial clusters? These are not self-evident.

Nevertheless, some GMS countries have already started to develop industrial clusters in the border areas. For example, the Cambodian government approved 18 special economic zones (SEZs) in the nation as of November 2007, and many of them are located along the border areas. Why do both policy makers and private entrepreneurs pay attention to border area development? What are the competitive edges and location advantages of border areas? This paper tries to investigate the source of competitiveness of border areas as industrial locations. Moreover, the author considers how to utilize such competitive edges of border areas for the development of less developed economies, i.e. CLMV, rather than the relatively developed ones such as Thailand and China.

The first section examines the concept of border area development from a historical viewpoint. Border area development has long been discussed in various words such as border industry and growth triangles. The GMS Economic Cooperation successfully revitalized such development and cooperation schemes in the 1990s, following the end of the Cold War. The second section examines the competitive edges of border industry from three viewpoints, i.e., complementary factor endowment, cross-border infrastructure services and balance between economic integration and border barriers. The third section provides two case studies of border industry: one is the garment industry in the Thai-Myanmar border areas and the other is the SEZs in Cambodia. The fourth section considers how to promote border industry on the less developed regions rather than on the more developed regions. In the last section, we will summarize the discussion and mention policy recommendations.

1. BORDER AREA DEVELOPMENT: NEW WINE IN OLD BOTTLES

Border area development is neither an original nor a brand new idea of the author. It has long been discussed in a variety of words including border industries, growth triangles, growth areas and economic corridors. They have different schemes and programs with diverse objectives. For example, Mexican border industrialization had often been discussed in the context of creating an economic fence that is expected to absorb the

potential migrants from Mexico to the Unites States (Rivera-Batiz, 1986:263). South Africa tried to promote border industries to reduce overconcentration in metropolitan areas (Best, 1971:329-330). In these examples, border area development serves more political and social objectives than economic ones.

On the contrary, growth triangles were conceptualized and proposed as a growth strategy of transnational regions. Growth triangles are probably most well-known sub-regional economic cooperation schemes including border area development. The term of growth triangle came into common use when then Deputy Prime Minister of Singapore, Goh Chok Tong, used it in December 1989 (Min Tang and Myo Thant, 1994:2). They are defined as transnational economic zones spread over well-defined, geographical proximate areas covering three or more countries such as Batam-Bintang-Karimn Growth Triangle, Southern China Growth Triangle, the Tunmen River Area Development Programme, Northern ASEAN Growth Triangle and Eastern ASEAN Growth Triangle. Growth triangles typically include the market economy and transitional economies that proceed from planning one to market-oriented one.

Just before the end of the Cold War, CLMV countries started to transform their socialist planning economies to market-oriented ones with open-door policy. The GMS Economic Cooperation, initiated by the ADB, grasped such an opportunity in the early 1990s and successfully revitalized a sub-regional economic cooperation in mainland Southeast Asia.

In the GMS, Thailand occupied the central part of the sub-region and recorded a relatively high economic and industrial growth. When CLMV countries opened the door to the regional markets, they had no option but to integrate themselves with the Thai economy. During the Cold War period, the cross-border economic activities between Thailand and CLMV countries and China had long been strictly restricted except for cross-border trades, which were often informal and illegal. After the end of the Cold War, however, the cross-border economic activities have become activated and border industry has begun to grow to form industrial clusters in border areas.

The GMS Economic Cooperation strongly promoted the regional integration between the CLMV economies and the Thai economy and later the Chinese one, and this was the key element of this regional cooperation schemes. Whatever the designations are, border area development has long been discussed in this region by policymakers,

economists and businessmen. Border area development has recently attracted more and more attention and been revitalized by the GMS Economic Cooperation.

2. COMPETITIVE EDGE OF BORDER INDUSTRY

Border industry[2] is one of the most important components of border area development. What factors promote or hinder border industry? There are three factors that influence the competitiveness of border industry, i.e., complementary factor endowment, availability of cross-border infrastructure, and balance between economic integration and border barriers.

2.1 Complementary Factor Endowment

From an economic point of view, a border is nothing but an impediment to free mobility of productive inputs, such as labor, capital, technology and information. As a result, a border creates differences in factor prices across the border, and complementary inputs become available alongside each other in border areas. Such complementary inputs can be easily transported across the border and combined for production on either side of the border. A border industry can also grow by exploiting the differences in the endowment of productive inputs across the border.

In the GMS, Thailand and China are relatively advanced economies, while CLM are still in their rudimentary development stage. On the other hand, Vietnam is apparently entering a more advanced stage of economic development. Border areas between relatively advanced and less developed economies offer their respective complementary location advantages. For example, CLM economies provide a labor force, while Thailand offers major inputs (materials, parts, and components), technology, and capital. In border areas, those complementary resources, which exist side by side across borders, are combined to produce cost-competitive products. Of course, some of these resources must be transported across the border to be utilized for production in a border town. Thus, a certain degree of cross-border mobility of productive inputs is required for the

[2] Border industry here is simply defined as industries located in border areas of two or more countries. This section is mainly drawn from Kudo and Kuroiwa (2009: forthcoming).

birth and growth of a border industry. The relations between degrees of economic integration and growth and decline of border industry will be examined later.

2.2 Cross-Border Infrastructure Services

In East Asia, service link costs—costs for connecting remotely located production blocks—have been reduced substantially. This made it possible for multinational corporations (MNCs) to aggressively exploit wage differences between developed and less developed economies in East Asia and to develop extensive production and distribution networks in the region.

However, CLM countries, less developed Southeast Asian economies, have yet to be integrated into such networks in spite of their abundant, reasonably well-educated and low-waged labor force. Underdeveloped infrastructure, notably in transportation and communication, hinders them from participating in production and distribution networks and, unless good infrastructure is developed, the savings in labor costs by relocating labor-intensive activities to less developed economies are more than offset by increases in service link costs and other costs (fixed costs of setting up new factories, high utility service costs, etc.). Particularly in labor-intensive export sectors, high transport costs could easily wipe out export profitability even if wage levels fell substantially (Fujimura, 2006:52). We should note that the industrial sector of CLM economies is, and will be for a foreseeable future, highly dependent on labor-intensive industries.

Here, a border industry could offer a solution for overcoming such a problem. Namely, a less developed economy in Southeast Asia can participate in the production network via border areas. The required infrastructure investment to connect its border areas with the existing infrastructure in neighboring countries may be far smaller than that for developing a nationwide infrastructure system. For example, it would be very costly to construct a deep-sea port somewhere on the Myanmar coast. Furthermore, the new port may not be fully utilized because of the weak agglomeration of industries, and it may lead to a shortage of cargoes and expensive shipping costs. Firms in Myanmar-Thai border areas, on the other hand, can gain access to the well-developed Bangkok Port and Laemg Chabang Port via well-connected road networks in Thailand.

In border areas, firms would also have better access to utility services such as electricity, water, and telecommunications that are provided by more advanced neighboring countries. Thus firms located in border areas can enjoy all the benefits of lower service link costs (i.e. lower transport and communication costs) and more reliable and cheaper utility services (especially electricity) as well as lower labor costs.

2.3 Economic Integration and Border Barriers

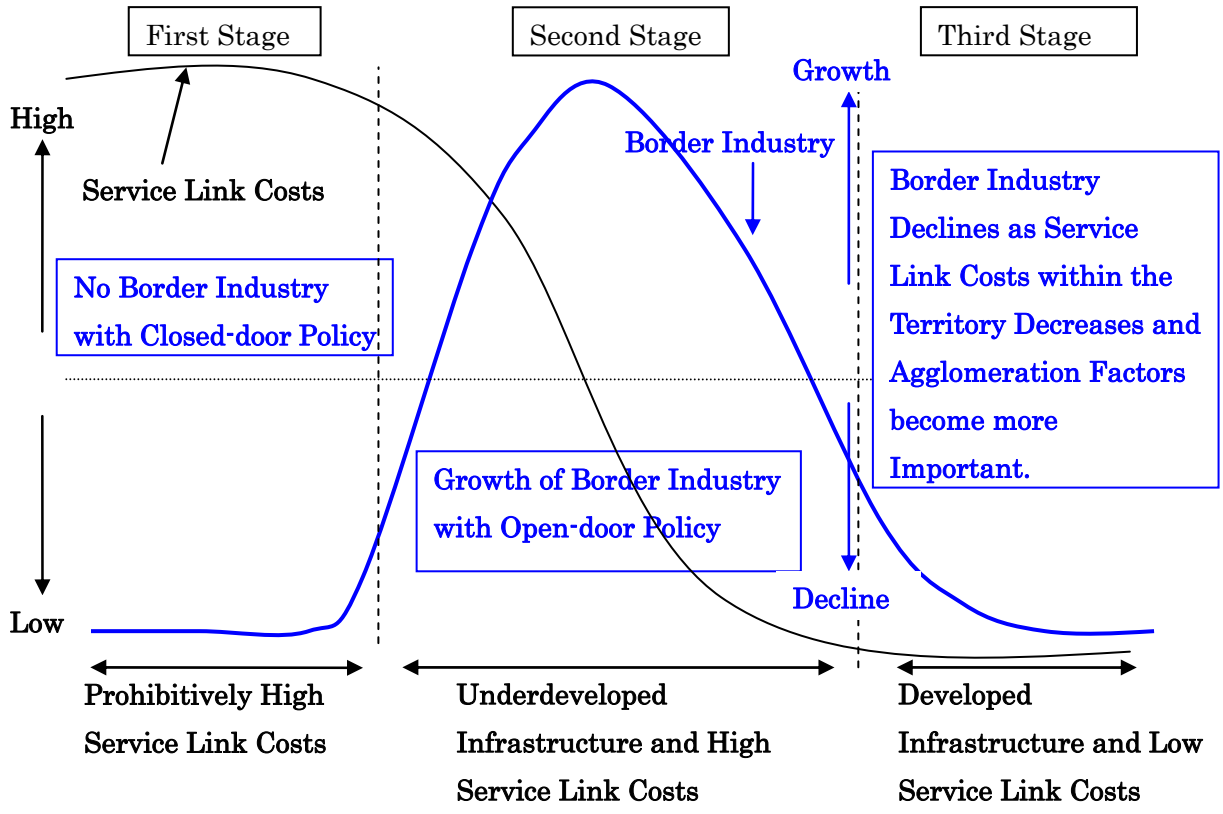
The above two production factors—lower service link costs and more reliable and cheaper utility services—provide location advantages of the border areas over other regions, including metropolitan areas and cities. Figure 1 shows the relationship between the service link costs and the growth of border industry. Initially, the borders of CLMV countries were closed for all practical purposes during the socialist period, and thus border industry could not emerge (the first stage). In this stage, only illegal, irregular and small-scale cross-border smuggling was conducted.

The open-door policy of CLMV and peace in the border areas following the end of the Cold War improved security and lowered border barriers, allowing a border industry to emerge and develop (the second stage). A border industry grows rapidly due to the location advantages mentioned above, i.e., lower service link costs, more reliable and cheaper utility services, and an abundant and cheap labor force.

However, as the infrastructure develops in a less developed economy, the location advantages of border areas (or the competitiveness of border industry) diminish (the third stage). This is because, on the one hand, the development of infrastructure, especially in transportation, telecommunications, electricity, and water, reduces the service link costs and utility service costs within the territory and therefore diminishes the cost advantages of border areas. At the same time, the advantages of other areas, especially metropolitan areas, may become more important at this stage. Metropolitan areas, for example, can provide a highly qualified labor force and specialized parts and service suppliers as well as lucrative local market. The metropolitan area can also furnish more frequent and cheaper transport services. Such agglomeration effects will become crucially important as the industrial activities in the area are upgraded, shifting from labor-intensive to capital- and/or knowledge-intensive activities. As a result of

lower service link and utility service costs, the economies of agglomeration in the metropolitan area will finally eclipse the initial location advantages of the border industry and eventually retard its growth.

Figure 1: A Relationship between Service Link Costs and Border Industry



(Source) The author.

3. CASE STUDIES OF BORDDER INDUSTRIES

As case studies, this section examines the garment industry in Mae Sot[3], which is an emerging border industry on the Thai-Myanmar border and SEZs in Cambodia. Based upon the discussion mentioned above, this section examines existing cases to see how the border industry exploits their location advantages.

[3] This case is based on Kudo (2007) and ERTC (2007).

3.1 Garment Industry in Thai-Myanmar Border Areas

Mae Sot is a small town in Tak Province north of Thailand.[4] A small river called the Moei separates Mae Sot and Myawaddy, a small town in Karen State in Myanmar. The two towns are also situated on the GMS's East-West Economic Corridor (EWEC) that connects Da Nang in Vietnam and Mawlamyine in Myanmar via Laos and Thailand.

According to the IDE-ERTC joint survey[5], the garment industry in Mae Sot is quite young. Six out of 10 garment firms surveyed were established after 2001, while two were set up in 1998, and one firm in 1990 and 1995, respectively. The average number of employees was 423. Workers from Myanmar comprised 86% of the total number of employees. The firms operated for 296 days in 2005, or 25 days per month on average.

Location Advantage (1): Availability of Myanmar Migrant Workers

An obvious location advantage of garment industry of Mae Sot is availability of Myanmar migrant workers. Tak Province is one of the places where abundant Myanmar labor is available and employable. In terms of the number of work permits issued to Myanmar nationals in 2004, Tak Province with 50,932 permits ranked third, followed by Bangkok with 98,308 and Samut Sakhon with 67,799 (Huguet and Punpuing, 2005:30-34).[6]

Out of 100 Myanmar workers interviewed, 61 were female. The average age of the workers was 27 years old, ranging from the youngest at 18 to the oldest at 36 years old. In terms of their hometowns, 23 were from Myawaddy; 20 were from Pa-an, the capital of Karen State; 11 were from Mawlamyine, the capital of Mon State; nine were from

[4] The population of Mae Sot in 2000 was 106,413 according to Wikipedia (available at http://en.wikipedia.org/wiki/Mae_Sot), accessed on September 11, 2008.

[5] The Institute of Developing Economies (IDE-JETRO) conducted a joint study with the Economic Research and Training Center (ERTC) of Thammasat University on the economic and social aspects of migrant workers in the garment industry in the Thai-Myanmar border areas in August and September 2006. The study included a questionnaire survey covering 10 garment factories and 100 Myanmar migrant workers. See ERTC (2007) for details.

[6] The Thai government has responded to requests from employers to allow them to hire foreign workers to fill labor shortages in the industry in particular job areas commonly referred to as the "Three Ds", which stand for "difficult, dirty, and dangerous". Following a Thai Cabinet Decision in April 2004, the most comprehensive registration until then took place in that year when the Thai Ministry of the Interior registered 1,280,000 foreigners during the month of July. Of these, 814,000 had applied for work permits by mid-December. Of the 814,000 applicants, 610,000 or three-quarters were from Myanmar.

Yangon, the former national capital; six were from Thaton, the former center of the ancient Mon Kingdom; and four were from Bago, the capital of Bago Division.[7] Many of workers were understandably from nearby towns like Myawaddy and Pa-an. It is however notable that quite a few were from rather distant places like Yangon and Bago and, in terms of ethnicity, 96 workers were Burmese and the rest were Karen, Kachin and Akha. These facts imply that the labor market for the garment industry in Mae Sot encompasses quite a large geographical area along the main road that connects Myawaddy and Yangon.

Seventy-four out of 100 Myanmar workers migrated to Thailand after 2002. In the years 2004 and 2005 in particular, the entry of 25 and 27 persons, respectively, was recorded. Rapid increases in these two years may be related to the relaxation of the Thai government's policy on migrant workers. It may also be related to the collapse of Yangon's garment industry after the United States' sanctions of July 2003, which banned imports of made-in-Myanmar products to the United States. The garment factories in Yangon were closed and some of their workers came to the factories in Mae Sot.

Employees worked for eight hours a day, six days a week. Ninety-two workers earned only the minimum wage of 143 baht (equivalent to US$3.80 at the exchange rate of September 2006) a day, six workers earned 150 baht per day and two workers earned 160 baht or more per day. Their basic monthly wage amounted to 3,575 baht (143 baht/day x 25 days) or US$94, while garment workers in Yangon earned, on average, 17,800 kyat per month, equivalent to about US$20 per month in 2004 (Kudo, 2005). Most workers in Mae Sot also received overtime pay with the higher rates being 23-27 baht per hour (equivalent to 184-216 baht per day). Nominal wage differences between the garment industry in Yangon and in Mae Sot were almost five-fold, and this wage gap attracted workers from Myanmar even from distant places. This indicates that as long as there is a significant difference in wages, border areas will be able to attract workers from other areas and make up for the shortage of the labor force in the remote area. Thus, the availability of Myanmar migrant workers in Mae Sot is an obvious location advantages of border areas.

[7] Some places indicated by interviewees were not identified because of incorrect transliteration of the Myanmar language by Thai enumerators.

Location Advantages (2): Logistics

The garment industry in Mae Sot, and possibly Myawaddy in the future, has an advantage in logistics over Yangon. Let the author take an example case where a garment manufacturer in Mae Sot exports to Tokyo. The 490-kilometer road connecting Mae Sot and Bangkok is paved well, and vehicles can cover the distance in 12 hours at a cost of about US$290 (Table 1). In Bangkok and its suburbs, there are two major ports: one is Klong Toey Port and the other is Laem Chabang Port, the latter of which is one of Asia's leading ports and the most important commercial deep-sea port in Thailand. It takes eight to nine days from Laem Chabang Port to Tokyo/Yokohama Port and costs US$1,340 to ship a 40-foot container.[8] Products made in Mae Sot arrive in Tokyo in about 10 days at an approximate cost of US$1,630.

Table 1: Comparison between Road and Marine Transport

	Route	Distance (km)	Time (Hour)	Cost (US$)	Conditions
Road	1. Bangkok-Mae Sot	490	12 Hrs (1st Day)	290	Very Good
	2. Mae Sot-Kawkareik	75	4 Hrs (2nd Day)	440	Very Bad
	3. Kawkareik-Yangon	380	15 Hrs (3rd Day)		Good
	Total	945	3 Days	730	
Marine	1. Bangkok-Bangkok Port	20-30	1-2 Hrs	80	Very Good
	2. Bangkok Port-Yangon Port	approx. 4000	20 Days	1,000	-
	3. Yangon Port-Yangon	20-30	1-2 Hrs	50	Good
	Total	-	approx. 1 Month	1,130	

(Note) Costs for 20-foot container.

(Source) *JETRO Censor* in Japanese, February 2006, p.19.

Alternatively, let the author consider another example case where a garment manufacturer in Yangon exports to Tokyo. Most factories in Yangon have good access to Yangon Port, taking one or two hours, at an approximate cost of US$50. However, no vessels sail directly to Japan and cargoes have to be transshipped at Singapore Port. It takes four to five days and costs US$650 to ship a 40-foot container from Yangon Port to Singapore Port.[9] Moreover, only two vessels are available every three days, and transshipment takes at least another day. Shipment from Singapore to Tokyo/Yokohama

[8] Based on information from JETRO (2007).

[9] Interview with the MGMA chairman on September 4, 2007.

Port takes seven days and costs US$940. In total, it takes 13 days from Yangon to Tokyo and costs US $1,740, plus transshipment charges in Singapore Port.

It is obvious that the latter route takes more time and expense by a significant margin. Moreover, garment firms in Yangon need to apply for export and import licenses for each transaction and it requires them to travel all the way to Naypyidaw, the new capital of Myanmar, located about 300 kilometers north of Yangon. It usually takes about two weeks to obtain one export and/or import license, as the Trade Policy Council approves each license individually. At the same time, cargoes are often kept in port for a considerable time for inspection and customs clearance. On the other hand, Bangkok Port and Laem Chabang Port are said to provide much more efficient services.

The garment industry in Mae Sot also has an advantage in the procurement of raw materials. The survey shows that four out of the eight respondent firms used only Thai domestic raw materials. For one respondent, domestic materials accounted for 73% of materials with the remaining 27% imported, and three used imported materials only. Conversely, the garment industry in Yangon has been completely dependent on imported raw materials. Firms in the garment industry actually needed to import all materials—fabrics, accessories, thread, and even plastic bags—with the exception, perhaps, of cardboard boxes. Furthermore, it takes a lengthy period of time in Myanmar to import materials. Thus garment firms in Yangon need a longer lead time for production and the delivery of products. The longer lead time required hinders Myanmar's garment industry from sewing seasonal and/or fashion apparel items, which require quick responses. On the other hand, it is a strong advantage for garment factories in Mae Sot to be able to use both domestic and foreign raw materials.

Location Advantages (3): Cross-border Supply of Electricity

Myanmar has experienced a long-standing national power shortage since the late 1990s. Shortage of electricity is one of the most serious problems in the garment industry as well as in other manufacturing sectors in Myanmar. In a survey of the garment industry in Yangon conducted by the author in 2005, firms were asked to rate how severely the poor infrastructure services in telecommunications, transportation, and electricity affected their operations. Table 2 shows that electricity is regarded as a very severe problem in garment production. In the same survey, 69 firms among the 139

respondents answered that they had experienced power interruptions more than three times a day and that these had often lasted for more than three hours. Therefore, most manufacturers (134 out of 141 factories) had to use their own generators or share generators with other factories.

Table 2: Garment Factories' Ratings on Infrastructure Services in Yangon, 2005

	Very Severe Obstacle	Major Obstacle	Moderate Obstacle	Minor Obstacle	No Problem
Telecommunications	3	18	30	34	56
Electricity	53	55	17	8	8
Transportations	0	2	20	35	84

(Source) Kudo (2006: 113).

On the other hand, firms in Mae Sot are provided with power from a Thai company and therefore have a reliable electricity supply. Moreover, many households in Myawaddy already buy electricity from a Thai company in Mae Sot, which is however deemed illegal by the State-owned Economic Enterprises Law in 1989. The Myanmar consumers pay electricity charges in baht, the use of which is also illegal, as possession of foreign currency by Myanmar citizens is prohibited by law.

The provision of electricity to households in Myawaddy through the power grid in Mae Sot seems to be based on a mutual understanding between the regional authorities in both countries. Once legal and institutional arrangements have been made between the two governments, factories located in Myawaddy could be officially and regularly provided with electricity from the Thai side. The electricity supply from the Thai side to the Myanmar side shall be a significant location advantage of Myawaddy over major cities in Myanmar proper including Yangon.

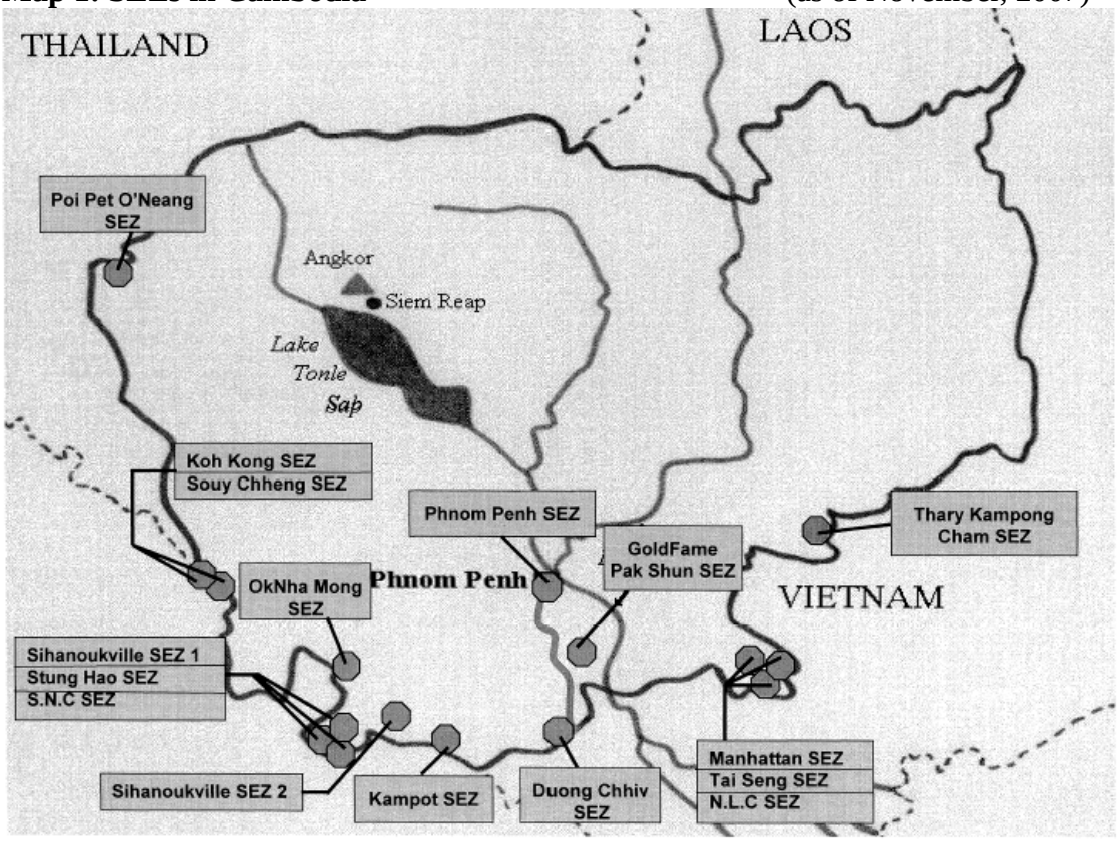
3.2 Manhattan SEZ in Cambodia

The Cambodian government approved 18 SEZs in the nation as of November 2007, and many of them are located along the border areas (See Map 1). One of the earliest established SEZs in Cambodia is Manhattan SEZ, which is located in a small border town called Bavet, opposite Moc Bai of Vietnam. The cross-border gate between Bavet

and Moc Bai is on the GMS's Southern Economic Corridor that connects Bangkok of Thailand and Ho Chi Minh of Vietnam through Phnom Phenh of Cambodia.

Two factories started to operate and export their products to the rest of the world through Vietnam. The factories can employ Cambodian workers with the minimum wage of US$ 50 per month, which is cheaper than that of Ho Chi Minh and its suburbs. On the other hand, electricity is supplied to the factories from the Vietnam grid, which is cheaper and more reliable than that of Cambodia. The products can be transported to Ho Chi Minh Port, which is located just 60 km away from the Bavet-Moc Bai border. Ho Chi Minh Port is one of the well-developed international ports and has a good access to the regional and global markets. The machineries and intermediate goods necessary for production also can be supplied from Ho Chi Minh and its suburbs, which have relatively thicker industrial clusters than Phnom Penh.

Map 1: SEZs in Cambodia (as of November, 2007)



(Note) In this map, only 16 SEZs are shown.
(Source) Documents obtained from the Cambodian SEZ Board (CSEZB) on November 16, 2007.

Thus, firms in Manhattan SEZ can make the most of its location advantages of border areas between the less developed region (Cambodia) and the more developed region (Southern Vietnam). It is noteworthy that most of SEZ developers in Cambodia are private companies, and present and potential investors in those SEZs are also private firms. The private sector and the public sector find business and investment opportunities in border areas, and regard border areas as a competitive location.

4. WHY IS BORDER INDUSTRY NOT LOCATED IN LESS DEVELOPED ECONOMIES?

The border industry is, in theory, expected to be geographically located in the less developed economy. In terms of physical service link costs that are largely determined by geographical distance, it makes no difference on which side of the border firms are located. Infrastructure services such as electricity, telecommunications, and access to international ports and airports can be provided from advanced neighbors. Access to intermediate goods is also provided by suppliers located in the neighbors.

However, a border industry could enjoy the benefits of lower labor costs much more if it is situated in the less developed economy. In the case of garment industry in Mae Sot, factories could employ more workers at lower wages on the Myanmar side of the border areas than on the Thai side, as they do not need to follow the minimum wage regulations and restrictive migrant worker policies established by the Thai government.

Nevertheless, it is particularly surprising that no border industry is located on the Myanmar side. In the case of the Thai-Myanmar border area, as we have examined, all factories are located on Thai soil, and Myanmar migrant laborers move to Thailand and work there. This is obviously due to insufficient investment and an inferior business environment in Myanmar where many restrictive regulations, both explicit and implicit, are imposed on foreign firms by the host government. For example, Myanmar's Foreign Investment Law sets the minimum capital investment at US$500,000 for manufacturing firms, and such an amount is often more than Thai small and medium-size enterprises (SMEs) can afford.

In addition to such an explicit regulation, lack of policy consistency and unpredictability of policy implementation and sporadic closure of border gates seriously

impede Thai firms from crossing the Moei River. The Myanmar government also strictly controls external trade, particularly cross-border trade, by means of export and import licenses, an export-first policy and trade bans on certain items. It also restricts foreign currency transactions, which then create significant disparities in exchange rates from the official rate of about six kyat to one US dollar to the market rate of about 1000 kyat as of February 2009.

The Myanmar government frequently changes rules and regulations without prior consultation with the business sector or even without prior notice and this attitude seriously undermines the stability and predictability of the business environment in Myanmar. Such unfavorable government policies increase the institution-wise service link costs across the Thai-Myanmar border. If enterprises were to move to the Myanmar side, Thai investors would face an extremely uncertain business environment. In the border areas, divisions are created not by the distance but by the impermeability of borders and differences in business and investment environments. Thus, Thai firms in the border area would not choose to move to Myanmar soil.

On the contrary, SEZs in the border areas of Cambodia are located on the Cambodian side rather than on the Thai or Vietnam side. This is probably because investment and business environment in Cambodia is relatively better than that of Myanmar. Moreover, regional economic cooperation schemes, such as the GMS, contribute to the development of the cross-border infrastructure, cross-border institutional frameworks such as the cross-border transport agreement (CBTA), single-window and single-stop services, and truck passports. These efforts will reduce the transport and transaction costs across the border and strengthen the location advantages of border areas on the side of less developed economies.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This chapter examined the location advantages of border areas, in particular of those between less developed regions such as CLMV and developed regions such as Thailand and China. We identified several factors that promote location advantages of border areas and growth potential of border industry. The border industry has a growth

potential, as it can exploit the location advantages of the abundant and cheap labor force in less developed regions, while avoiding high service link costs and unstable utility services that accrue from underdeveloped infrastructure in less developed regions, by utilizing cross-border infrastructure services from the developed side.

What policy recommendations can we draw from the discussions above? The CLMV economies have not been deeply integrated into the East Asian production and distribution networks in spite of their various location advantages, notably abundant, reasonably well-educated and low-waged labor forces. Underdeveloped infrastructure, logistics in particular, and poor investment climate hinder them from participating in such networks in East Asia. Service link costs and other business costs in CLMV have not become low enough to realize total costs reduction. Such costs can easily offset the advantages of low-waged workers in CLMV countries.

Special economic zones (SEZs), including export processing zones (EPZs), could be a good policy tool to reduce such business and transaction costs embedded in the CLMV economies. SEZs will provide well-developed infrastructure with intensive capital investments in the demarcated production sites. SEZs will also provide efficient administrative procedures including single-stop and single-window services for export and import, business services such as offshore banking and logistics, and governmental supports for human resources development and technological transfer. All these efficient services will be made possible in SEZs by insulating them from the rest of the country, where investment climate is generally poor.

SEZs can be located in the border areas, since border industry can offer a solution on how to overcome high business and service-link costs in the CLMV economies. SEZs located in the border areas can connect themselves to the regional and global economy through their borders with neighboring countries, Thailand in particular, which have logistic hubs such as deep sea ports, airports, and trunk roads. Thus, firms including multi-national companies (MNCs) located in the border areas of CLMV can enjoy location advantages such as low-waged labor while realizing total cost reduction with lower service link costs. SEZs in the border areas also can provide efficient cross-border infrastructure and institutions, which eventually enhance the competitiveness of border areas.

In this way, border areas in CLMV are no longer backward regions that are dependent on assistance from the center. On the contrary, they are situated on the frontiers and are conduits which capture business opportunities originating from emerging countries such as Thailand and China, and pass them into the core of the CLMV economies. The governments of CLMV countries need to recognize the potential of border areas and to position border area development, including promotion of border industry, in their national industrial development strategy.

REFERENCES

Asian Development Bank (ADB) (2001) *Preinvestment Study for the Greater Mekong Subregion East-West Economic Corridor*, Vol.1-6, ADB.

Best, Alan C.G. (1971) "South Africa's Border Industries: The Tswana Example," Annals of the Association of American Geographers, Vol.61, No.2. (Jun., 1971), pp.329-343.

Economic Research and Training Center (ERTC), Thammasat University (2007) "Joint Study for Economic and Social Aspects of Migrant Workers of Garment Industry in Thai-Myanmar Border Area," March 2007.

Fujimura, Manabu (2006) "Cross-border Transport Infrastructure, Regional Integration, and Development: Implications for the Greater Mekong Subregion." Journal of Greater Mekong Subregion Development Studies, Volume 3, Number 2, December 2006, Asian Development Bank, Greater Mekong Subregion Program, Phnom Penh Plan for Development Management, available at http://www.adb.org/GMS/phnom-penh-plan/GMS-Journal-V3-N2.pdf.

Huguet, Jerrold W. and Punpuing, Sureeporn (2005) *International Migration in Thailand*, Bangkok: International Organization of Migration (IOM).

JETRO (2007 in Japanese) ASEAN Logistics Network Map, Tokyo: Japan External Trade Organization (JETRO).

Kudo, Toshihiro (2005) "The Impact of United States Sanctions on the Myanmar Garment Industry." IDE Discussion Paper Series No.42, Institute of Developing Economies, JETRO, available at http://www.ide.go.jp/English/index4.html.

---------- (2006 in Japanese) "Growth and Decline of the Garment Industry in Myanmar: Market, Firms and Institutions," in Amakawa, Naoko ed., *The Experiences and Prospects of Late-Comer ASEAN Countries*, IDE Research Series No. 553, Institute of Developing Economies, JETRO, pp.101-139.

---------- (2007) “Border Industry in Myanmar: Turning the Periphery into the Center of Growth” IDE Discussion Paper Series No.122, Institute of Developing Economies, JETRO, available at http://www.ide.go.jp/English/index4.html.

Kudo, Toshihiro and Kuroiwa, Ikuo (2009, forthcoming) “Border Industry in Myanmar: Plugging into Production Networks in East Asia” in Kuroiwa, Ikuo ed. *Plugging into Production Networks: Industrialization Strategy in Less Developed Southeast Asian Countries*, Singapore: ISEAS.

Min Tang and Myo Thant (1994), “Growth Triangles: Conceptual and Operational Considerations,” in Myo Thant, Min Tang and Hiroshi Kakazu eds., *Growth Triangles in Asia: A New Approach to Regional Economic Cooperation*, Oxford University Press: Hong Kong, pp. 1-28.

Rivera-Batiz, Francisco (1986) “Can Border Industries Be a Substitute for Immigration?” The Aerican Economic Review, Vol.76, No.2, Papers and Proceedings of the Ninety-Eighth Annual Meeting of the American Economic Association, May 1986, pp.263-268.

Chapter 4

PROTOTYPE MODELS OF THE FLOWCHART APPROACH TO THE INDUSTRIAL CLUSTER POLICY

Akifumi Kuchiki

Abstract

This chapter assumes the policy process to form industrial clusters. First, a local government establishes an industrial zone to attract foreign investors. Second, the government builds capacity for improving the business and living conditions of foreign investors. If physical infrastructure such as road, ports, communications improve and human resource is available, the government can invite "anchor firm", which has high value of the backward linkage in manufacturing. If anchor firm set up a factory, agglomerations will be accelerated. CLMV countries are in the stage to improve the business and living conditions of foreign investors.

INTRODUCTION

One of the main roles of the Economic Research Institute for ASEAN and East Asia (ERIA) is to study three key subject areas for regional integration of East Asia. These are on deepening integration, narrowing gaps, and sustaining growth. The topic on narrowing gaps has focused on the development of Cambodia, Lao, Myanmar, and Vietnam.

While there are many large industrial agglomerations or clusters in East Asia, there are none in Cambodia, Lao, Myanmar, and Vietnam (except in Northern Vietnam). It may be difficult to narrow the gaps in East Asia without any industrial clusters in Cambodia, Lao, Myanmar, and Vietnam.

In his development theory, Nurkse (1953) explained that there exist vicious cycles of poverty in developing countries. Nelson (1956) also proved that there exists a

low-level equilibrium trap. Yokoyama (1997) derived the policy implications as follows: To get out of the trap and take off, developing countries must attain critical minimum effort via the big push concept. Rostow (1960), Rosenstein-Rodan (1943), and Leibenstein (1957) advanced these concepts of take-off, big push, critical minimum effort, respectively. Lewis (1954), Ranis and Fei (1961), Jorgenson (1967), and others discussed a dual economy that consists of traditional customary economy and modern market economy. A modern economy is needed to give employment opportunities to redundant labor in the traditional economy. Hirschman (1958) recommended fostering industries with high values of backward linkage effects at growing points or poles.

A closed economy, protectionism and centralization dominate the economies before the 1980s. However, the economic conditions saw a marked change after the 1980s. President Ronald Reagan introduced a new economic policy called Reaganomics, China adopted an Open-Door Policy, and the World Bank implemented its Structural Adjustment Policy. All these policies promoted the shift from the planned economy to the market economy. The principles of the open economy, free market, and decentralization started to dominate. Global trade and investment were liberalized.

Economies moved away from the import substitution policy, which dominated the era before the 1980s, and toward the export-led policy that the World Bank called the "export push strategy adopted in Asia." The most important change in the development strategy, however, was when Asian economies introduced the foreign direct investment (FDI) by liberalizing the inflow of foreign investment.

In sum, foreign investors in the modern economy were instrumental to the big push that paved the way for Asian countries to free themselves from their low-level equilibrium trap after the 1980s. That is, the idea of industrial clusters was tapped to make foreign investors agglomerate in industrial zones in the Asian economies.

The ERIA proposes practical policy measures for regional integration. Its Poverty Reduction Strategy Papers promotes and recognizes the participation of donor agencies and recipients. Section 2 of this study aims to apply the flowchart approach to the industrial cluster policy and recommends policy measures for Cambodia, Lao, Myanmar, and Vietnam based on the results of our questionnaire survey. Section 3 applies the flowchart approach to the feedback processes of Northern Vietnam and Guangzhou in China. Section 4 concludes the paper.

1. PATTERNS OF THE FLOWCHART APPROACH

This paper aims to propose a flowchart that shows sufficient conditions that can lead to the successful formation of an industrial cluster.

1.1 A general model of the flowchart approach: From the diamond model in the form of a plane to the flowchart model in the form of a line

Our flowchart approach is not an empty theory but a practical hypothesis applicable to the industrial cluster policy. We can form a cluster if we follow the following steps: Find ingredients or factors such as establishing industrial zones, build capacity, and invite an anchor firm. Figure 1.1 shows 'industrial zone', 'capacity building', and 'anchor firm',

(i) From the flowchart above, select the minimum number of ingredients. Figure 1.2 shows C, A and E.

(ii) Order the ingredients along a flowchart (Figure 1.3). The number of ways we prioritize them is a mathematical 'permutation' and 3! = 3*2*1. In general, $n! = n*(n-1)*(n-2)*\ldots*3*2*1$. We can, however, implement only one policy. Therefore, we must prioritize the policy measures.

Figure 1.1
A Model of Flowchart Approach

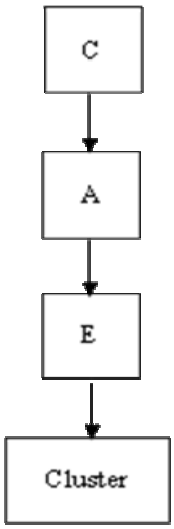


Figure 1.2
An Example of Flowchart Approach

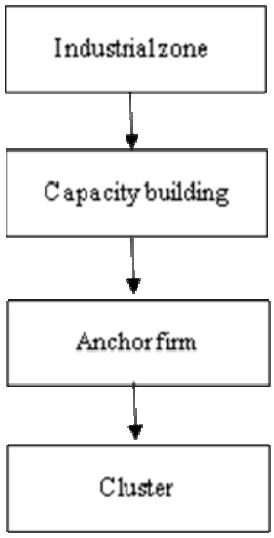
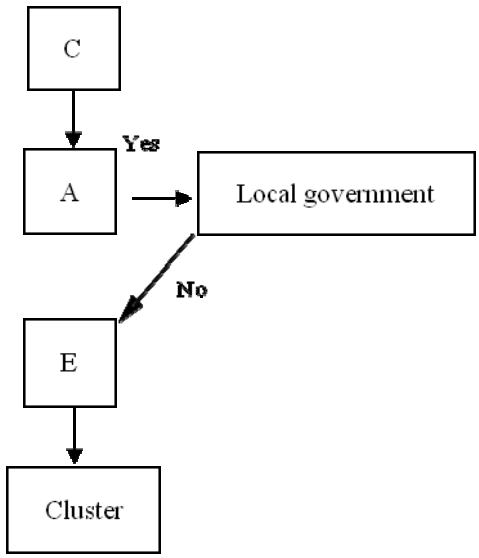


Figure 1.3
Roles of Actors of Flowchart Approach



(iii) Specify actors such as central government, local government, non-governmental organizations, or private firms and move forward one step in the flowchart if the answer is ”No”.

The flowchart approach has three functions: It prioritizes policy measures, specifies players and gives prescriptions regarding the industrial cluster policy.

1.2 A prototype flowchart model for the cluster policy

Our flowchart of the manufacturing industry cluster policy proceeds as follows: First, a local government establishes an industrial zone to attract foreign investors. Second, the government builds capacity for improving the business and living conditions of foreign investors. Elements of capacity building include: (i) constructing physical infrastructure: (ii) building institutions; (iii) developing human resources; and (iv) creating living conditions amenable to foreign investors. Physical infrastructure refers to roads, ports, communications, etc. Institutional building, which is also crucial in attracting foreign investors, includes streamlining investment procedures through one-stop services, deregulation, and introduction of preferential tax systems. Human resources, which are usually an initial condition for foreign investors, include unskilled labor, skilled labor, managers, researchers, and professionals. The living environment, on the other hand,

includes the provision of hospitals and international schools.

An anchor firm will be ready to invest after this capacity building has been carried out. The anchor firm is defined as one with a high value of the backward linkage in manufacturing. Along this line, the Rasmussen method is based on the column sums of the Leontief inverse to measure intersectoral linkages. The backward linkage based on the Leontief inverse matrix is defined as the column sums of the inverse matrix.

$BLRj = \Sigma^{n}_{i=1} l_{ij,}$

where l_{ij} is the *ij'*th element of Leontief inverse matrix that is denoted by $L = (I - A)^{-1}$.

BLRj is backward linkage for sector *j* which reflects the effects of an increase in final demand. It represents the power of an industry to generate derived demand from other industries. Core competencies of a region should be established to attract the anchor firm.

1.3 Step I. Agglomeration

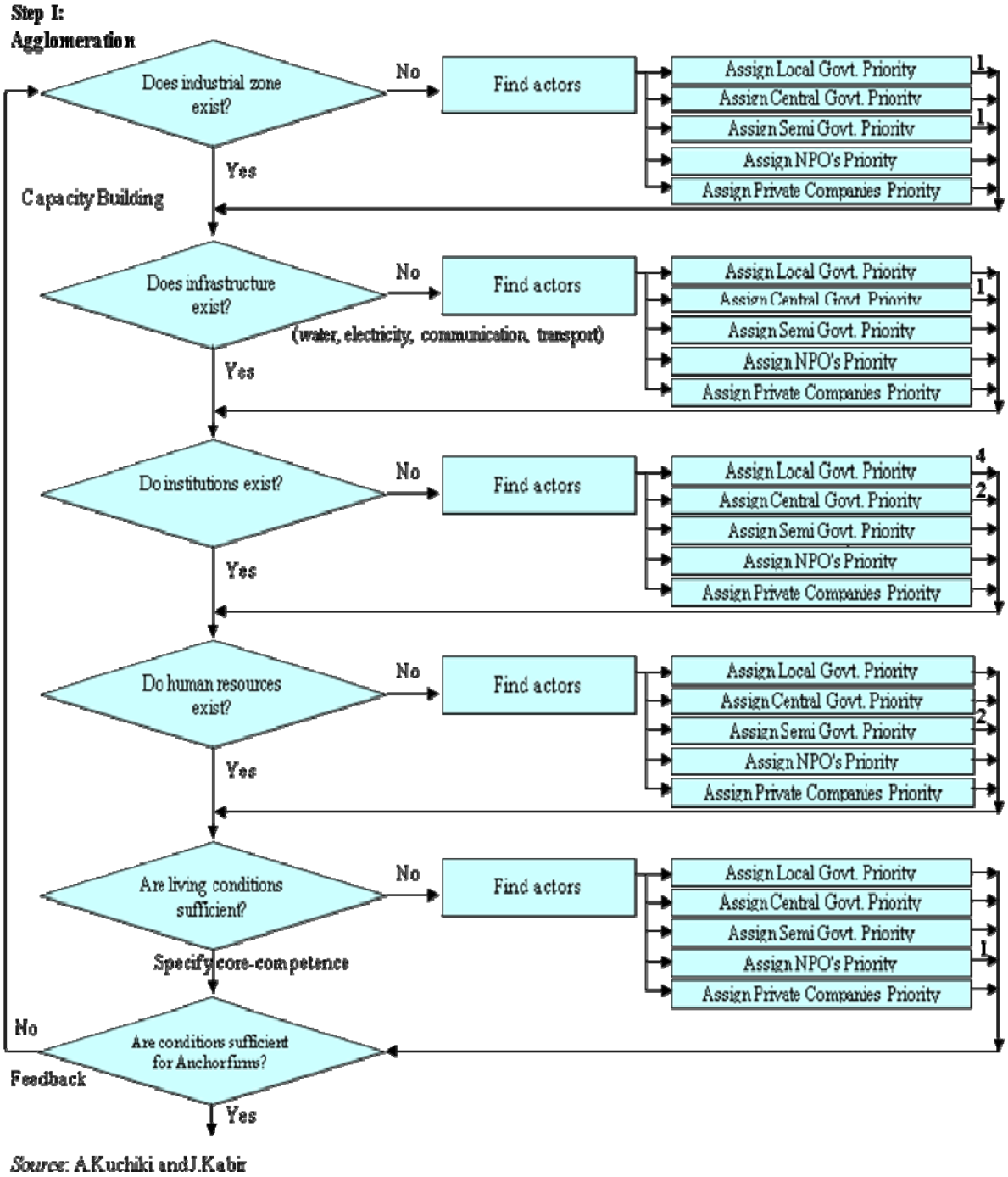
Our flowchart approach is illustrated in Figure 2. First, we ask whether industrial zones have been established. If they have not, we must decide which actors should establish such zones. Once these actors are identified, we return to the main stream of the flowchart.

Next, we look at the second step, capacity building, which takes place after the establishment of industrial zones. We examine whether there is adequate water supply for the industrial zones (Figure 3). We then proceed along the flowchart to examine power supply, communication, and transportation.

After looking at the physical infrastructure, we examine whether institutions are in place. The central government must institutionalize national tax systems and the local government must institutionalize local tax systems. One-stop investment procedures are crucial for successfully attracting foreign investors.

In the area of human resource development, an abundance of unskilled labor with a high literacy rate is a necessary condition for luring foreign investors whose purpose is to employ cheap labor. On the other hand, an industrial cluster sometimes faces a shortage of skilled labor after industrialization has progressed. Universities and on-the-job training centers for innovation are then needed for further development.

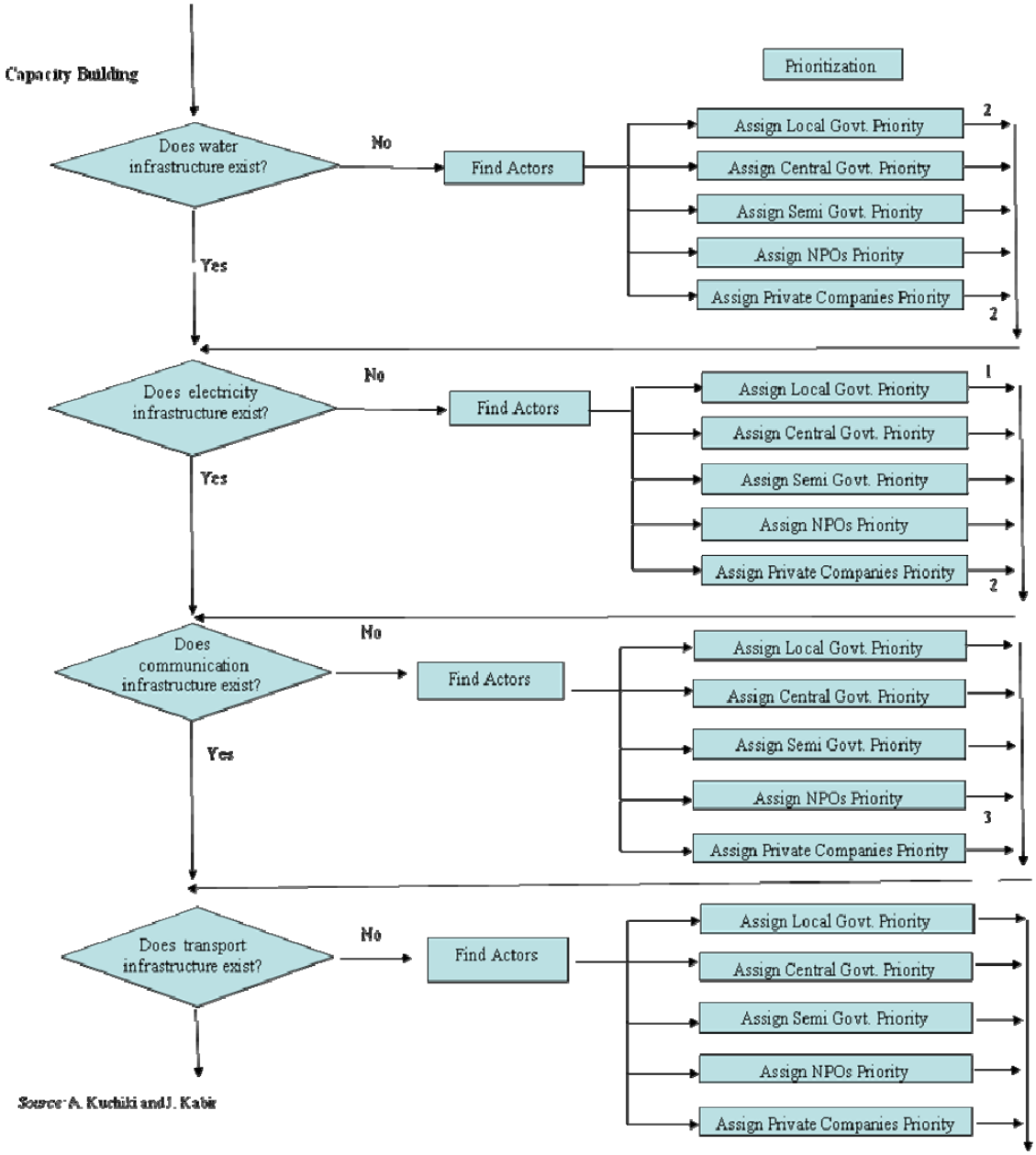
Figure 2: Flowchart Approach: Step I. Agglomeration



Source: A.Kuchiki and J.Kabir

Living conditions are equally crucial in the equation. Researchers from investor companies have incentives for work hard if they can enjoy their lives; it is important to create satisfactory conditions in areas such as housing, schools, hospitals, etc. These are the final conditions that must be satisfied to bring in anchor firms.

Figure 3. Flowchart Approach: Step Ⅰ. Infrastructure (Capacity Building)



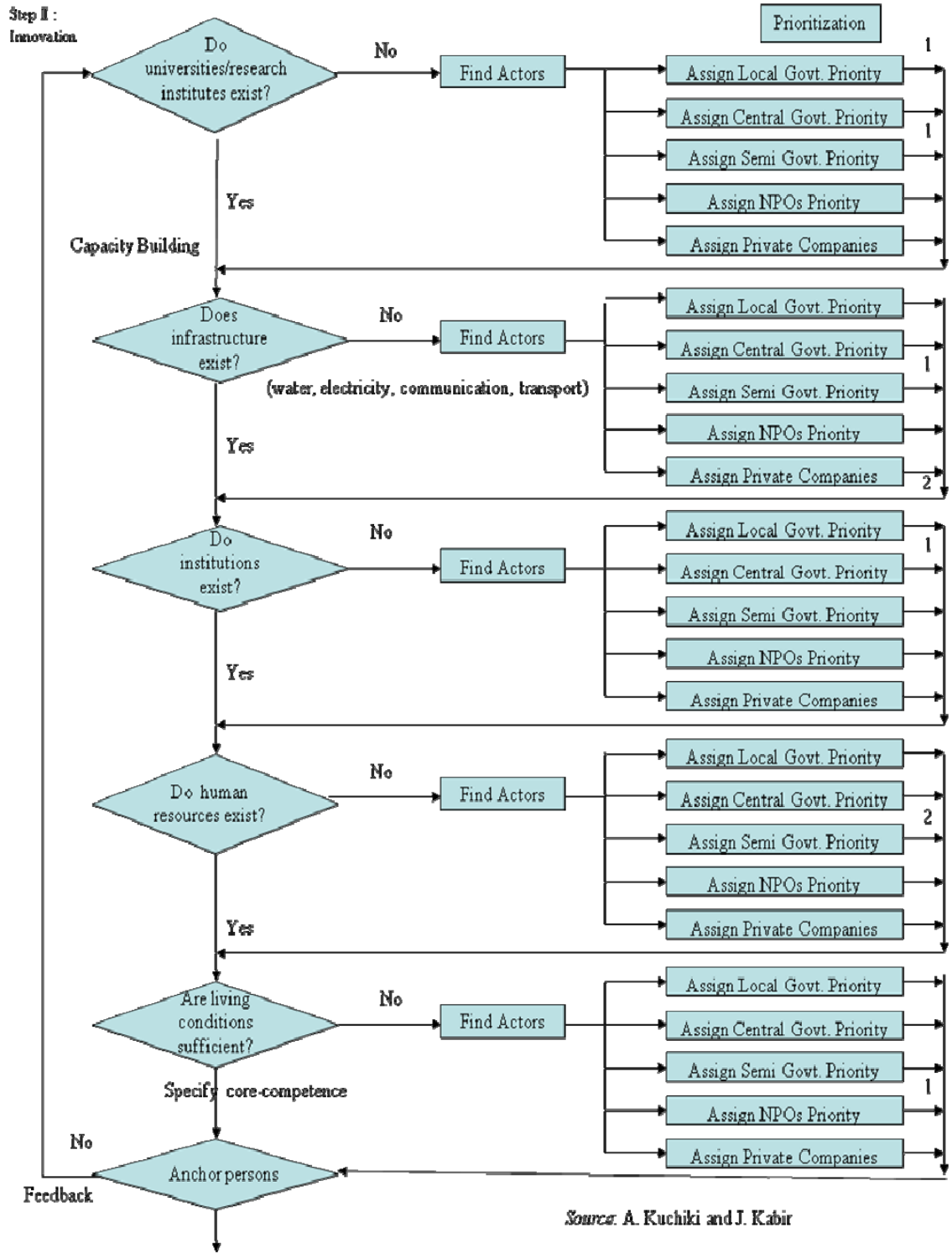
Here, the anchor firm is defined as one belonging to the manufacturing industry and having a high value of backward linkage effect in its input-output relationship

1.4 Step II. Innovation

Intellectual property rights should be enforced in Step II (innovation), as shown in Figure 4. Preconditions for Step II are: (i) Related services: finance and insurance, logistics,

marketing companies, repair shops, and used car shops; and (ii) Professional and other services: lawyers, restaurants, retail shops, and tourism.

Figure 4. Flowchart Approach: Step Ⅱ. Innovation



As shown in Figure 1, the factors that lead to innovation are: (i) universities and research institutes; (ii) capacity building of infrastructure, institutional reforms, human resources, and living conditions: and (iii) anchor persons.

Meanwhile, joint actions or activities that support innovation are: (i) facilitating cluster skill centers; (ii) establishing collective projects; (iii) creating business associations; and (iv) implementing a branding strategy.

The linear instruments and interactive approach of policy instruments for innovation may be as follows:

Linear instruments: (i) direct R&D aids; (ii) transfer of research-based knowledge to firms; and (iii) financial support:

Interactive approach: (i) improvement of institutions and programs that provide technology transfer services; and (ii) policy to stimulate networking and business clusters.

We earlier identified the minimum prerequisites, ie., universities and research institutes, capacity building and anchor persons, to simplify the flowchart of Step II and prioritize policy measures. Most Asian countries are still at the door of innovation, and we cannot find a huge number of the experiences on innovation in Asia. Step II is still a hypothesis to be further examined.

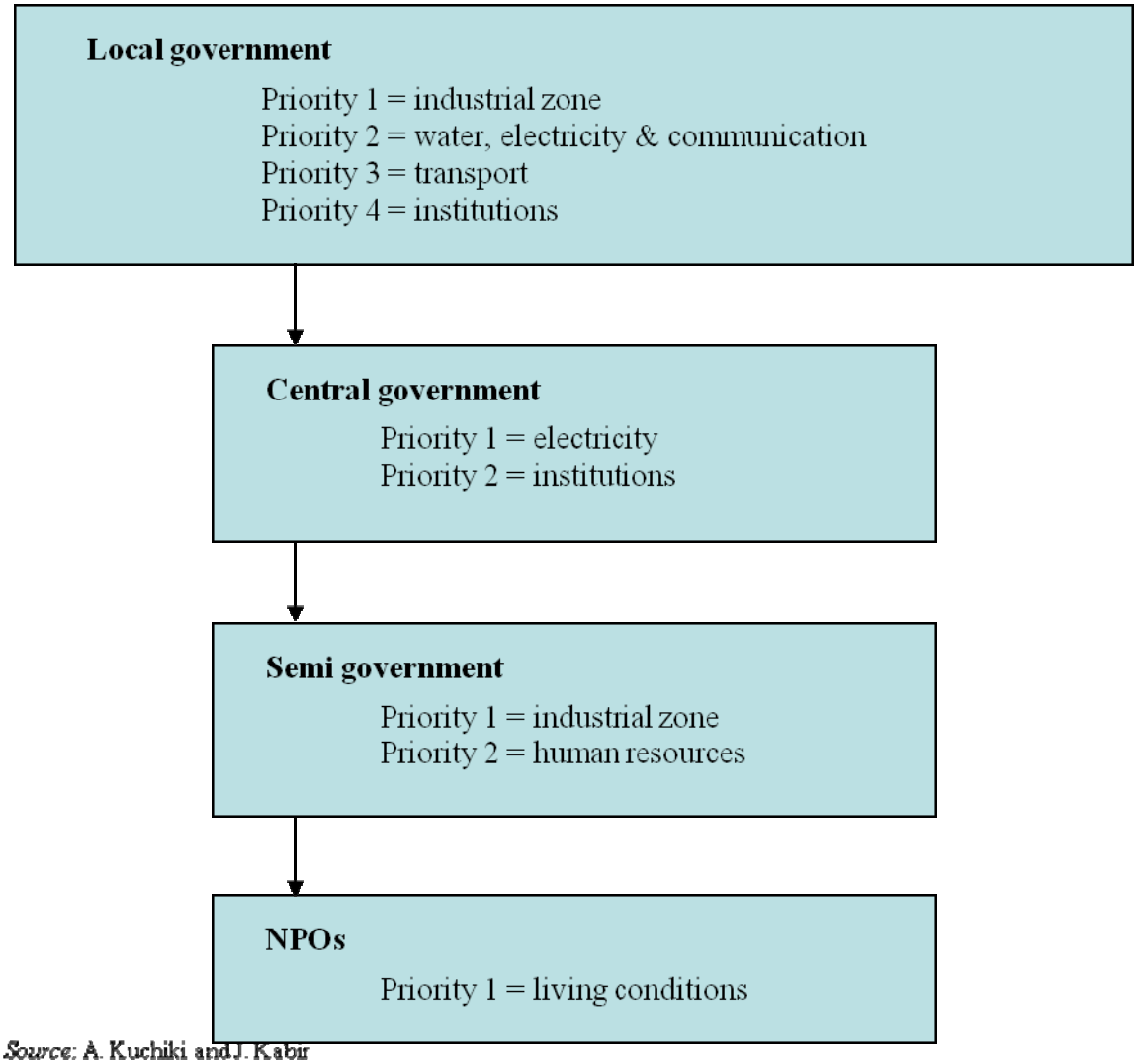
Figure 5 shows the priorities of each actor or player. Local governments play a crucial role in establishing industrial zones, supplying electricity, facilitating transport, and forming institutions. The first priority of local government in Figure 5 is to construct industrial zones for foreign investors. The second priority during that stage is to supply electricity, facilitate transportation, and form institutions. The central government's main priorities are to supply electricity and build institutions.

The flowchart approach to industrial cluster policy can be applied to other regions in the following cases:

(i) Where there are newly-formed industrial clusters (ex-ante application): Examine whether each step of the flowchart is a "Yes" or "No" and find players if the answer is "No".

(ii) To evaluate the failed cases of industrial cluster policies (ex-post evaluation): Examine whether each step of the flowchart is a "Yes" or "No", find reasons why it failed if the answer is "No", and proceed to the next step.

Figure 5. Priorities of actors



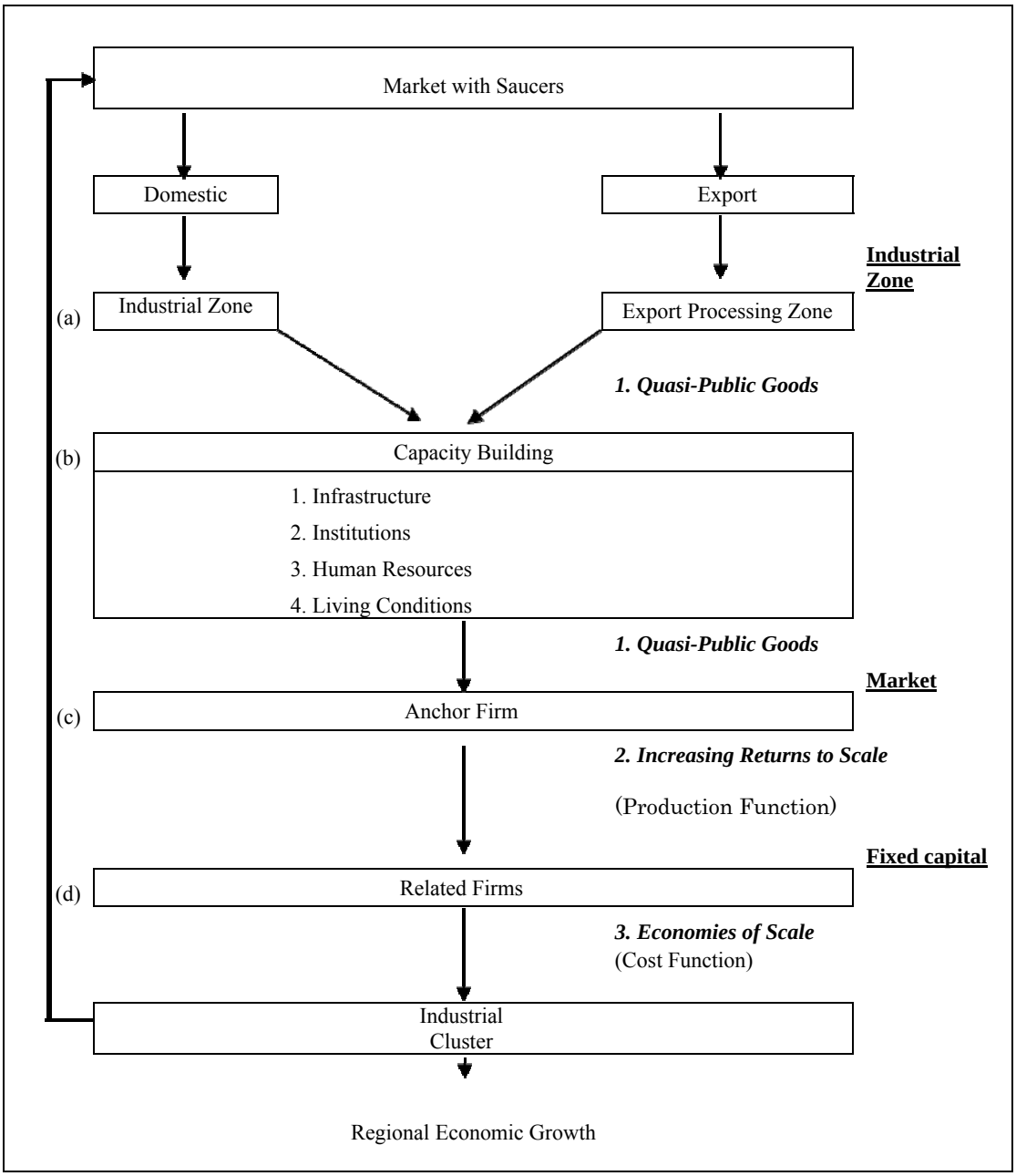
Source: A. Kuchiki and J. Kabir

(iii) Where industrial cluster policies have been successful, so as to prescribe such for their next upgrading (ex-post prescription): Examine whether each step of the flowchart is a ”Yes” or ” No”. Find players if the answer is ”No”, and prescribe the region for its industrial cluster policy.

This section further recommends that for the “flowchart approach to an industrial cluster policy” to help form industrial clusters in the manufacturing industry in Asia, certain conditions would first have to be met. The formation of industrial clusters in

East Asia was typically theorized by defining the role of "quasi-public goods". Also, the industrial cluster policy was proven to enhance economic growth under a production function of "increasing returns to scale". Another factor was the critical amount of production under "scale economies", which firms used as basis for deciding whether or not to invest in clusters.

Figure 6. An Industrial Cluster Formed by an Anchor Firm



Source: Kuchiki (2008)

The importance of the concepts of quasi-public goods, increasing returns to scale, and economies of scale in development is shown in Figure 6. Once more, it is reiterated here that sufficient conditions for development are to establish industrial zones, to build capacity, and to invite anchor firms and their related firms.

First, note that industrial zones, capacity building in physical infrastructure, institutions, and human resources as quasi-public goods are provided by both organizations in the quasi-public sector and firms in the private sector. Second, the ability of an industrial cluster policy to provide industrial zones and capacity as quasi-public goods can enhance regional economic growth in cases where an anchor firm operates under increasing returns to scale. For instance, markets for sales in China are at an early stage of development and large enough for anchor companies to attain increasing returns to scale. Third, the minimum optimal size of car production economies of scale depends on the size of fixed capital of anchor companies' related firms.

The flowchart approach to an industrial cluster policy further emphasizes the importance of ordering and timing of policy measures. The flow of policy implementation is as thus: to establish an industrial zone, to invite an anchor company, and to encourage its related companies to invest in the industrial zone. Then, the recipient country's government reduces its role in order to promote competition. It transfers greater authority to local governments and makes more use of the quasi-public sector (i.e., public corporations and state enterprises). As a result, the quasi-public sector is likely to supply quasi-public goods. The improvement and expansion of networks in Asia by both multinational corporations and the quasi-public sector are thus prerequisites to the upgrade of Asia's industrial structures. Leadership, too, is crucial to the success of an industrial cluster policy.

2. PRESCRIPTIONS FOR THE INDUSTRIAL CLUSTER POLICY OF HANOI AND GUANGZHOU

We propose that, upon considering the current status of Northern Vietnam, an industrial policy can take one of the following three options. First, the flowchart goes to Step II: Innovation. Second, the flowchart feeds back to the capacity building stage. Third, the local related firms venture into partnerships with foreign firms.

2.1 Hanoi

At this point, let us examine the second option and raise the following 12 questions:

1. Do industrial zones exist sufficiently?

In terms of capacity building: 2. Is the transport infrastructure sufficient?

3. Does the electricity infrastructure exist?
4. Does the communication infrastructure exist?
5. Does the port infrastructure exist?
6. Do institutions exist?

On human resource:

7. Does unskilled labor exist?
8. Is skilled labor sufficient?

On living conditions:

9. Are there sufficient hospitals?
10. Are there sufficient schools?
11. Are there sufficient entertainment venues?
12. Are there incidences of theft in the area?

We carried out a survey on the industrial cluster policy of Northern Vietnam to determine whether we can solve its problems using our flowchart approach. We interviewed 10 professionals. The 10 respondents included six staff of companies in Hanoi, three staff of Japanese semi-government organizations in Hanoi, and one Japanese professor studying the Vietnamese economy. The six results are summarized in Table 1.

Table 1. Questionnaires on industrial cluster policy: Hanoi

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Do industrial zones exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
Capacity building: Physical infrastructure												
2. Does transport infrastructure exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
3. Does electricity infrastructure exist sufficiently?	X	X	X	X	X	X	X	O	O	O	3	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	X	O	X	8	
5. Does port infrastructure exist sufficiently?	X	X	O	O	X	X	X	X	X	X	2	X
6. Do institutions exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
Human resources												
7. Does unskilled labor exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
8. Does skilled labor exist sufficiently?	X	X	O	O	O	O	O	O	O	O	8	
Living conditions												
9. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	6	
10. Do schools exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
11. Do entertainments exist sufficiently?	O	O	X	X	X	X	X	O	O	O	5	X
12. Do thefts happen?	X	X	X	X	X	O	O	O	O	O	5	X

Source: A. Kuchiki and T. Gokan (interviews in Hanoi on Aug. 28-30, 2008)

On the issue of industrial zones, no respondent answered "Yes." Our survey confirmed that roads, electricity and ports are insufficient in their support of industrial clusters. Specifically, on the question surrounding highway roads meant for automobiles, all 10 respondents answered "No." Such refers in particular to the roads in these areas: (i) Hanoi – Haiphong; (ii) Hanoi – southern China; and (iii) Hanoi – Noibai Airport. Seven out of 10 gave a "No" reply regarding the sufficiency of the electricity supply. Three who belonged to firms located in Thanglong Industrial Park, answered "No". They had no problem regarding electricity supply since their companies were given priority for such.

In terms of communication, two of the 10 respondents answered "No". That is, the connectivity of the email system in Vietnam sometimes encountered issues.

On the issue of ports, eight respondents answered "No". The other two also answered "No" but were unaware of problems at the ports since they often availed of the services of logistics companies in the delivery of their materials and products, and therefore did not directly use ports. In sum, these mean that all respondents highlighted

the problem with the ports. Haiphong Port in Northern Vietnam is a river port and has a shallow depth of 5-7 meters. Cailan Port is located in Halong Bay and an alternative to Haiphong Port. However, one of the concerns here is that the development of Cailan Port would harm Halong Bay, which is a world heritage. Therefore, it has become necessary to expand the facility of Haiphong Port. Currently, cargoes at the port are loaded into a small ship, sent to the Hong Kong Port, and loaded into a large ship again.

Meanwhile, when it comes to institutions, all respondents answered "No" as well. Of all the 12 questions, this is where the problem was found to be most serious. In particular, it is in customs clearance where there are four grave issues. First, every document passing through customs clearance need to be translated into the Vietnamese language. Second, every document should be original. Third, companies should put their stamps on their documents. Fourth, every document needs the signatures of companies. In short, having these original documents pass on from one place to another in Northern Vietnam for the required stamps and signatures carry with them certain costs.

Transporting cargos from Hanoi to the border of southern China also faces three problems. First, working hours at the customs clearance office at the border is short. Operating hours at the Vietnam-China border of 8:00am. to 5:00pm differs from the usual working hours of 9:00am to 4:00pm. Also, because the time difference between Vietnam and China is one hour, actual operation hours at the border total six hours only. Thus, trucks would be required to spend one night at the border whenever they fail to reach the border during the given operating hours. Each night spent presents a cost.

Second, costs add up whenever container cargos have to be trans-shipped (That is, whenever cargos are unloaded from one truck in Hanoi and loaded to another truck at the Chinese border). Other problems related to transshipment of container cargos include theft, damage to goods, and the usual delay. Given that a truck consists of its cab and container parts, transportation costs could be reduced if the container part would be allowed to pass beyond the Vietnam and China border.

Third, the road situation is in a sorry state. First, there is a lot of fatal traffic accidents on the Vietnamese highways since these are not exclusive to automobiles only. That is, bicycles and motorcycles are allowed on the highways. Also, the speed of trucks on the Vietnamese highways is slower compared with those in Thailand and Lao due to the former's road conditions. For instance, according to one respondent at the Thanglong

Industrial Park, the speed in Vietnam is 30 kph while that in Thailand is 50 kph.

Meanwhile, implementing rules at the customs clearance office in Vietnam are not transparent. Rules allegedly change so often and implemented in a discretionary manner.

All 10 respondents also gave a "No" reply to the question on unskilled labor, partly because illegal strikes occurred in many firms in 2008. Firms have been obliged to establish labor unions starting 2008. Also, the power to designate the labor union president has been transferred from the company boards to the labor unions themselves starting 2009. It is therefore understandable why corporate boards now feel uneasy regarding the future of labor unions.

The unskilled labor market in Hanoi has contracted. For example, when firm A began hiring in 2007 and 2008, the number of its applicants at the Thanglong Industrial Park dropped to 170 in 2008 from 700 in 2007. In the past, this firm employed its workers around the Hanoi area but was increasingly forced to consider those from the mountainous areas far from Hanoi. Later, the firm had to construct an apartment for the workers to live in. The share of workers from Hanoi dropped from 70 percent to 30 percent. Meanwhile, the share of workers from the mountain areas rose to 10 percent by 2008.

On the other hand, two of the 10 respondents answered "No" on the issue of skilled labor. Like in most Asian countries, the phenomenon called job hopping is common. One respondent pointed out that it is difficult to find Vietnamese applicants who can speak Japanese, and that Japanese firms should employ Vietnamese who can speak English instead. There is also a shortage of Vietnamese who can speak the Chinese and Korean languages.

On the issue of living conditions, most respondents answered "Yes", although four replied "No" on the question specific to hospitals. Respondents usually opt to go to hospitals in Bangkok or Singapore for serious illnesses rather than to a Hanoi-based one. In addition, a few firms periodically bring in food from Japan as a precaution against bird influenza in Vietnam.

On the question on entertainment, some respondents answered "No". They could not enjoy Saturdays and Sundays due to the shortage of entertainment facilities such as shopping centers and movies.

Five respondents pointed out that theft of raw materials such as copper coils happens since some workers have not yet imbibed the values these companies espouse. It takes time before workers begin to change their values.

In sum, the issues critical to the improvement of Vietnam's investment environment in 2008 are those on highways, electricity, ports, customs clearance, and unskilled labor.

2.2 Guangzhou

Guangzhou's industrial policy may take one of three options. First, the flowchart proceeds to Step II: Innovation. Second, the flowchart feeds back to the capacity building phase. Third, local related firms venture into partnerships with foreign firms. This section examines the second option and poses the same 11 questions used for the Hanoi study.

A survey of the industrial cluster policy of Guangzhou was carried out to determine whether we can solve its problems using the flowchart approach. We interviewed 10 professionals via a questionnaire survey, and came up with the six results summarized in Table 2. The 10 respondents included six staff of companies in

Table 2. Questionnaires on industrial cluster policy: Guangzhou

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Do industrial zones exist sufficiently?	O	X	O	X	X	X	X	O	X	X	3	X
Capacity building:												
2. Does transport infrastructure exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
3. Does electricity infrastructure exist sufficiently?	X	X	O	X	X	X	X	X	X	O	2	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
5. Do institutions exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
Human resources												
6. Unskilled labor	O	O	O	X	X	X	X	O	X	X	4	X
7. Skilled labor	X	O	O	O	O	O	O	O	O	X	8	
Living conditions												
8. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	6	X
9. Do schools exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	
10. Do entertainments exist sufficiently?	O	O	O	O	O	O	O	O	O	O	10	

Source: A. Kuchiki and T. Gokan (interviews in Guangzhou on Aug. 24-27, 2008.)

Guangzhou, two staff of Japanese semi-government organizations in Guangzhou, and one Japanese professor and one researcher studying the Vietnamese economy.

The investment environment issues of the Guangzhou Authority are land, electricity, and institutions. Below are the details on the result of our questionnaire survey (Chapter).

On the issue on land, eight of 10 respondents answered ‘”No”. That is, there is currently a shortage of land in Guangzhou. The Guangzhou municipality has changed its policy from attracting labor-intensive industries to attracting high value-added industries without the environmental issues. It is difficult for firms that do not meet the requirements of the policy to be approved by the government. One of the respondents who applied to set up business in the site told us that it was highly improbable for his firm to be approved. There is shortage of land in Guangzhou even if there is still some available at Zhongshan, Foshan or Shunde.

The Dalian municipality experienced the same situation around 2000 and introduced a policy to shift labor-intensive industries from Dalian to the inland areas. In fact, Guangzhou’s current situation is the same as Dalian’s at that time.

Meanwhile, as far as electricity goes, nine out of 10 respondents answered ”No”. Two of the 10 sampled answered ”Yes” since their firms are located in the district where the Guangzhou municipality has prioritized the supply of electricity. The survey also showed that there were no problems with other infrastructure such as roads, communication, and ports.

When it comes to customs clearance, tax systems, and foreign currency transactions, all respondents answered ”No”. The Guangzhou municipality has its own two institutions on customs clearance. One is called the *Rairyokako,* whose parts and components are exempted from import tariffs when their products are exported. . Another, called *Tensho*, has parts and components exempted from the value-added tax when their final products are exported, even if the parts and components are purchased not from foreign countries but from firms in Guangdong Province. The local government temporarily sets the reduction rate at 7 percent for import tariffs and 15 percent for the value added tax. The total maximum rate is 22 percent. The increase in minimum wages in Guangzhou is from 10 percent to 14 percent. The wage rate hike is 10 percent per year, but becomes 30 percent in three years, and is more than 22 percent when the reduction

rate is the maximum due to the Rairyoukako and Tensho. One of the respondents pointed out that labor-intensive industries such as the textile and the shoe industries will find it difficult to stay in Guangzhou. In addition, the Tensho reduction rate applied to 1,000 kinds of commodities is 10 percent. The firms in Guangzhou are forced to move to places where wages are lower than those of Guangzhou in three years or earlier.

Regarding foreign currency transactions, one of the 10 respondents pointed out how long a time it takes for approvals on foreign currency transactions to be completed and sent to his firm in China for the import of parts and components. As to unskilled labor, six respondents answered ”No” since the increase in minimum wage rates is high in recent years. One of the respondents who stayed in both China and Malaysia pointed out that the wage, including welfare costs, of unskilled labor in Guangzhou is around 20,000 thousand yen while that in Malaysia is 15,000 yen. It is partly because China’s welfare costs are higher than that of other Asian countries. Guangzhou is getting more uncompetitive in the wages of unskilled labor than Malaysia does.

Many economists have debated on whether China has passed its turning point. Such turning point is explained as follows: The supply of labor can be unlimited at the minimum subsistence-level wage before the turning point. Then, there will come a time after such turning point when residual labor is absorbed and wages become higher than the minimum subsistence level.

We can attest that the Guangzhou Authority has passed the turning point. It will be difficult for labor-intensive industries to hold its office in Guangzhou. The labor-intensive industries have no other choices but to change into high value-added industries or shift to areas where wages are low. Possible ones may be Nangning or Beihai in Gungxi Zhuangzu Zizhiqu, or Human Province. Northern Vietnam may be another alternative.

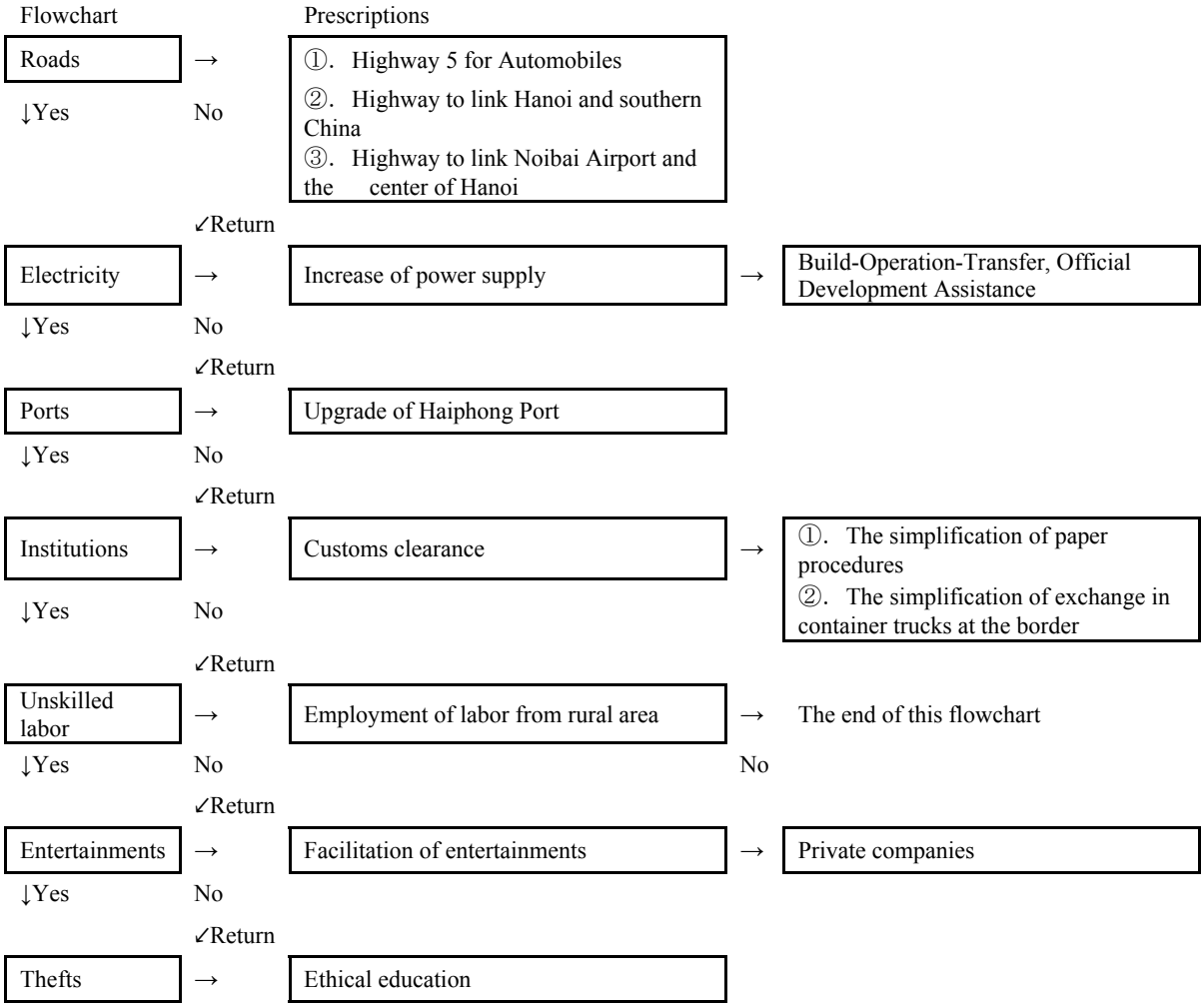
On the other hand, there is a shortage in electricity in China, including Guangzhou. Nine of the 10 respondents answered ”No”. One of the ten answered ”Yes” only because the Guangzhou Authority prioritizes his firm in the supply of electricity.

Finally, living conditions were found to have few problems only since they have been improved in recent years. Only four respondents answered ”No” regarding hospitals. This concern found here is common in other Asian countries. Patients needing critical help would have to fly to Hong Kong or Japan.

2.3 Recommendations on the industrial cluster policy of Northern Vietnam

Recommendations regarding the industrial cluster policy in Northern Vietnam are shown in Figure 7. Northern Vietnam needs the infrastructure that will facilitate its next-stage growth since it has reached around $900 per capita income in 2008. First, the new route 5 highway specific to cars between Hanoi and Haiphong is needed. Second, there is also a need for a highway between Hanoi and Southern China. Such should be of the same level as China's three-lane highway each way. Third, a highway between Noibai Airport and the center of Hanoi is needed. Vietnam would benefit from a highway that links Noibai Airport to Hoalac Hitech Park, and Hoalac Hitech Park and the center of Hanoi. The three lanes-per way highways will contribute to economic growth and reduce the number of traffic accidents.

Figure 7. Nortern Vietnam's Flowchart



Source: Author.

Meanwhile, there would be electricity supply issues in Hanoi even if Northern Vietnam imports electricity from China. Such industry needs to be developed by the private sector through a build-operate-transfer scheme or official development assistance.

Cairan Port should be expanded and Haiphong Port should be further improved. Customs clearance procedures should be more transparent and simplified. For example, the format of customs clearance should be straightforward by omitting signatures and stamps. Transshipment rules should be amended. Rules should allow containers to travel from points of origin to destination instead of having to unload contents at borders and transfer these into another truck.

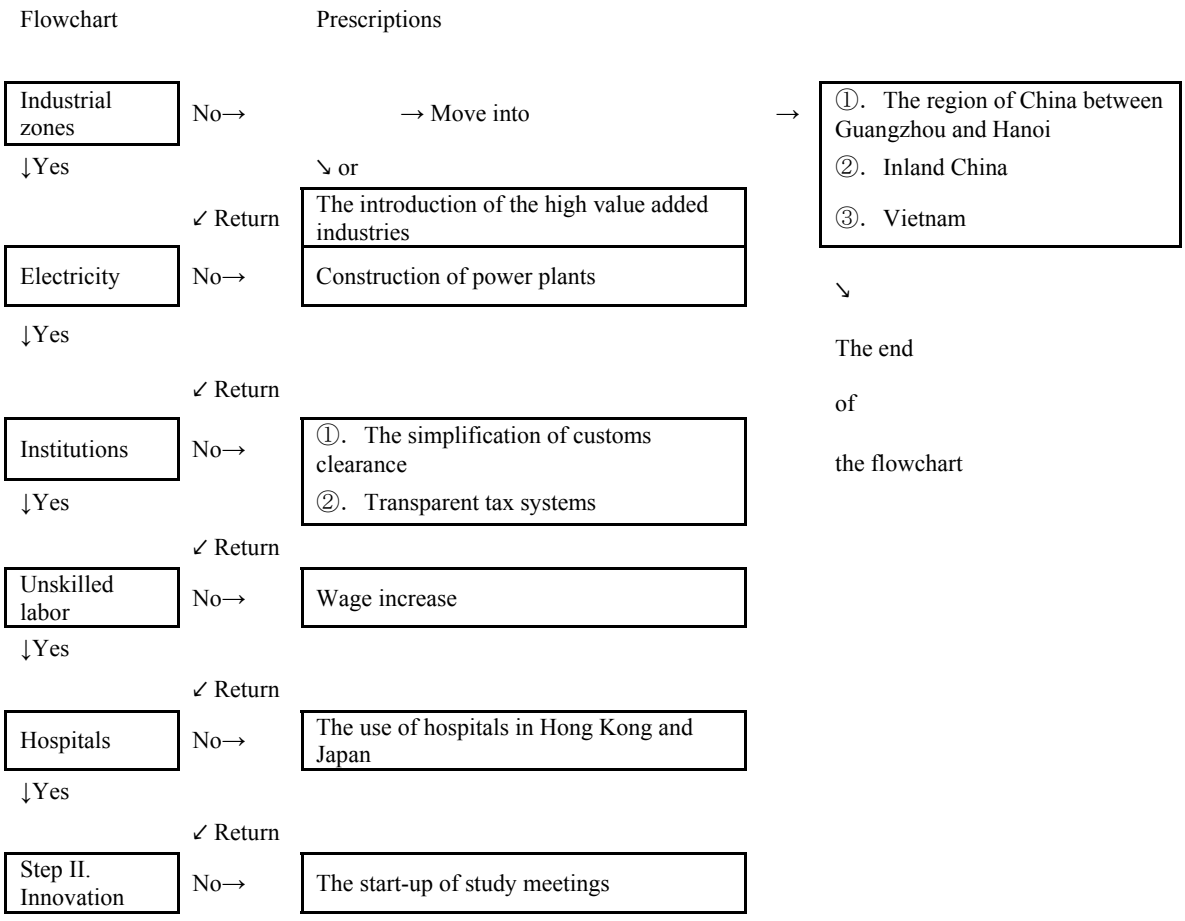
Unskilled labor should be sourced from all over the country, including local villages. Thus, apartments for the unskilled labor have to be constructed. Their employment will help reduce the income gap of residents living between Hanoi and mountain areas. Meanwhile, the problem of theft takes time to eradicate as this requires educating people on moral ethics.

Guangzhou is losing its competitiveness in the labor-intensive industries and has been moving toward the innovative process stage of Step II in our flowchart approach. On the other hand, the per-capita income in Northern Vietnam has reached almost $1000 and is therefore moving toward its turning point; therefore, it should be preparing by upgrading its infrastructure such as loads, ports, and electricity. Hanoi and Guangzhou benefit each other by constructing a highway between Hanoi and Youyi Xian in Southern China and simplifying customs clearance procedures. The reduction of a tariff rate from China to Vietnam will be effective in linking the two cities since the tariff rate is 5 percent higher than that from Vietnam to China.

2.4 Recommendations on Guangzhou's industrial cluster policy based on the flowchart approach .

Recommendations for Guangzhou are in Figure 8. Due to the shortage of land, firms will be forced to relocate to areas where there are lower wages or change their products into those in the high value-added industries.

Figure 8. Guangzhou's Flowchart



Source: Author.

The options on how to increase Guangzhou's electricity supply are limited. The alternatives are atomic power, heating power, and water power. As far as institutions are concerned, it is the customs clearance procedures that should be worked on. Firms too are forced to deal with higher wages for unskilled labor since they would need to abide by the country's minimum wage requirement. Meanwhile, patients with serious conditions have to seek medical care in Hong Kong or Japan.

Guangzhou should proceed to the innovative process stage of the flowchart approach. For that purpose, the formal exploratory meetings and research activities among firms in Guangzhou will activate innovation. Informal activities are at present already done.

3. ERIA QUESTIONAIRE SURVEY

The ERIA Questionnaire Survey and the Flowchart Approach Survey complement each other in their aim to recommend improvements in the industrial cluster policy within the region. The Flowchart Approach Survey outlines questions on the industrial cluster policy and the ERIA Questionnaire Survey details questions on the Flowchart Approach. Questions in Table in Chapter 5 are related to industrial zones of the flowchart approach, and institutions, physical infrastructure, human resource development, capacity building. The ERIA Questionnaire Survey helps identify projects under the official development assistance program.

CONCLUSIONS

We established and applied our questionnaire method on the flowchart approach regarding the industrial cluster policy in Northern Vietnam. The prescription for Northern Vietnam is to construct highways for automobiles, increase electricity supply, build more capacity for ports, and enhance institutional workflow such as import procedures. We should pay attention not only to Vietnam itself but also to the regional integration of Asia when considering the industrial cluster policy. Kuchiki (2008a) called the region around China, ASEAN and India as the Asian Triangle of Growth.. The industrial cluster policy of Vietnam should be planned by considering this triangle. In particular, roads and ports should be linked to the regional integration of Asia.

REFERENCES

Department of Statistics (2002), *Statistical Yearbook of Vietnam*.

Holt, D. B. (2004) *How Brands Become Icons: The Principles of Cultural Branding*, Boston: Harvard Business School Press.

Hirschman, A. O. (1958), *The Strategy of Economic Development*, New Haven: Yale University Press.

Japan Bank for International Cooperation (2001), *Survey on Promotion of Effectiveness in Official Development Assistance to Vietnam* (in Japanese).

Jorgenson, D. W. (1961), "The Development of a Dual Economy," *The Economic Journal*, 71, June, 309-34.

Kuchiki, A. (2005), "Flowchart Approach," in *Industrial Clusters in Asia*, A. Kuchiki and M. Tsuji eds., New York: Palgrave Macmillan, pp.169-199.

Kuchiki, A. (2007a), 'Clusters and Innovation: Beijing's Hi-technology Industry Cluster and Guangzhou's Automobile Industry Cluster.' *IDE Discussion Papers*, Institute of Developing Economies, Japan External Trade Organization (JETRO), No. 89, 26 Oct**.**

Kuchiki, A. (2007b), 'A Flowchart Approach to Malaysia's Automobile Industry Cluster Policy.' *IDE Discussion Papers*, Institute of Developing Economies, Japan External Trade Organization (JETRO), No. 120, 26 Oct**.**

Kuchiki, A. (2007c), "Agglomeration of Exporting Firms in Industrial Zones in Northern Vietnam: Players and Institutions," Chapter 5, *Industrial Agglomeration and New Technologies: a Global Perspective*, M. Tsuji, E. Giovannetti, and M. Kagami eds., Cheltenham: Edward Elgar, pp.97-138.

Kuchiki, A. (2008a), "Industrial Clustering and MNE Management in East Asia: Recent Progress and Prospects of the Asian Triangle," in *Economic Integration in East Asia: Perspectives from Spatial and Neoclassical Economics*, M. Fujita, S. Kumagai and K. Nishikimi eds., Cheltenham: Edward Elgar.

Kuchiki, A. (2008b), "Theory of a Flowchart Approach to Industrial Cluster Policy," in *the Flowchart Approach to Industrial Cluster Policy*, A. Kuchiki and M. Tsuji eds., New York: Palgrave Macmillan, pp. 285-311.

Kuchiki, A. (2008c), "Effective Policy Interventions for Building Industrial Clusters in Mozambique: Flowchart Approach", Foundation for Advanced Studies on International Development of Japan **(**FASID), July 14

Kuchiki, A. and H. Tsukada (2008), "Guangzhou's Automobile Industry Cluster," in *The Flowchart Approach to Industrial Cluster Policy*, A. Kuchiki and M. Tsuji eds., New

York: Palgrave Macmillan, pp. 41-70.

Leibenstein, H. (1957), *Economic Backwardness and Economic Growth*, New York: John Wiley & Sons.

Lewis, W. A. (1954), "Economic Development with Unlimited Supplies of Labour," *The Manchester School of Economics and Social Sciences*, 22, May, 139-91.

Nelson, R. R. (1956), "A Theory of the Low-level Equilibrium Trap in Underdeveloped Economies," *The American Economic Review*, 46(5), 894-908.

Nurkse, R. (1953), *Problems of Capital Formation in Underdeveloped Countries*, Oxford: Basil Blackwell.

Porter, M.E. (1998) *the Competitive Advantage of Nations,* New York: The Free Press.

Tinbergen, J. (1952), *On the Theory of Economic Policy*, Amsterdam, North-Holland

Ranis, G. and J. C. H. Fei (1961), "A Theory of Economic Development," The *American Economic Review*, 51(4), 533-65.

Rosenstein-Rodan, P. N. (1943), "Problems of Industrialization of Eastern and Southeastern Europe," *The Economic Journal*, 53, 210/211, 202-11.

Rostow, W. W. (1960), *The Stages of Economic Growth*, Cambridge: Cambridge University Press.

Tsuji M., S. Miyahara & Y. Ueki (2008), An Empirical Examination of the Flowchart Approach to Industrial Clustering: Case Study of Greater Bangkok, Thailand, In *Flowchart Approach to Industrial Cluster Policy,* eds. Kuchiki, A and M. Tsuji. London: Macmillan.

Yokoyama, H. (1997), "Development Strategy," in Chapter 10, eds. A. Kuchiki, H. Nogami, and T. Yamagata, *Development Economics*, Tokyo:Yuhikaku.

Chapter 4-1

FLOWCHART APPROACH TO INDUSTRIAL CLUSTER POLICY IN PHNOM PENH AND SIHANOUK VILLE

Sau Sisovanna

Abstruct

The poor development status of infrastructure is the main hindrance to the Cambodia's participation in the production and distribution networks in East Asia in spite of its abundant, reasonably well-educated and low-wage labor. Results of interviews shows high power costs and poor road infrastructure are serious problems. Besides weak physical infrastructure, issues such as high fuel prices exist in Phnom Penh and Sihanouk Ville.

Interviews using the flowchart approach sought to identify the poor development status of Cambodia's infrastructure today. This is the main hindrance to the country's participation in the production and distribution networks in East Asia in spite of its abundant, reasonably well-educated and low-wage labor.

A survey was carried out on the industrial cluster policy of Phnom Penh and Sihanouk Ville to determine whether the problems confronting it could be solved using the flowchart approach. Ten professionals per each site were interviewed based on prepared questionnaire. (The results are presented in Tables 1.and 2.) The respondents were asked to give their opinions on whether the existing industrial zones and infrastructure are adequate. Most of the respondents found these facilities generally sufficient in Phnom Penh and Sihanouk Ville while pointing out that water, electricity, roads, ports, transport, public institutions, human resources, and living condition were inadequate.

Here are some of the specific outcomes of the survey:

Industrial zones. Some respondent expressed concern about the effectiveness and efficiency of existing industrial and special economic zones.

Water infrastructure. While the Phnom Penh Water Supply Authority (PPWSA), a public enterprise, has been providing water since 1996, Sihanouk Ville is the only exception as Sihanouk Ville Water Supply Authority is supplying water to the city but in rural areas, people mostly depend on groundwater, river water and/or rainwater.

The Government's National Water Supply and Sanitation Policy affirms that every Cambodian, including the rural folk, shall have access to safe water and sanitation by 20015.

Electricity. Although the supply of electricity by Electricite Du Cambodge (EDC) has been significantly improved, there still are some issues discouraging existing and potential investors. These include the high power costs supplied by EDC and independent power producers and the lack of electricity infrastructure linking major strategic areas of Cambodia. Although it is expected that most of these issues will be addressed by 2010 according to the government's development plans, more effective measures should be taken to hasten such developments.

Telecommunications. Although significant improvements are evident in these infrastructure, there has been a continuous shortage of fixed-line services. Compared to other ASEAN countries, Cambodian telephone density remains low and international call tariffs remain high.

Roads. The Road Density (km/km2) is comparable to other ASEAN countries but very inferior in terms of paved road density. Due to the severe floods in Cambodia in 2000, serious damage to Cambodian roads occurred. Since road transport plays a very important role in Cambodia, not only for passengers but also for cargo transport, immediate measures should be taken to hasten the renovation and rehabilitation programs.

Aviation. Cambodia has ten airports, including Phnom Penh International Airport (Pochentong Airport), Siem Reap Airport, the gateway to Angkor Wat; and Kang Keng airport in Sihanouk Ville, which provides international flights. However, the two railway lines in operation in Cambodia need to be improved. The average speed of rail transport is less than 30km/hour. Many sections of track lack bolts for rails, and there are no traffic signals along railways.

Sea port. Cambodia has only one deep seawater port in Sihanouk Ville. Constructed in the 1950's and 1960's, Sihanouk Ville is the main deep water sea port.

This port is expected to have international capacity and be utilized by zone investors operating in the planned SEZ in the Sihanouk Ville area.

The Phnom Penh Port is the international river port for the country's access to the South China Sea through Vietnam via the Mekong River. In 2002, the port shifted to all-container operations, and volumes have been increasing since then. Like Sihanouk Ville, the port lacks modern facilities for expeditious cargo processing.

Besides weak physical infrastructure, issues such as high fuel prices, lack of health, life, social and life insurance, pensions, among others, also exist in Phnom Penh and Sihanouk Ville.

Cambodia ranks 114th out of 117 countries in terms of the quality of its public institutions and overall competitiveness. Cambodia's public institutions are no doubt among the world's worst (World Economic Forum (WEF). Corruption is considered pervasive in Cambodia, making it a serious and sensitive issue. Both the Investment Climate of the World Bank (released in August 2004) and Survey on Investment Climate in Cambodia in 2008-09 suggest that corruption is the biggest business problem facing the country.

There is still a large pool of unskilled labor, especially in the rural areas of Phnom Penh, as well as Sihanouk Ville, which is located in a coastal and highland area, far from rural plain areas where many people live. Very few of the 200,000 people entering the job market each year are absorbed by the formal sector.

Lacking in scientists and engineers, Cambodia also suffers from inadequate skilled labor. Overall quality of education is low, which explains the poor quality of Cambodia’s human resources. There is thus an urgent need for Cambodia to improve the quality of its educational system, as well as its local business schools, so it can meet business requirements.

Phnom Penh has about ten international schools, two international medical centers, at least ten five- and four-star hotels and serviced departments, and many three-star hotels, which are widely used by business persons and tourists. Sihanouk Ville has no international school and hospitals. Both areas have inadequate shopping centers, movies and other entertainment facilities.

To make Cambodia an attractive place for investment and industrial cluster site, it must develop more infrastructure such as roads, railways, ports and airway networks,

and ensure an adequate and clean water supply, water sewage treatment, and energy power from various sources. The lack of skilled and professional labor is a critical issue that must be solved by enhancing the quality of education while paying attention to technical and vocational training. Higher education at par with international standards and sufficient to meet the country's development needs is also urgently needed. Just as vital are technical and vocational training schools and higher educational institution that can produce a pool of competent technicians and engineers. Strengthening and improving public institutions is also required to ensure good governance, efficient law implementation, better delivery of services, and decreased processing time and costs of transacting business with the government. Achieving these goals also requires sound policies, the formulation of which should include all sectors.

Appendix

Table 1- **Questionnaires on industrial cluster policy: Phnom Penh**

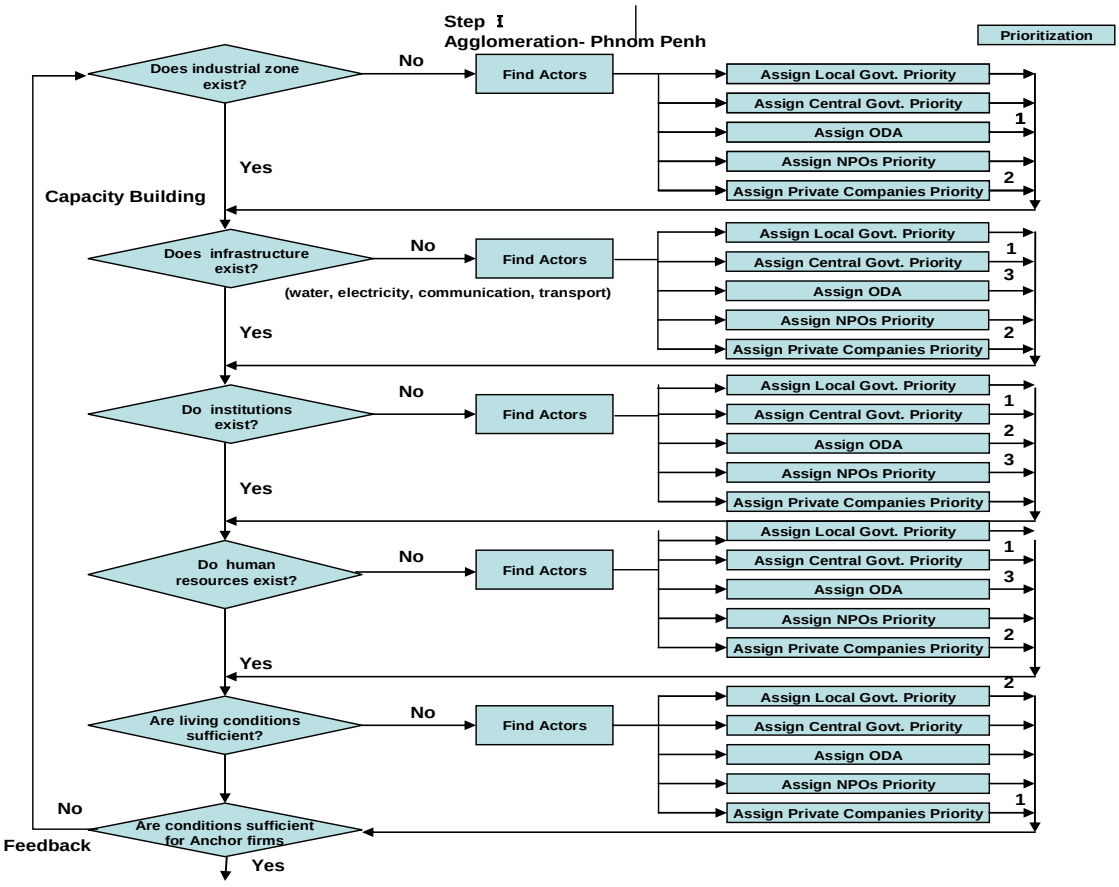
Questions	1	2	3	4	5	6	7	8	9	10	Result	Problem
1. Do industrial zones exist sufficiently?	O	X	O	O	X	O	X	X	X	O	5	
Capacity building												
2. Does water infrastructure exist sufficiently?	X	X	O	O	O	O	X	X	X	X	4	X
3. Does electricity infrastructure exist sufficiently?	X	X	O	X	X	X	X	X	X	X	1	X
4. Does communication infrastructure exist sufficiently?	X	O	O	O	O	O	X	X	X	X	5	
5. Does transport infrastructure exist sufficiently?	X	X	X	X	O	O	X	X	X	X	2	X
6. Does other infrastructure exist sufficiently?	X	X	O	X	O	O	X	X	X	X	3	
7. Do institutions exist sufficiently?	X	X	X	X	O	O	X	X	O	O	4	X
Human resources												
8. Unskilled labor	O	O	O	O	O	O	O	O	O	O	10	
9. Skilled labor	X	X	O	O	X	X	X	X	X	X	2	X
Living conditions	X	X	X	X	O	O	X	X	X	X	2	
10. Do hospitals exist sufficiently?	X	X	X	X	O	O	X	X	X	X	2	X
11. Do schools exist sufficiently?	X	X	X	X	O	O	X	X	X	X	2	X
12. Do entertainments exist sufficiently?	X	X	X	X	O	O	X	X	X	X	2	X

Source: Sau Sisovanna (interviews in Phnom Penh, 8-12/12/2008.)

Table 2- **Questionnaires on industrial cluster policy: Sihanouk Ville**

Questions	1	2	3	4	5	6	7	8	9	10	Result	Problem
1. Do industrial zones exist sufficiently?	O	O	O	O	×	×	O	O	O	O	8	
Capacity building												
2. Does water infrastructure exist sufficiently?	O	×	O	×	×	×	×	×	×	×	2	×
3. Does electricity infrastructure exist sufficiently?	O	×	O	×	×	×	×	×	O	×	3	×
4. Does communication infrastructure exist sufficiently?	O	O	O	O	×	×	×	O	O	O	7	
5. Does transport infrastructure exist sufficiently?	O	×	O	×	×	×	×	×	O	×	3	×
6. Does other infrastructure exist sufficiently?	O	×	O	×	×	×	×	×	×	×	2	
7. Do institutions exist sufficiently?	O	×	O	×	×	×	O	O	O	×	5	×
Human resources												
8. Unskilled labor	O	O	×	×	×	×	O	O	×	O	5	
9. Skilled labor	O	×	×	×	×	×	O	×	×	×	2	×
Living conditions	O	×	×	×	×	×	×	×	×	×	1	
10. Do hospitals exist sufficiently?	O	×	×	×	×	×	×	×	×	×	2	×
11. Do schools exist sufficiently?	O	×	×	×	×	×	×	×	×	×	1	×
12. Do entertainments exist sufficiently?	O	×	×	×	×	×	×	×	×	×	1	×

Source: Sau Sisovanna (interviews in Sihanouk Ville, December. 25-29/12/2008.)



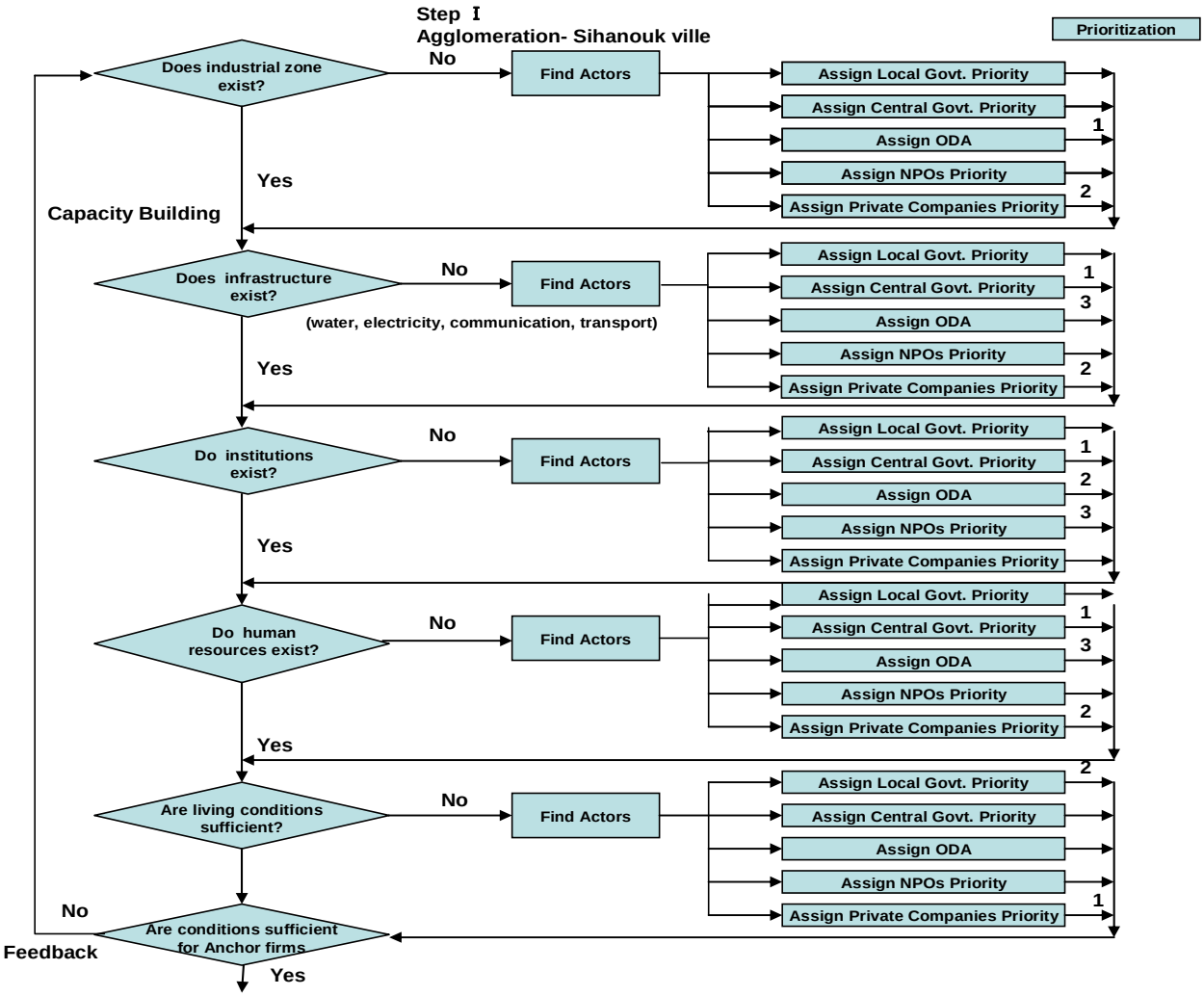

Step I
Agglomeration- Sihanouk ville
Prioritization
Does industrial zone exist?
No
Find Actors
Assign Local Govt. Priority
Assign Central Govt. Priority
Assign ODA
Assign NPOs Priority
Assign Private Companies Priority
1
2
Yes
Capacity Building
Does infrastructure exist?
No
Find Actors
(water, electricity, communication, transport)
Assign Local Govt. Priority
Assign Central Govt. Priority
Assign ODA
Assign NPOs Priority
Assign Private Companies Priority
1
3
2
Yes
Do institutions exist?
No
Find Actors
Assign Local Govt. Priority
Assign Central Govt. Priority
Assign ODA
Assign NPOs Priority
Assign Private Companies Priority
1
2
3
Yes
Do human resources exist?
No
Find Actors
Assign Local Govt. Priority
Assign Central Govt. Priority
Assign ODA
Assign NPOs Priority
Assign Private Companies Priority
1
3
2
Yes
Are living conditions sufficient?
No
Find Actors
Assign Local Govt. Priority
Assign Central Govt. Priority
Assign ODA
Assign NPOs Priority
Assign Private Companies Priority
2
1
No
Are conditions sufficient for Anchor firms
Feedback
Yes

Figure 1. Phnom Penh's Flowchart

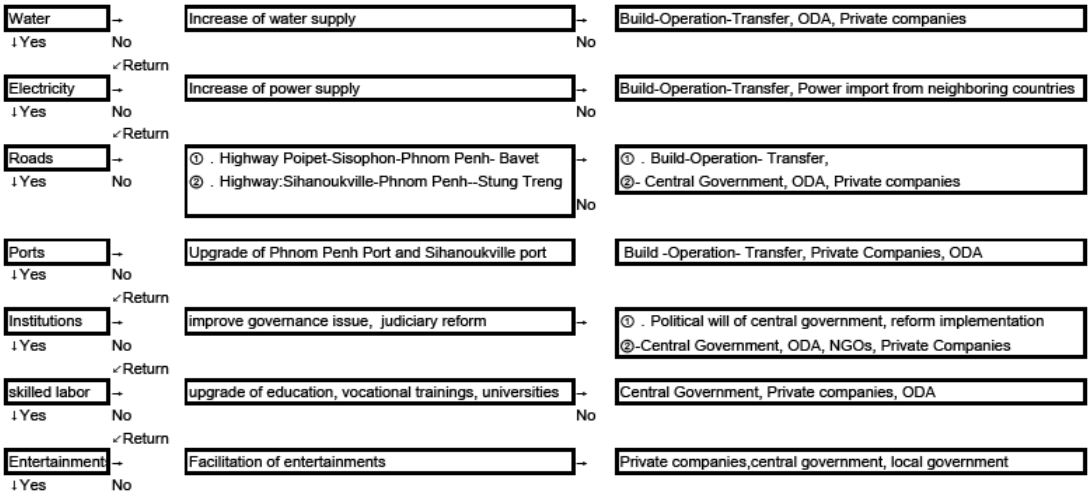
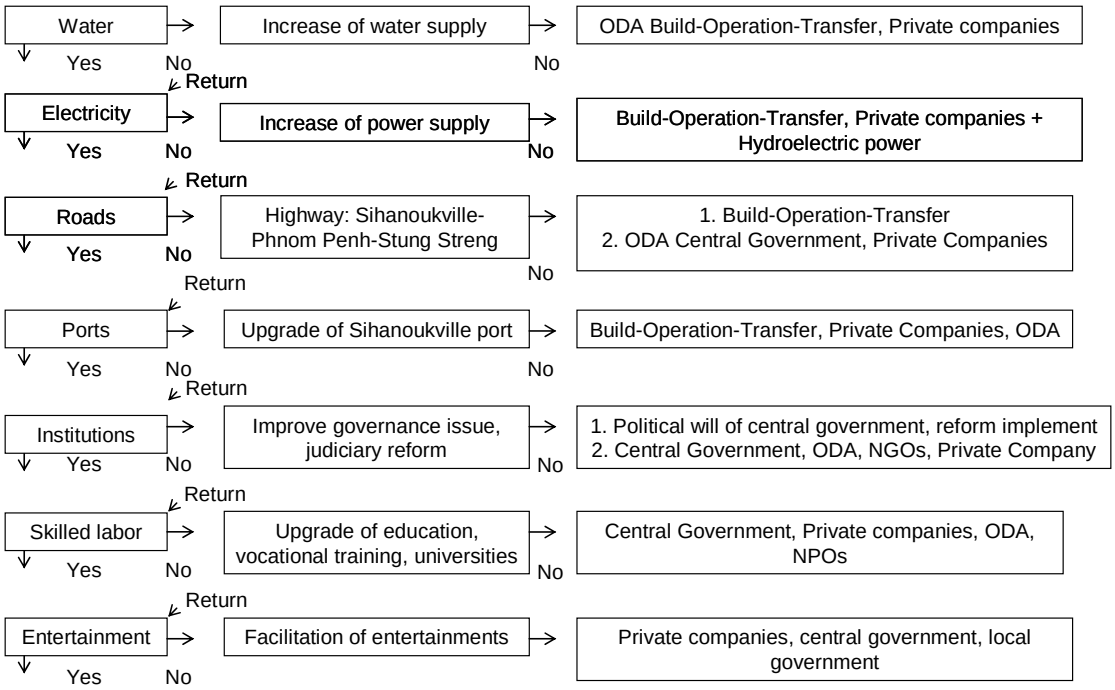


Figure: Sihanoukville's Flowchart



Chapter 4-2

FLOWCHART APPROACH TO INDUSTRIAL CLUSTER POLICY IN VIETIANE AND SAVANNAKHET

Syviengxay Oraboune

Abstract

In Vientiane and Savannakhet, water supply and transportation infrastructures are bottlenecks to do business. Electricity and telecommunication are relatively better than them.

Based on the results of the flowchart approach survey, we can summarize some critical issues for both Vientiane and Savannakhet as follows:

(1) Vientiane

Table 1: Results of the industrial cluster policy survey in Vientiane (Flowchart Appraoch)

	1	2	3	4	5	6	7	8	9	10	Results	Problems
1. Do industrial zones exist sufficiently?	X	X	X	O	X	X	O	X	O	X	3	X
Capacity building:												
2. Does water supply exist sufficiently?	x	O	X	X	X	X	O	X	X	O	3	X
3. Does electricity infrastructure exist sufficiently?	O	O	X	X	O	X	X	O	X	O	5	X
4. Does telecommunication infrastructure exist sufficiently?	O	O	X	X	O	X	O	O	O	X	6	X
5. Does transport infrastructure exist sufficiently?	X	O	X	X	X	O	X	X	X	O	3	X
6. Does social infrastructure (schools, hospitals) exist sufficiently?	X	X	X	X	X	X	O	X	O	X	2	X
7. Does institution/lecal system exist sufficiently?	X	O	X	X	X	O	O	X	X	O	4	X
Human resources												
8. Does human resource exist sufficenty?	X	X	X	X	X	X	X	X	O	X	1	X
Living conditions												
9. Are living condition sufficient?	O	O	O	O	X	O	O	O	X	O	8	
Anchor firms												
10. What companies are the target of anchor firms?	O	O	O	O	O	O	O	O	O	O	10	

Source: S. Oraboune, C. Ampayvanh, V. Souliya (interviews in Vientiane on Dec. 08-13, 2008.)

Table 1 indicates that respondents were only satisfied with their living conditions and

gave a mid-range score on infrastructure such as electricity and telecommunications. Other infrastructure, including water supply, transportation, schools, hospital as well as human resources still pose some constraints. Therefore, according to the survey, the investment environment of Vientiane consists of its transportation, electricity, water supply, regulations, and unskilled labor. Building these mentioned infrastructure as well as putting in place those factors that can create a conducive business environment such as those on regulations, living conditions, etc., determine the success of an industrial estate in Vientiane. Funding these requires the involvement of relevant stakeholders, as mentioned in the flowchart below (Figure 1).

(2) Savannakhet

Table 2: Results of industrial cluster policy survey in Savannakhet

	1	2	3	4	5	6	7	8	9	10	Results	Problem
1. Do industrial zones exist sufficiently?	X	O	X	X	X	O	X	O	X	X	3	X
Capacity building:												
2. Does water supply exist sufficiently?	X	X	X	X	X	X	X	O	O	X	2	X
3. Does electricity infrastructure exist sufficiently?	X	O	X	O	O	O	X	O	O	O	7	
4. Does telecommunication infrastructure exist sufficiently?	O	O	O	O	X	O	O	O	O	O	9	
5. Does transport infrastructure exist sufficiently?	O	X	O	X	X	X	X	O	X	X	3	X
6. Does school infrastructure exist sufficiently?	O	X	X	O	X	X	X	X	X	O	3	X
7. Does hospital infrastructure exist sufficiently?	O	X	X	X	X	X	X	X	X	X	1	X
8. Does institution/lecal system exist sufficiently?	O	O	X	X	X	O	X	O	X	X	4	X
Human resources												
9. Does skilled labour exist sufficenty?	X	X	X	X	X	X	X	X	X	X	0	X
10. Does unskilled labour exist sufficenty?	X	X	X	X	X	X	X	X	X	O	1	X
Living conditions												
11. Are living condition sufficient?	X	X	X	X	X	O	X	O	O	O	4	X
Anchor firms												
12. What companies are the target of anchor firms?	X	O	O	O	X	O	O	X	X	O	6	X

Source: S. Oraboune, (interviews in Savannakhet on Jan. 14–16, 2009.)

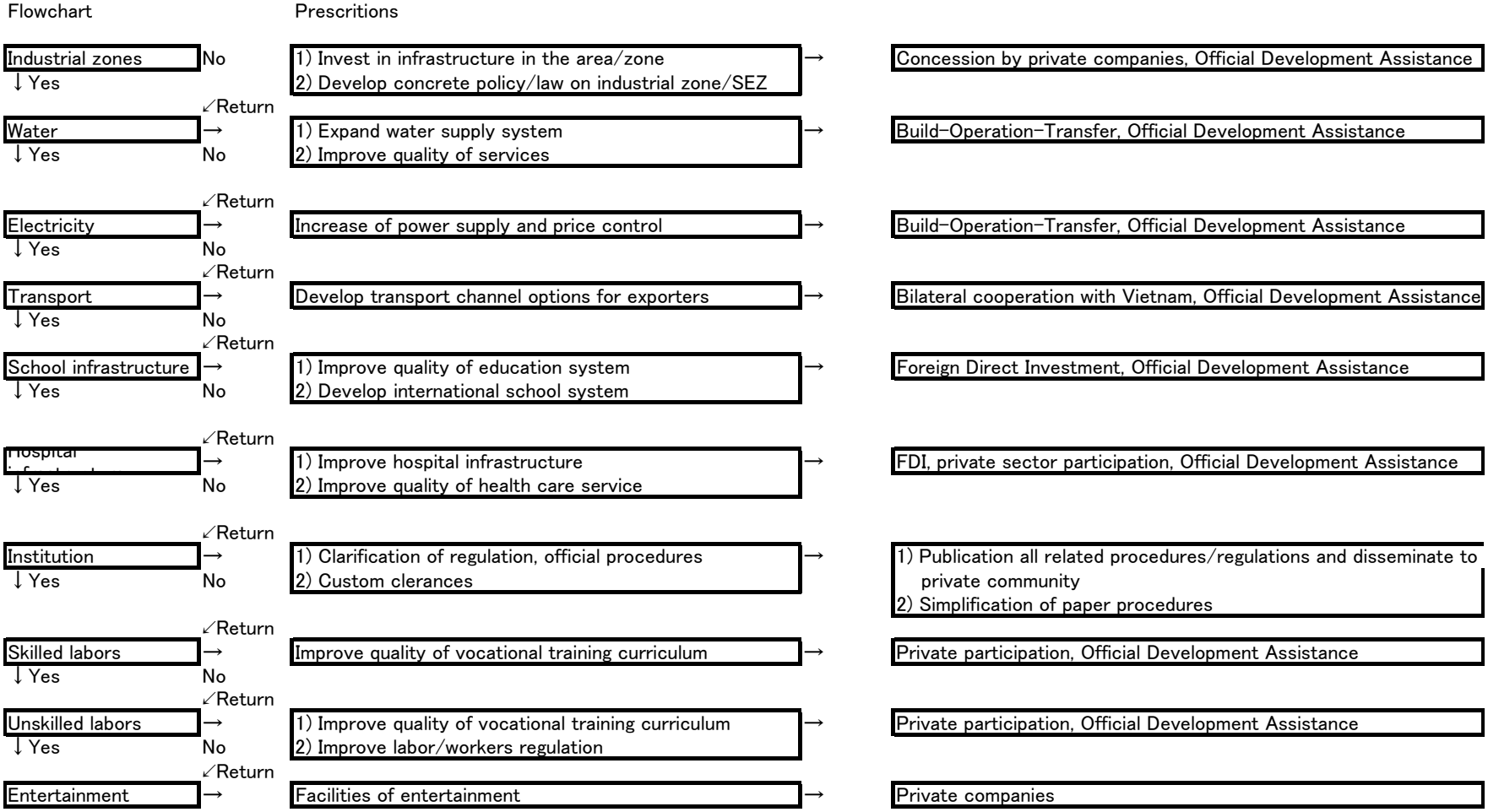
Just like for Vientiane, Savannakhet's respondents seem to be only satisfied with their telecommunications and electricity sectors and see some constraints in the other infrastructure. Therefore, the investment environment of Laos, especially in Savannakhet, covers infrastructure, including transport, water supply, social infrastructure (schools, hospital) as well as regulations, and skilled and unskilled labour (base on the flowchart survey under ERIA Research Project 2008). Again, the establishment of SSEZ requires the development of infrastructure as well as other areas that can make the business environment more conducive such as those on regulations,

Figure 1: Vientiane's Flowchart

Flowchart		Prescritions		
Industrial zones	No	1) Invest in infrastructure in the area/zone 2) Develop concrete policy/law on industrial zone/SEZ	→	Concession by private companies, Official Development Assistance
↓ Yes	↙Return			
Water	→	Expand water supply system	→	Build-Operation-Transfer, Official Development Assistance
↓ Yes	No			
	↙Return			
Electricity	→	Increase of power supply and price control	→	Build-Operation-Transfer, Official Development Assistance
↓ Yes	No			
	↙Return			
Telecommunication	→	Reduce the service price		The end of the flowchart
↓ Yes	No			
	↙Return			
Transport	→	1) Develop transport channel options for exporters 2) Develop dry port for exporters 3) Develop road network conneting to neighboring countries	→	Regional cooperation, Official Development Assistance
↓ Yes	No			
	↙Return			
Social Infrastructure (School/hospital)	→	1) Improve school infrastructures 2) Improve quality of education 3) Improve hospital infrastructures 4) Improve quality of health care services	→	Private sector participation, Official Development Assistance
↓ Yes	No			
	↙Return			
Institution	→	1) Clarification of regulation, official procedures 2) Custom clerances	→	1) Publication all related procedures/regulations and disseminate to private community 2) Simplification of paper procedures
↓ Yes	No			
	↙Return			
Human resource (Skilled/ unskilled labor)	→	1) Improve quality of vocational training curriculum 2) Improve labor/workers regulation	→	Private sector participation, Official Development Assistance

Source: Author.

Figure 2: Savannakhet's Flowchart



Source: Author.

labour, and living condition. Figure 2 below shows how stakeholders can get involved in funding the development activities in the SSEZ in Savannakhet. Both flowcharts above show the many issues that still need to be addressed as far as the industrial estate in Vientiane and special economic zone in Savannakhet are concerned.

In sum, both surveys suggest that the development of Vientiane's industrial estate and Savannakhet's special economic zone---or of Lao PDR as a whole---is still at its very early stage. Since funding is the most crucial concern here, any development activities have to first be preceded by an appropriate fund mobilization policy, especially from external sources in terms of official development assistance and foreign direct investment, etc.

Chapter 4-3

FLOWCHART APPROACH TO INDUSTRIAL CLUSTER POLICY IN YANGON

Moe Kyaw

Abstract

There are 18 industrial zones in the whole country. However, necessary measures should be taken to establish well-structured industrial zones. Most industries are not provided with sufficient supply of electricity for production. Yangon transport infrastructure is relatively underdeveloped compared to those of other Southeast Asian countries.

Objectives of the study

The objectives of the flowchart approach survey are to assess the industrial zone, to find out bottlenecks in production networks, to recommend appropriate timing and sequence of policy measures to develop industrial clusters and to attract and invite anchor firms.

Institutional structure for industrial development in Myanmar

The Industrial Development Committee (IDC) headed by the Head of State stands at the top of the institutional structure followed by the Myanma Industrial Development Committee (MIDC) headed by the Prime Minister. Under the MIDC, the Myanma Industrial Development Working Committee (MIDWC) chaired by the Minister for Industry No (2) was established to encourage the production of machinery and equipment for industrial use.

The roles and functions of industrial development committees are to assist in better production and management techniques, R&D and standard quality control; to assist in technology transfer and providing consultations for process and management improvement; to encourage production of machinery and equipment for industrial use;

and to provide financial assistance to specific industry located at industrial zones. The industrial zones and sub-industrial zones are under the control and supervision of the respective Industrial Zone Supervisory Committees and Industrial Zone Management Committees.

The situation of the industrial zones

In Yangon, there are 10 industrial zones, namely: Hlaing Thayar, Shwe Pyi Thar, Shwe Pauk Kan, North Okkalapa, South Okkalapa, East Dagon, South Dagon, Dagon Seikkan, Thaketa, and Thilawa. These industrial zones have a total of 5,469 industries. In the Mandalay industrial zones, there are 1,267 industries such as food industry, clothing, construction, consumer goods, household goods, printing and publishing, industrial raw materials, oil and minerals, agricultural machinery, machinery and parts, transportation, electric goods, and general industry. In the Myeik industrial zone, there are 26 industries operating different kinds of industrial activities. Industries such as food industry, wood-based industry, raw materials, light truck production and general industry could be found in the Myeik industrial zone.

The survey team carried out the flow chart approach survey in November 2008 by interviewing 10 key reliable respondents who have knowledge of industrial zones and industrial development in Yangon. These 10 respondents consisted of two departmental officials, one professor, two executive members of industrial association and five industrialists. They were asked three sets of questions.

1) **Industrial zone:** There are 18 industrial zones and 28 sub-industrial zones in the whole country. However, some zones do not meet the fundamental objective of industrial development and necessary measures should be taken to establish well-structured industrial zones.
2) **Electricity:** Electricity distribution is still limited in Myanmar and most industries are not provided with sufficient supply of electricity for production. Insufficient electricity supply poses a big problem for industrial development and it discourages the entrepreneurs to sustain or expand their industries.

Table : Questionnaires on industrial cluster policy: Yangon Industrial Zones Flow chart approach survey

	1	2	3	4	5	6	7	8	9	10	Result	Problems
1. Do industrial zones exist sufficiently?	X	X	X	O	X	x	O	X	x	O	3	X
Capacity building: Physical infrastructure												
2. Does transport infrastructure exist sufficiently?	X	X	X	O	O	X	X	X	X	X	2	X
3. Does electricity infrastructure exist sufficiently?	X	X	X	X	X	X	X	X	X	X	0	X
4. Does communication infrastructure exist sufficiently?	X	X	X	O	O	X	X	X	X	X	2	X
5. Does port infrastructure exist sufficiently?	X	X	X	O	X	X	X	X	X	X	1	X
6. Do institutions exist sufficiently?	X	X	X	X	X	X	O	X	X	X	1	X
Human resources												
7. Does unskilled labor exist sufficiently?	O	O	O	O	X	X	O	O	O	X	7	
8. Does skilled labor exist sufficiently?	X	X	X	O	X	X	X	X	X	O	2	X
Living conditions												
9. Do hospitals exist sufficiently?	O	O	X	X	O	O	X	O	O	X	6	
10. Do schools exist sufficiently?	O	X	O	O	X	O	O	O	O	O	8	
11. Do entertainments exist sufficiently?	O	O	X	X	X	X	X	O	O	O	5	X
12. Do thefts happen?	X	X	X	X	X	O	O	X	X	O	3	X

Source: (interviews in Yangon in November 2008) (O= Yes, X= No)

3) **Telecommunications:** Telecommunication services are under the control of the Myanmar Post and Telecommunication, a government enterprise. Internet/email facility is not reliable and Myanmar has direct satellite links to eight countries such as Japan, Hong Kong, Singapore, Thailand, India, UK, Australia and Indonesia.
4) **Transportation:** Yangon transport infrastructure is relatively underdeveloped compared to those of other Southeast Asian countries. Most respondents suggested that the existing roads should be maintained and upgraded because the roads are still underdeveloped to cope with the increasing traffic volume.
5) **Port:** The port facilities are poor and need to be developed to modern standard to efficiently handle cargo and containers. The port services are aggravated by

the red tape type of management system and the port location is not on the international sea line.

6) **Others infrastructure:** Good quality water can be available for industrial use in industrial zone areas. Other infrastructures such as supporting industries are not yet developed.
7) **Institutions:** The Industrial Zones Management Committees were formed under the Industrial Zone Management Order No (1/97). There is lack of one-stop service (OSS) and it is necessary that OSS should be provided in the industrial zones or in the zone group.
8) **Unskilled labor:** There is a large size of unskilled labor although there is a labor issue of migration moving to neighboring countries for better income. While labor turnover is high in some industries, there is no serious problem in relationship between management and employees.
9) **Skilled labor:** Most of the engineers are technically competent and highly skilled. Some factories try to keep their efficient employees by paying attractive salaries. However, some industries have launched a training program of capacity building to train workers to take charge of the operation.
10) **Hospital:** There are international medical centres and hospitals such as the 'Pan Hlaing' hospital in Hlaing Thar Yar and the 'Pin Lon' hospital in North Dagon. There are also many private clinics that provide good health care services.
11) **School:** In Yangon, there are international schools and other private education/ learning centres.
12) **Living condition:** There are hotels and apartments which are widely used by business persons, foreign expatriates and tourists. In the Hlaingthayar Industrial Zone, residential complex, supermarkets and shopping centres have proved to be standard service facilities.

Bottlenecks of industrial cluster

The bottlenecks which hinder the development of industrial clusters include electricity shortage, lack of one-stop service, time-consuming procedure of license application and permit issuance, restriction on imports of raw materials, lack of sound trade and industrial policy, weak control on informal and illegal imports, absence of tax relief and exemption, limitation to enjoy GSP, double or repeated taxation system applied to raw materials and finished goods, scarcity in skilled workers and technicians, and higher transportation cost due to scattered supporting industries.

Prospect for industrial cluster

The definition of industrial cluster in Myanmar has become complex with the agglomeration of industries, in which the combination of the same industries has been regarded as a cluster. The linkage among industrial clusters is weak in the industrial

zones, i.e., the main or mother industry and supporting industries are kept far away from one another. The flow chart approach suggests that industries such as fishery, wood-based, automotive, and plastic should be regarded as industrial clusters in Myanmar.

Policy recommendations for inviting anchor firms

It is recommended that regulation, institution, infrastructure, and human resources should be improved to invite anchor firms. Through the cooperation of government and related organizations and the promotion of infrastructure development, Myanmar could become an attractive country for anchor firms to invest in.

Chapter 4-4

FLOWCHART APPROACH TO INDUSTRIAL CLUSTER POLICY IN DANANG

Dinh Hien Minh[1]

Abstract

This paper is about the role of the investment climate in Viet Nam to usher its industries into the regional production network. One way this can happen is to form an industrial cluster. Based on the flowchart approach to policy formulation/development of industrial clusters, interviews have been conducted in Danang City. Findings from the interviews were as follows: 1) industrial zones/special economic zones need to be improved; 2) more comprehensive, physical infrastructure needs to be upgraded, especially roads linking Danang with neighboring provinces; 3) warehouses and railways as well as power plants should be built; 4) institutional reforms should be sustained and regulations made clearer, transparent and consistently enforced; 5) manpower training should be undertaken to attract foreign firms, including anchor ones, to invest in Viet Nam; 6) business environment as well as living conditions should be enhanced and facilities needed set up (e.g., shopping centers, hospitals, international schools and amusement centers); and, last but not least, 7) more incentives should be extended to anchor firms. All this shows that Viet Nam still has a lot to accomplish if it is to achieve its goal of becoming an industrialized country in 2020.

[1] Dinh Hien Minh is Deputy Director of Dept for Macroeconomic Policy & Integration Studies Central Institute for Economic Management

INTRODUCTION

Viet Nam's socio-economic situation has exhibited remarkable changes in over 20 years of renovation and development. As one of the country's enormous achievements, gross domestic product (GDP) per capita rose to US$1,053 in 2008 from US$86 in 1988. This is because Viet Nam managed to sustain a relatively high growth for a long period: average GDP growth rate for 1986-2000 was 6.8 percent per year, and 7.5 percent per year[2] for 2001-2008.

However, Viet Nam is still considered a low-income country and is still in the early stages of development. In its Socio-Economic Development Strategy for 2001-10, Viet Nam's goal is to accelerate its industrialization and modernization process. From underdevelopment to "a modern-oriented industrialized country" is what Viet Nam hopes to achieve by 2020. Viet Nam recognizes that there is a link between building an industrialized country and pursuing a proactive international economic integration. The country also recognizes that deepening integration can bring ample opportunities (e.g., creating greater foreign market access, larger foreign investment attraction, technology, management skill transfer, and efficient resource allocation for industrial sector) as well as big challenges (fierce competition among enterprises on the world market as well as on domestic market) for Viet Nam. Effetive international economic integration plays a key role in enhancing efficiency and promoting economic growth. Effetive international economic integration creates the necessary conditions for building an industrial economy.

The recently developed conceptual framework of Viet Nam, i.e., new economic geography and the fragmentation theory, suggests that the economic forces of concentration and dispersion of economic activities can be utilized for attaining opportunities of deepening integration and narrowing development gaps if proper policy environment is prepared.

[2] GDP growth rate for 2008 was lower (6.23 percent) than those of the previous years because of the global financial crisis impact

Viet Nam enjoys geographical proximity of dynamic industrial agglomeration in Thailand and China, and large gaps in income levels and development stages can provide ample opportunities for inviting economic activities to Viet Nam. Viet Nam has abundant, reasonably well-educated and low wage labor. Yet, it has only participated to a modest extent in production and distribution networks in East Asia. If infrastructure in Viet Nam improved further, costs of service links and doing business in Viet Nam will decrease so that firms, especially foreign ones, will start seeing them as attractive investment sites. Transport hub development along the economic corridors can play an important role to reduce the cost of service links.

This case study in Danang city aims to find the hindrances to forming industrial clusters[3] to Danang by applying the flowchart approach—a step-by-step guide with focus on economic corridors such as East-West Economic Corridor (EWEC) and industrial zones (IZs), since they are instrumental in attracting foreign direct investment (FDI) and setting up production networks in East Asia. Local small and medium enterprises (SMEs) may also become suppliers to foreign firms in industrial clusters. The study concludes with policy recommendations for local governments, as well as for the Central government: (1) to attract FDI and to participate in production networks in East Asia; (2) to recommend policy measures to utilize effectively economic corridors and IZs; and (3) to recommend policy measures to develop industrial clusters in order to reach the goals of industrialization.

This paper is organized as follows. Section 2 presents the basic model of the flowchart approach to industrial cluster policy, and Section 3 applies this model in the case of Danang, Viet Nam. Section 4 presents findings relating to certain issues about industrial cluster policy. Section 5 concludes the paper by proposing policy implications in forming an industrial cluster.

[3] Cluster development is a relatively new concept, having emerged only around the 1990s. Yet in a relatively short period of time, the subject has gained immense popularity among policymakers as a very important tool for microeconomic, small and medium enterprise development. For further discussion on the concept of cluster development and policy, read *Foundation for MSME Clusters*, 2006.)

1. THE FLOWCHART APPROACH TO THE INDUSTRIAL CLUSTER POLICY

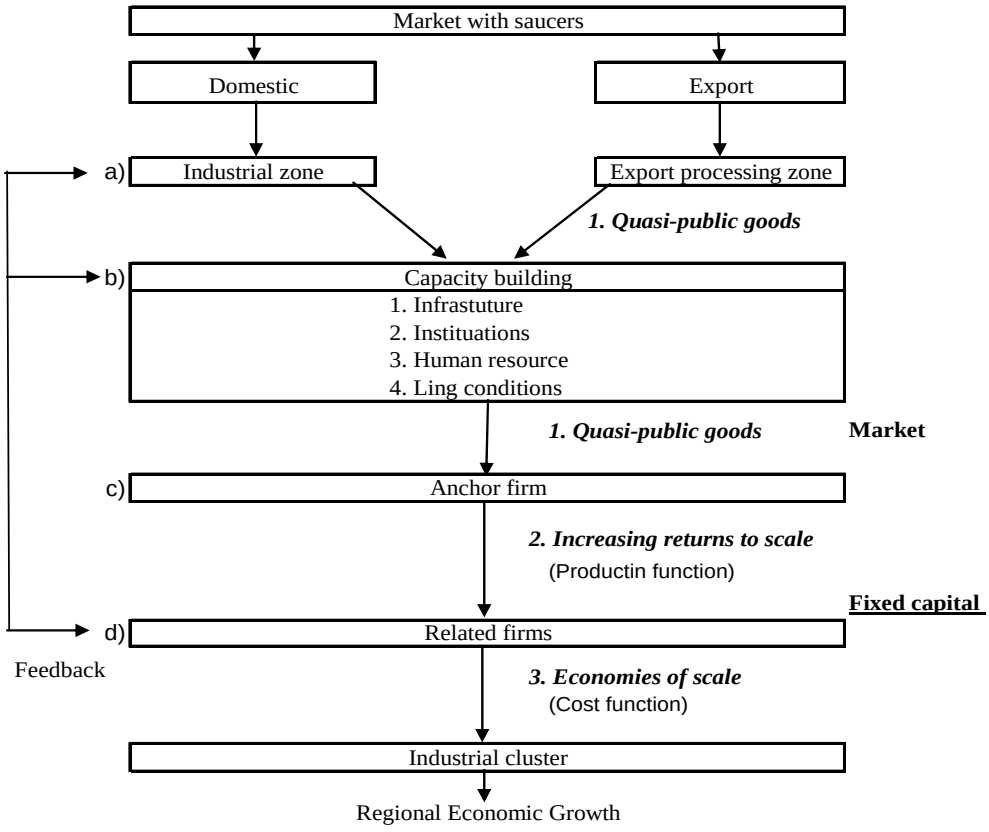
According to Kuchiki (2005), cluster development focuses on the cluster as an interconnected system rather than a physical agglomeration of enterprises in a location. It therefore must encompass the entire economic value chain which the cluster is a part of and goes beyond. It understands and directs the efforts right from raw material provision to the delivery of goods and services that the cluster produces. Cluster policy should provide the flexibility to harness the potential in different clusters of the country based upon local ground conditions in those locations.

Kuchiki (2005) has developed a theory to analyze and facilitate an effective adoption of an industrial cluster. He proposed a "flowchart approach to industrial cluster policy," theorizing that cluster policy is effective in forming industrial clusters by establishing export process zones (EPZs) and IZs, building capacity, and inviting anchor firms. The flowchart approach to industrial cluster policy can be seen in Figure 1.

Industrial clusters grow through step-wise development. As shown in Figure 1, forming an industrial cluster starts by building an IZ typically with the central government being in charge. An IZ serves as a saucer, with fulfilled conditions ready for business and manufacturing operation, to invite investors. This is the prerequisite of companies considering investing into the region. An anchor firm coming to the IZ is expected to bring with it related suppliers and partners, and that brings prosperity to the IZ and the local region. It forms an industrial cluster inside and around the IZ. Even if it is a poor area with a low-income level and high unemployment rate, after the arrival of the anchor firm, it will rise and become an attractive place for economic/production activities and municipal development.

All the foregoing forms part of *phase I of industrial cluster development*, aptly called Industrial agglomeration (Figure1). Industrial agglomeration consists of four steps by establishing EPZs and IZs, building capacity, inviting anchor firms and related firms.

Figure 1: Prototype Model of "Flowchart Approach" to Industrial Cluster Policy



Source: A. Kuchiki (2008)

Related firms that are mostly local SMEs can gradually join production networks as capacity building combines facilitation of physical infrastructure, institutional reform, human resource development and preparation of living conditions. Physical infrastructure refers to roads, ports, communications, and so on. Institutional building, also crucial to successful atraction of foreign investors, includes streamlining investment procedures through one-stop services, deregulation of laws, and introduction of preferential tax systems. Human resources, which are usually an initial condition for foreign investors, include skilled and unskilled labor, managers, researchers and professionals. Living

environment, for example, includes the provision of hospitals and international schools to attract foreign firms. An anchor firm will be ready to invest after all of this capacity building has been carried out.

Phase II of industrial cluster development is innovation stage that has the same "Capacity Building" as Phase I, only at a higher level. The differences here are: (1) Once Phase 1 has been accomplished, the demand for more skilled labor and R&D activities for the sake of further development will urge universities and research institutes to grow and enhance themselves; (2) The advent of anchor person(s) can encourage further foreign investment into the region, enlarge the scope as well as enhance the quality of the industrial cluster(s).

2. THE FLOWCHART APPROACH TO THE INDUSTRIAL CLUSTER POLICY IN DANANG CITY

This section applies the flowchart approach to the industrial cluster policy in Danang. This is phase I of industrial cluster development. Danang City was chosen for this undertaking because it is situated in the middle of the country, right on the transport hub of the north-south highway, rail, sea and air routes, lying 764km south of Ha Noi and 964km north of Ho Chi Minh City. Moreover, Danang City lies at the east end of the East-West Economic Corridor (EWEC) and is the gateway to the Pacific Ocean at the Tien Sa Seaport. The Danang sea port (including Tien sa seaport, Han Riverport and Lien Chieu seaport) is the import-export port of the virtually untapped hinterlands of Laos, Northeast Thailand, Myanmar and central Viet Nam. Therefore, Danang City is a potential site for industrial clustering.

Interviews were conducted in Danang by applying Kuchiki's basic model of flow-chart approach to industrial cluster policy (see "The Questionnaire on Industrial Cluster Policy" in the Appendix). The questionnaire was administered to 12 key persons involved in IZs, industrial development and working in local government agencies and enterprises, including state-owned, private, joint-venture and 100 percent foreign-invested enterprises.

Results of interview using the flow chart approach are as follows:

Table 1: Summary of flow-chart-approach interviews in Danang*

	Respondents												Results	Problems
	1	2	3	4	5	6	7	8	9	10	11	12		
1. Do industrial zones exist sufficiently?	O	O	O	O	O	O	O	O	O	O	O	O	12	
Capacity building: Physical infrastructure														
2. Does road transport (infrastructure) exist sufficiently?	X	X	X	O	O	X	X	X	O	O	X	O	5	X
3. Does electricity infrastructure exist sufficiently?	X	O	X	O	O	X	O	O	X	O	X	O	7	X
4. Does communication infrastructure exist sufficiently?	O	O	O	O	O	O	O	O	O	O	O	O	12	
5. Does port infrastructure exist sufficiently?	O	O	O	O	X	O	O	O	O	X	X	X	9	
6. Does other infrastructure exist sufficiently (warehouse, train or air)?	NA	NA	NA	NA	X	X	X	NA	X	X	NA	X	6	X
7. Do institutions exist sufficiently?	O	O	X	O	O	X	O	O	X	X	X	O	7	X
Human resources														
8. Does unskilled labor exist sufficiently?	X	X	X	X	O	X	X	X	X	X	X	X	1	X
9. Does skilled labor exist sufficiently?	X	X	X	X	X	X	X	X	X	X	X	X	0	X
10. Does Professionals exist sufficiently?	X	X	X	X	X	X	X	X	X	X	X	X	0	X
Living conditions														
11. Do schools exist sufficiently?	O	X	X	O	O	X	O	X	X	X	O	X	5	X
12. Do hospitals exist sufficiently?	O	O	X	O	O	X	O	X	X	X	O	X	6	X
13. Do amusement exist sufficiently?	O	O	X	O	O	X	X	X	X	X	O	X	5	X
Anchor firms:														
14. Do anchor firms exist ?	X	O	X	O	O	NA	O	O	O	O	O	O	9	?

Note: * Interviews in Danang on Dec. 8-12, 2008
X means that it is a problem
O means that it is existing or existing sufficiently
NA means it is not available
Source: Authors

.

- *IZs*

In terms of development of land, five IZs (Danang IZ, Hoa Khanh IZ, Lien Chieu IZ, Hoa Cam IZ, Aquatic Service IZ) have been built in Danang City. The total land area of these five IZs is at least 1,400 hectares. The infrastructure in the industrial zones have been improved to benefit local and foreign investors alike. In addition, the province city of Danang is now encouraging foreign investors to develop the new Hoa Phuong IZ with a land area of 500 hectare and a high-tech zone with a land area of 1,214 hectares (IPC Danang, 2008). At present, occupation rate in the five IZs is about 60 to 70 percent. In this

regard, it is easy to understand why all interviewees admitted that the development of land in Danang IZs would be sufficient for the formation of an industrial cluster.

- *Capacity building: Physical infrastructure*

According to Edmund Malesky et al. (2008), Danang City is one of three cities with the best physical infrastructure in Viet Nam. This is consistent with the respondents' perception that physical infrastructure in Danang have considerably improved time. Water supply and telecommunications have satisfied investors and businesses. One water plant in Danang is capable of providing at least 80,000 cubic meters a day. Existing water supply exceeds water demand. A new water facility, currently under construction, is projected to have a capacity of 120,000 cubic metes a day. In terms of post and telecommunications, Danang City has an international marine optical fiber cable station (SE-ME-WE 3), considered the ASEAN's top-ranged international transmission line with a speed of 355 mega bits per second. Major companies such as VNPT, MobiFone, Viettel, EVN telecom, HT mobi, and Sfone have existing facilities in Danang, providing services with relatively high quality.

But electricity supply and other physical infrastructure such as roads, sea ports, air ports and railways, are limited. In Danang City in general and in IZs in particular, electricity supply comes from the national North-South 500KV high voltage grid, on which the availability of electricity depends a great deal. More than half of the respondents said that in shortage of electricity usually happens during summer time, and power loss happens frequently without prior notice. This has resulted in increased production costs for some companies due to the need to reset production processes. Shortage of power supply is thus among the obstacles to industrial development.

The respondents expressed dissatisfaction on the state of transportation infrastructure. Road networks in Danang City are relatively good because they are paved, but those connecting the city with neighboring provinces (such as roads from the Lao Bao border gate to Danang) remain narrow and still underdeveloped.

Port facilities at the Danang sea port are insufficient due to lack of nearby large warehouse and internal railways. It leads to low frequent use of sea port and actual throughput is about 3 million tons. Therefore, transport of goods via sea port in Danang City is still costly compared to other sea ports.

The Danang sea port is the third largest commercial port in Viet Nam after the ports Saigon and Haiphong. With navigation depth of 11 m, it can receive 45,000 DWT ships and other kinds of vessels such as container ships and large cruise ships. The annual throughput capacity for handling cargo through the Danang port is about 4 million tons.

Still another source of respondents' dissatisfaction is the state of the Danang International Airport. The airport can handle B747, B767 and A320 aircraft, but the frequency of international flights is insufficient to meet businesses' requirements. This is evident when a company needs to transport its goods fast but freight transport of goods by airport is not feasible and sometimes very costly. At the moment, the airport is being expanded to include a new terminal that is targeted to meet the increasing demands for passengers and cargo transportation.

- *Capacity building: Institutional reforms*

All respondents noted that administrative reforms and the investment climate have improved significantly over time at the national as well as provincial levels, including Danang City. Ministries and people's committees at all levels have streamlined and rationalized administrative procedures and business requirements.

The Management Board of the Danang Industrial and Export Processing Zones (DIEPZA) is an authority established in 1994 by the Prime Minister (DIEPZA, 2009) to undertake public administration of the industrial and export processing zones in Danang City. DIEPZA is responsible for formulating appropriate regulations for the management of IZs, undertaking infrastructure development within and outside related IZs, provide assistance in attracting investment to IZs, and grant investment licenses to foreign or joint venture investments.

Complementing the role of DIEPZA is the Danang Investment Promotion Centre (IPC DANANG), which was established by the People's Committee of Danang. IPC DANANG assists the People's Committee of Danang to facilitate investment licensing procedures and promote domestic and foreign investment to Danang.

While DIEPZA acts as a one-stop-shop service for foreign investors inside IZs, IPC DANANG is a one-stop-shop service for foreign investors inside and outside IZs in Danang City and the Department of Planning and Investment for domestic investors. The one-stop shop is the point of entry for all inquiries about establishing a new business or expanding existing ones in Danang City. As a result of the one-stop shop implementation, waiting periods for business registration and procedures for start-up have declined significantly. Investment licenses are granted to appraised projects within 10 days and registered projects in five days. As a one-stop shop, DIEPZA provides investment incentives for the IZs in Danang, such as those dealing with power and water supply costs, price of land used rights, among others.

The respondents complained that legal requirements are cumbersome and regulations and by-laws are unclear, inconsistent, and overlapping. They referred in particular to the Investment Law, Construction Law, Land Law, Environmental Protection Law, to name some. They described these legislated laws as confusing and even contradictory with each other, specifically on the sequence and procedures for setting up investments. In addition, enforcement of specific regulations is always delayed. All of this hinders on investment attraction and business development.

Despite some recent improvement in customs procedures, some respondents claimed that firms still are willing to bribe customs officers to fast-track customs clearance.

- *Capacity building: Human resources*

Danang City boasts 14 universities and colleges, 15 junior colleges and technical secondary schools, and many vocational and informatics and foreign language training centers. Every year, tens of thousands of personnel are trained in the city. Against this

backdrop, the respondents unanimously indicated that although the city's human resources are of the highest quality in central Viet Nam and the highlands, they fail to meet the requirements of businesses. They claimed that the quality of education and training system is still very low compared to international standards. Curriculums and programs are backward. As such, trained labor supply does not meet business demands, especially for terms of professional labor. Thus, it is difficult to recruit high-quality skilled labor and professionals in Danang.

Danang's average population as of 2007 is 806,900, of which the labor force accounts for 58 percent. As such, the city is considered small compared to other regions. Due to the high economic growth in Danang City over the past decade, not only skilled, but unskilled labor has also become unavailable. Many businesses have had to recruit labor from outside the city such as rural areas in neighboring provinces. But even this task has created problems. According to some respondents, some laborers from rural areas are always on the lookout for higher-paying jobs even in other areas like Ho Chi Minh City. This means higher turnover. For others, this is seen as a way to accelerate technological transfer and thus contribute to the accumulation of regional technical capacity.

- *Capacity building: Living conditions*

Living conditions include the provision of residential areas, shopping centers, hospitals, international schools and amusement centers in order to attract more foreign firms. All respondents agree that Danang City have recently begun to develop real estate, including the facilities referred to earlier. Still, they think that there are insufficient basic and modern facilities as well as amenities for foreign investors. Even public transportation is yet to be fully developed.

The lack of foreign schools is still another disincentive to potential investors. As present, there is only one international primary school in Danang.

- *Anchor firms*

An anchor firm should have high-value forward and backward linkages. A good anchor firm with upstream and downstream industries is the key force for forming an industrial cluster.

Most respondents consider the Danang ITG Phong Phu Corp., a joint venture between Phong Phu Corp. (a Ho Chi Minh City-based textile company) and International Textile Group subsidiary Burling Worldwide (USA), as the first anchor firm in Danang City. ITG is the largest textile complex in Viet Nam with a total investment of US$80 million. It specializes in producing cotton and khaki with a self-contained production line from material processing to dying, washing and finishing products. The complex includes three plants—a cloth, sawing and dying plant.

By the end of 2008 the textile complex started its production, providing employment to about 1,500 workers while seeking export markets for more than 90 percent of its output. In the years to come, the Danang ITG Phong Phu Corp. expects to purchase inputs from local firms.

3. FINDINGS FROM INTERVIEWS

Findings from the interviews using the flowchart approach are similar to a large extent to those of the investment climate survey in Danang and Ho Chi Minh City (see Dinh Hien Minh and Trinh Quang Long, Nguyen Minh Thao, 2008).

According to the respondents, among the factors that contribute to forming industrial clusters are the existence of IZs, including site development and incentives, water supply and telecommunications. The respondents in Danang viewed land development as no major problem for them, claiming there is still enough land to be developed for industry.

Factors considered as hindrances to attracting anchor firms and forminng industrial clusters are as follows:

Physical infrastructure

- Limited power supply and frequent power outages;
- Poor or insufficiently developed road networks.
- Insufficient sea port facilities in Danang City.

Soft infrastructure

- Unclear and inconsistent regulations and delayed enforcement of the existing some regulations;
- More incentives should be extended to anchor firms;

Human Resource

- Skilled and professional labor, and even unskilled ones are not available in Danang City.
- The quality of workers also presents a major issue

Living conditions

- Lack of basic facilities and modern amenities such as hospitals and amusement centers for investors.

4. POLICY IMPLICATIONS FOR INDUSTRIALIZATION

Viet Nam now stands at the threshold of industrialization and pursues regional production networks like electronic industry or garments and textiles industry. To achieve its goal of becoming an industrialized country by 2020, Viet Nam needs to pursue, among others, infrastructure development, both on the physical and soft (or institutional) sides.

Being the focal point of the special economic zone of central Viet Nam and end point of EWEC, Danang City has built its development strategy for 2010 on changing an economic structure that will create a bigger industrial share in GDP and its development strategy from 2010 to 2020. One way this can happen is to form industrial clusters. This is

an area where Danang's potential can be harnessed. Becoming a textile or garments industrial cluster or logistics service hub in the center of Viet Nam and EWEC may not be easy for Danang City, but it is feasible. Toward this end, the local government should formulate a policy to form and develop industrial clusters. It also needs to invite anchor firms that can create backward linkages. Once operational, anchor firms can usher in the second stage of industrialization—attracting related firms. The evolving supporting industry will extend beyond Danang to neighboring provinces.

Industrial cluster policy in the case of Danang should be focus on the following:

a) *IZs:* developers of IZs should take into account that the infrastructure must be comprehensive for firms.

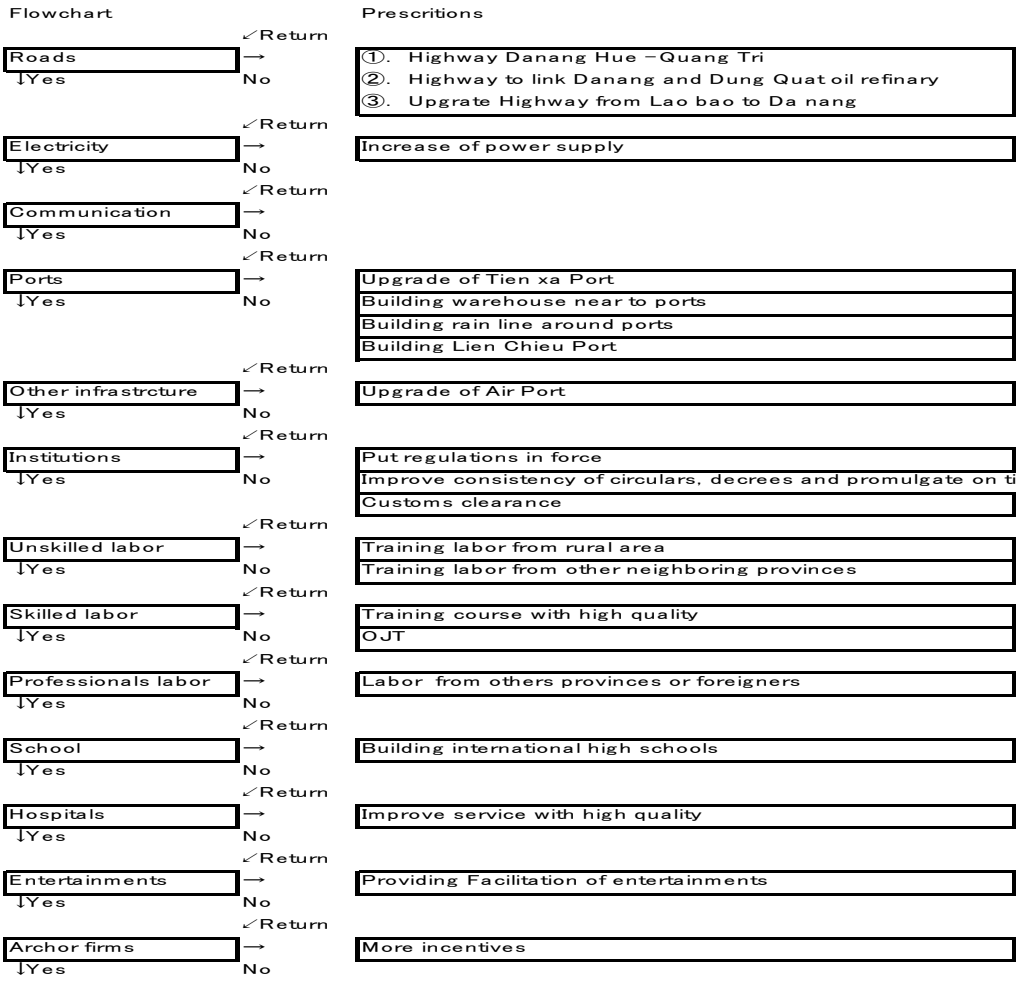
b) *Infrastructure*

Despite the acknowledged improvements in infrastructure systems, businesses are not yet fully satisfied with their present state. Further improvements are in order such as developing the transportation system in general and the road transportation system in particular. The former should be given top priority. In the case of Danang, roads from the Lao Bao border gate to Danang should be upgraded, and highways from the Dung Quat finery factory to Danang and those from Danang via Hue to Quang Tri should be built.

Achieving full capacity utilization at the Danang sea port requires increasing water depth and buildng roads, railways, warehouses and setting up logistics service companies. Such companies are preferably foreign-owned. This will mean reduced costs for enterprises engaging these companies' services, since middlemen fees will be avoided if freight and goods are bound for Singapore, Taiwan and Hong Kong as importing countries.

Continuous production requires adequate electricity or power supply This means there is a need to build more power plants, especially in the central area where there is no big power plant yet. Achieving this will reduce dependence on power transmitted from the national North-South 500KV high voltage grid, where electricity shortage is becoming serious.

Figure 2: Danang's Flowchart



Source: Authors

c) *Institutions*

The institutional aspect of achieving a better investment climate requires regulations that are simple, clear, consistent, transparent and readily enforceable. Obtaining the inputs of businesspersons during the policy making process and ensuring that laws and regulations are enforced fully and consistently nationwide will undoutedly help.

d) *Human resources*

A globally competitive workforce can be achieved through intensified training according to international standards. This can be implemented by opening more high-qualified training centers and schools. Local governments can support this endeavor providing more incentives to firms to train their workers on the job. They should also provide incentives to companies to attract more professionals and engineers to work in provinces like Danang City. Curriculum reform should be pursued alongside overseas education and training in some cases.

e) *Living conditions*

Developing IZs also requires the provision of a system of housing and other social services that serves the recreational needs of workers. Foreign investors seeking longterm stay in Viet Nam are expected to bring their families with them. Hence, basic facilities and modern amenities like schools, hospitals and recreation centers should be built on international standards./.

REFERENCES

Foundation for MSME Clusters. 2006. Getting to Know Clusters: Frequently Asked Questions. Foundation for MSME Clusters [online]. http://www.smeclusters.org/ [accessed March 2, 2009]

Kuchiki, A. 2005. A Flowchart Approach to Asia's Industrial Cluster Policy. In *Industrial Clusters in Asia*, edited by A. Kuchiki and M. Tsuji. London: Macmillan.

_____. 2009. Paper presented at the ERIA Meeting at Bangkok Research Center on Feb. 10, 2009, [venue?].

IPC Da Nang. 2008. *Danang –Make it Your Investment*. Danang Investment Promotion Center, 2008

Danang Industrial and Export Processing Zones. *Function and duties* [online]. http://www.iza.danang.gov.vn/english/ [accessed 10 March, 2009]

Dinh Hien Minh, Trinh Quang Long. 2008. Interviews on flowchart approach to industrial cluster policy – case study in Danang.

Dinh Hien Minh, Trinh Quang Long, Nguyen Minh Thao. 2008. Firm survey on investment climate in Danang and Ho Chi Minh city.

Malesky, E. and Tran Huu Huynh, Dau Anh Tuan, Le Thanh Ha, Le Thu Hien, Nguyen Ngoc Lan ,2008. *The Viet Nam Provincial Competitiveness Index 2008 – Measuring Economic Governance for Private Sector Development*. http://asiafoundation.org/publications/pdf/448 [accessed 10 March, 2009]

APPENDIX

Questionnaire on industrial cluster policy applied Flow-chart Approach in Danang

	Answer
1. Do industrial zones exist sufficiently?	
Capacity building: *Physical infrastructure*	
2. Does road transport (infrastructure) exist sufficiently?	
3. Does electricity infrastructure exist sufficiently?	
4. Does communication infrastructure exist sufficiently?	
5. Do port infrastructure exist sufficiently?	
6. Does other infrastructure exist sufficiently (warehouse, train or air)?	
Institutions	
7. Do institutions exist sufficiently?	
Human resources	
8. Does unskilled labor exist sufficiently?	
9. Does skilled labor exist sufficiently?	
10. Do professionals exist sufficiently?	
Living conditions	
11. Do schools exist sufficiently?	
12. Do hospitals exist sufficiently?	
13. Do amusement facilities exist sufficiently?	
Anchor firms:	
14. Do anchor firms exist?	

Source: Kuchiki (2008) et al.

Chapter 5

FRAMEWORK OF THE ERIA FIRM SURVEY

Ikuo Kuroiwa

ABSTRACT

This chapter introduces the analytical framework of the ERIA firm survey. The ERIA firm survey aims to indicate bottlenecks faced by less developed countries in attracting foreign direct investment (FDI), participating in production networks, and forming industrial clusters. The chapter also includes the survey questionnaire in the appendix.

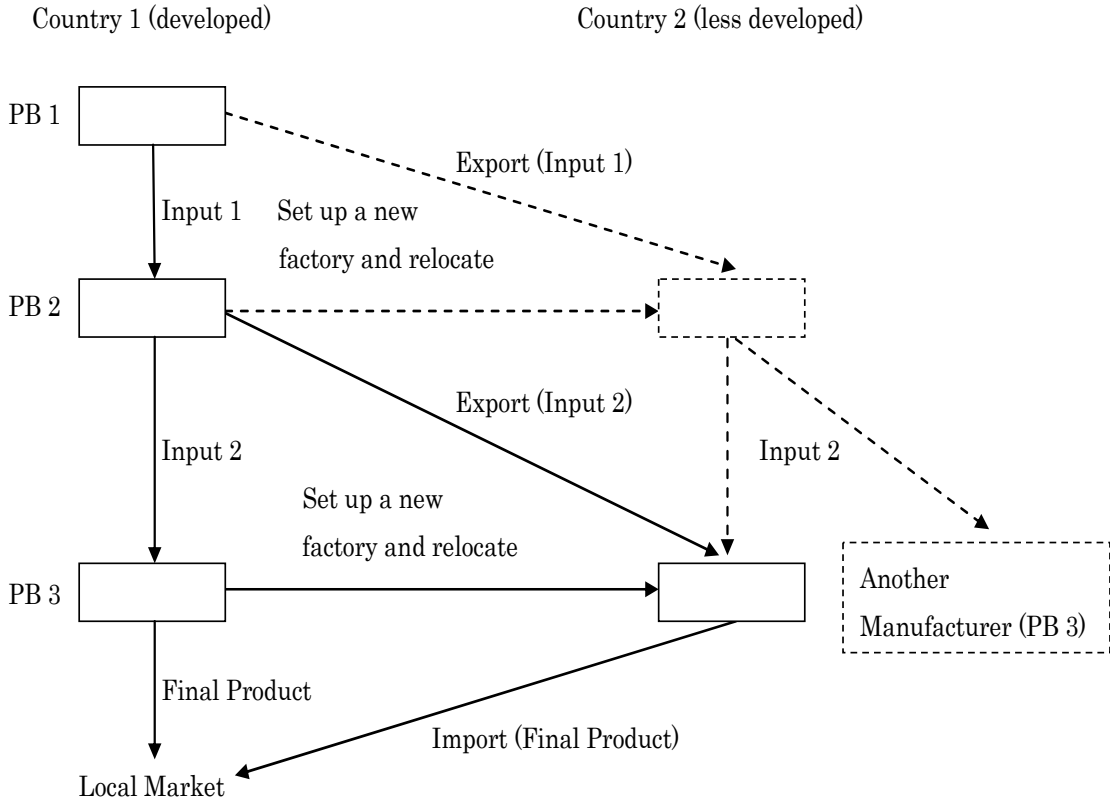
INTRODUCTION

Leading Southeast Asian economies have achieved rapid growth by participating in production networks organized by multinational enterprises (MNEs). It is thus crucial for CLMV to improve investment climate and join the production networks of MNEs. Service link costs need to be reduced substantially to make production fragmentation economically feasible. The discussion elaborates on how these conditions are satisfied and how they are organized in the framework of the ERIA firm survey.

1. PARTICIPATION IN PRODUCTION NETWORKS

Firms try to organize production activities efficiently to minimize production costs. To achieve this objective, comparative advantage of each production site should be fully utilized. Figure 1 illustrates a case of a firm with three production blocks—PB 1 (upstream), PB 2 (midstream), and PB 3 (downstream). Then it is supposed that PB 3 is the most labor intensive among the three. All of these blocks are initially located in a relatively industrialized area in Country 1—such as Bangkok metropolitan area in Thailand.

Figure 1: Fragmentation and Formation of Industrial Agglomeration



Saving in Labor Costs > Additional costs in Business Setup + Business Operation + Logistics

(NPV) (NPV)

Fragmentation

Formation of industrial agglomeration in Country 2:

- Relocation of PB 3 to Country 2
- Backward linkages
- Relocation of PB 2 to Country 2
- Forward linkages
- Relocation of another manufacturer (PB 3) to Country 2
- Backward and forward linkages
- Relocation of PB 1 and other relevant PBs to Country 2
- + Participation in the network of local suppliers and assemblers

However, due to a sharp increase in wages, the firm is now considering whether it shifting PB 3 to a less industrialized area in Country 2— such as Vientiane area in Lao PDR— is a better option. In this setting, below is a comparison of costs and benefits with and without relocation of PB 3.

(1) Benefits from relocation

The firm can save significant labor costs by shifting PB 3 to Country 2. Labor costs in Thailand, for example, are 4.8-8.0 times higher than Lao PDR (Suzuki 2009)[1]. Thus, the firm has a strong incentive to shift a labor intensive activity to a low-wage country.

(2) Costs of relocation

There are three kinds of additional costs incurred when production fragmentation occurs.

(a) *Business Setup Costs* are incurred when the firm set up a new factory for PB 3 in Country 2. For example, the firm needs to collect information on the regulatory framework and legal procedures, obtain licenses and permits in the host country. These costs will be reduced substantially if the government provides efficient services for investors.

(b) Additional *Business Operation Costs* are incurred when Country 2 (less developed country) has less favorable business environment than Country 1 (developed country)[2]. For example, infrastructure services such as utilities (electricity, water, and gas supply), transportation and communication services are less efficient and often more expensive in less developed countries. Institutions and governance are commonly weak in these countries, so that the firm faces serious uncertainty in business. Also crucially important is the availability of qualified workforce, like engineers and managers, but less developed

[1] Suzuki, Motoyoshi (2009). "Industrialization strategy of Laos: agglomeration and fragmentation". In *Plugging into production networks: industrialization strategy in less developed Southeast Asian countries*, ed. Ikuo Kuroiwa. Singapore: Institute of Southeast Asian Studies, forthcoming.

[2] If less developed countries offer better business environment than developed countries, additional business operation costs become negative. However, this is not the case in many developing countries.

countries typically lack these resources. On the other hand, if less developed countries offer attractive investment incentives, such as generous tax cuts, it will offset additional business operation costs to a certain degree.

(c) *Service Link Costs* or *Logistics Costs* are incurred when intermediate inputs (Input 2 in the case of Figure 1) and final products are carried back and forth between the two countries after the relocation of PB 3. Logistics Costs also include time cost for custom procedures. Moreover, communication costs are incurred to coordinate the production activities internationally. From a simple comparison of the costs and benefits, the firm will decide to shift PB 3 to Country 2, if the following condition is satisfied:

Net present value (NPV) of the benefits (= Savings in Labor Costs) exceeds that of the costs (= additional costs in Business Setup + Business Operation + Logistics).

In the above equation, since labor costs are mostly determined in the market (except for setting of minimum wage rates by the government), the influence of the government on the benefit side is limited. On the other hand, the government can influence the costs significantly. For example, the Business Setup Costs will be reduced substantially if the government provides an efficient one-stop service for investors. Special economic zones (SEZs) are especially instrumental to reduce these costs altogether, because they can provide an efficient one stop service, excellent infrastructure services, generous tax incentives, efficient custom procedures, and so on in a geographically specified area.

The ERIA questionnaire survey, especially questions in Sections 1, 2, and 3 are respectively relevant to the Business Setup Costs, Business Operation Costs, and Logistics Costs (see the appendix of this chapter). The CLMV countries can increase a possibility of attracting FDI and participating in production networks by taking appropriate measures to improve business environment and reduce these costs.

2. FORMATION OF INDUSTRIAL AGGLOMERATION

As discussed in Chapter 1, if the industry has weak agglomeration economies, production blocks are dispersed geographically. For example, labor-intensive activities such as garment sewing are constantly relocated to low-wage countries. Although such activities are relatively easy to attract, they are footloose and will leave the host country easily once wages and rents start to rise. To sustain economic growth, it is critical to attract the industries that exhibit some form of agglomeration economies.

Attracting these industries is more difficult due to the centripetal force of agglomeration economies and higher technological capabilities required for them. However, once they are successfully relocated, they will give significant impacts on the local economy. To illustrate this process, let us go back to Figure 1. Figure 1 shows that after the relocation of PB 3, PB 2 initially stays in Country 1, and Input 2 is exported to Country 2 to be used as an input for PB 3. However, as production of PB 3 increases, it is likely to be less costly to set up a new factory and relocate PB 2 to Country 2, because saving in Logistics Costs would exceed additional Setup Costs incurred by relocation. This is especially so if PB 3 has strong backward linkages to PB 2. On the other hand, after the relocation of PB 2, Input 2 becomes available locally in Country 2, and it is likely that PB 3 of another manufacturer would be attracted to Country 2, especially if PB 2 has strong forward linkages to PB 3. Furthermore, there is a possibility that PB 1 and other relevant PBs would be attracted to Country 2 via backward and forward linkages of the existing PBs in Country 2.

The above process illustrates a simple example of concentrated dispersion (Figure 2 in Chapter 1). It also illustrates how the anchor firms, such as Toyota and Canon, attract suppliers from abroad and form industrial clusters (see the flowchart approach in Chapter 4). In addition, if local suppliers have enough technological capabilities, they will participate in production networks and obtain not only market access but also technological transfer from MNEs.

October 2008

ERIA QUESTIONNAIRE SURVEY

Background

The Economic Research Institute for ASEAN and East Asia (ERIA) is a new research institute established on 3 June 2008 among the governments of 16 countries: Australia, Brunei, Cambodia, China, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Thailand and Vietnam. ERIA undertakes policy analyses and policy recommendations for leaders and ministers in the region. It serves as a tripartite-type forum for policy dialogue and interactions among policymakers, researchers, and business/civil community to improve policy research capacities especially in the less developed countries.

In FY 2008, ERIA conducted several research projects. One of them is "Development Strategy for CLMV countries". In this project, the focus is on the development of the manufacturing sector in Cambodia, Laos, Myanmar, and Vietnam.

The survey questionnaire is one of the most important tools to derive valuable policy suggestions for CLMV. Managers of businesses operating in CLMV are the respondents of this survey who will be asked for opinions about the business environment. This questionnaire will help us understand the needs of companies in CLMV.

Objectives

1. To recommend policy measures for CLMV to attract FDI and to participate in production networks in East Asia.
2. To recommend policy measures to utilize effectively economic corridors and SEZs.
3. To recommend appropriate timing and sequence of policy measures to develop industrial clusters.

Methodology

The survey will be administered following the processes below:

1. Interview at least 60 firms engaged in international business transactions (including MNEs).
2. Interview owners or those who are responsible for the management of companies or establishments.
3. MNEs and local firms located inside the SEZ or Industrial Estate should be given priority.
4. This study focuses on three types of industrial location—a metropolitan area, transport hub, and border area. Each participating institute is expected to select at least one survey site for each type of industrial location.

Please note that the result of the survey will be used for general analysis purposes only. All private information of your company will be kept confidential and will not have any negative influence on your business.

QUESTIONNAIRE

Name of Respondent/Title _____

Company Name _____

Head Office Address _____

_____

Q're. No.

Country Code.

1	Cambodia
2	Laos
3	Myanmar
4	Vietnam

Phone Number

Fax Number

Email

No. of Contacts

Factory Name _____

Address _____

Phone Number

Fax Number

Email

No. of Contacts

Major Product (1) Brand Name (1)

Major Product (2) Brand Name (2)

Major Product (3) Brand Name (3)

Interviewed

Date	Day	
	Monday	1
	Tuesday	2
	Wednesday	3
Start Time	Thursday	4
	Friday	5
	Saturday	6
	Sunday	7
End Time		

Interviewer

Name Number

Supervisor

Name Number

1. Witness 2. Call back

Date - _____

Q're Editing

Initial & No Date

Data Puncher

Initial & No Date

Profile of the Company (or Establishment)

1.	When was your company established? (Year)	…….……

2.	**What is your capital structure? (SA)**	**Code**
	100% Local	1
	100% Foreign	2
	Joint Venture	3
	(a) In case of the joint venture, what is the percentage of foreign capital?	……..%
	(b) If you checked 100% Foreign or Joint Venture, what is the **nationality** of the foreign investor?	……

3.	**Size of your company**		
	(a) Number of Full-time Employees:	……	
	(b) Annual Output (in quantity):	……..(Qty.)	…….(Unit)
		Local Currency	US$
	(c) Total Asset (Paid-up Capital):		
	(d) Annual Sales:		
	(e) Annual Profit (if available):		

4.	**Where is your factory located? (SA)**	**Code**
	Inside the Industrial Estate / Zone	1
	Inside the SEZ (or EPZ)	2
	Outside the Industrial Estate or the SEZ	3
	Others (please specify:)	4

5.	**What is your main business activity? (Please circle your answer.) (MA)**	**Code**
	Material Supplier	1
	Part / Component Supplier	2
	Assembler	3
	Distributor	4
	Storage Handler	5
	Others (please specify: .....)	6

Section 1: Business Setup

6.	**Please evaluate your environment related to the business setup (Question A through E) on a five-point scale.** **<u>If your answer is 1 or 2</u>, please specify the reason(s).**						
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**	**Reason**
A	Collecting information on the business environment – information necessary to make an objective decision on investment	1	2	3	4	5	
B	Collecting information on the regulatory framework and legal procedures for setting up the business	1	2	3	4	5	
C	Obtaining licenses and permits	1	2	3	4	5	
D	Effectiveness of one-stop service (if any)	1	2	3	4	5	
E	Investment regulation	1	2	3	4	5	

7.	If you have faced any other obstacles in setting up the business, please specify.	

Section 2: Business Operation

8.	**Please evaluate your environment related to the business operation (Question A through CC) on a five-point scale.** **<u>If your answer is 1 or 2</u>, please specify the reason(s).**						
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**	**Reason**
A	**- Macro economy -** Macroeconomic stability (low inflation, stable exchange rate, etc.)	1	2	3	4	5	
B	**Governance** Crime, theft, and disorder	1	2	3	4	5	
C	Quality of policy formulation and implementation	1	2	3	4	5	
D	Quality of government services	1	2	3	4	5	
E	Quality of the legal system	1	2	3	4	5	
F	Corruption	1	2	3	4	5	
G	- **Regulatory framework** - Business licensing and operating permits	1	2	3	4	5	
H	Tax rates	1	2	3	4	5	
I	Tax administration	1	2	3	4	5	
J	Labor regulation	1	2	3	4	5	
K	Land regulation	1	2	3	4	5	
L	Finance regulation	1	2	3	4	5	
M	Intellectual property right (IPR) protection	1	2	3	4	5	
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**	**Reason**

N	- **Infrastructure** - Electricity	1	2	3	4	5	
O	Water	1	2	3	4	5	
P	Gas/Fuel	1	2	3	4	5	
Q	Transportation	1	2	3	4	5	
R	Telecommunication	1	2	3	4	5	
S	Industrial estates	1	2	3	4	5	
T	Accommodation for foreigners	1	2	3	4	5	
U	**- Labor -** Quality of workers	1	2	3	4	5	
V	Quality of middle management	1	2	3	4	5	
W	Quality of engineers	1	2	3	4	5	
X	Labor cost	1	2	3	4	5	
Y	Easiness of recruitment of workers	1	2	3	4	5	
Z	Labor turnover (frequency of movement of workers in and out of a company)	1	2	3	4	5	
AA	Labor relation (labor strikes, etc.)	1	2	3	4	5	
BB	**- Land –** Office rentals / land prices	1	2	3	4	5	
CC	- **Finance** - Access to loan	1	2	3	4	5	

9.	**Do you have any foreign workers in your company?**

A	Number: Nationality:	……..…… ……
	Do you have any foreign middle management staff in your company?	
B	Number: Nationality:	……..…… ……
	Do you have any foreign engineers in your company?	
C	Number: Nationality:	……..…… ……

10.	**What is the educational background of your workers, middle management, and engineers?**			
		Worker	**Middle management**	**Engineer**
A	No formal schooling	1……%	2……%	3……%
B	Elementary school	1……%	2……%	3……%
C	Middle-high school	1……%	2……%	3……%
D	High school	1……%	2……%	3……%
E	Technical/vocational school	1……%	2……%	3……%
F	College/university (BA)	1……%	2……%	3……%
G	Graduate school (MA/PhD)	1……%	2……%	3……%

11.	**How much do you pay for workers (including allowances) monthly? (Average Monthly Wages and Salary)**	**(Local Currency)**	**(US$)**
	(a) Worker		
	(b) Middle Management		
	(c) Engineer		

12.	What percentage of your workers changes their jobs monthly? Monthly labor turnover ratio (%):	……%

13	Do you think that the current investment incentives are attractive enough to attract investors? Please evaluate the current investment incentives (Question A through H) on a five-point scale. **<u>If your answer is 1 or 2</u>, please specify the reason(s).**						
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**	**Reason**
A	Tax incentive (e.g. tax holiday)	1	2	3	4	5	
B	Subsidies	1	2	3	4	5	
C	Rent-free or subsidized land	1	2	3	4	5	
D	Access to low-cost financing						
E	Exemption from trade restrictions	1	2	3	4	5	
F	Exemption from remittance restrictions	1	2	3	4	5	
G	Exemption from foreign ownership restrictions	1	2	3	4	5	
H	Prioritized supply of utility services such as electricity, telecommunication	1	2	3	4	5	

14.	Please specify other incentives which are effective to increase investment.	

Section 3: Logistics

15.	**What are your main products and market share distributions?**					
	Product name	**Domestic Market**	**Export Country 1**		**Export Country 2**	
			Name	**%**	**Name**	**%**
A	1.	2……%	3.	4……%	5.	6……%
B	1.	2……%	3.	4……%	5.	6……%
C	1.	2……%	3.	4……%	5.	6……%

16.	**What are your main materials, parts, and components and sources?**					
	Materials / parts name	**Domestic Market**	**Import Country 1**		**Import Country 2**	
			Name	**%**	**Name**	**%**
A	1.	2……%	3.	4……%	5.	6……%
B	1.	2……%	3.	4……%	5.	6……%
C	1.	2……%	3.	4……%	5.	6……%

17.	**Please evaluate your environment related the logistics (Question A through Q) on a five-point scale.** **<u>If your answer is 1 or 2</u>, please specify the reason(s).**						
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**	**Reason**
A	- **Domestic market** - Domestic market size	1	2	3	4	5	
B	Purchasing power of local consumers	1	2	3	4	5	
C	Smuggling control	1	2	3	4	5	
D	- **Foreign market** - Procedures for export	1	2	3	4	5	
E	Export tax (leave it blank if there is no export tax)	1	2	3	4	5	
F	Rules of origin for GSP	1	2	3	4	5	
G	Uncertainty of the GSP status In future	1	2	3	4	5	

H	- **Domestic Procurement** - Collecting information about local suppliers	1	2	3	4	5	
I	Quality of local supplier base	1	2	3	4	5	
J	Access to capable international suppliers	1	2	3	4	5	
K	- **Foreign Procurement** - Procedures for import of raw materials/ parts and components	1	2	3	4	5	
L	Custom clearance	1	2	3	4	5	
M	Tariff barrier	1	2	3	4	5	
N	Non-tariff barrier	1	2	3	4	5	
O	Drawbacks of import duty and value added tax	1	2	3	4	5	
P	Trade regulation	1	2	3	4	5	
Q	Foreign exchange regulation	1	2	3	4	5	

18.	**How do you import your materials, parts, and components from abroad? Is it by land, sea, or air transport? Please circle your answer.**		
A	1. Land	2. Sea / River	3. Air
	Which highway, rail, port or airport do you use mostly?		
	1.1 Highway / Rail name		
	2.1 Port name		
	3.1 Airport name		
	How do you export your products to abroad? Is it by land, sea, or air transport? Please circle your answer.		
B	1. Land	2. Sea / River	3. Air
	Which highway, rail, port or airport do you use mostly?		
	1.1 Highway / Rail name		
	2.1 Port name		

	3.1 Airport name	

19.	**How do you evaluate the cost competitiveness of each mode of transportation and communication?**					
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**
A	Land transport	1	2	3	4	5
B	Sea / River transport	1	2	3	4	5
C	Air transport	1	2	3	4	5
D	Communication	1	2	3	4	5

20.	**How do you evaluate the efficiency of each mode of transportation and communication?**					
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**
A	Land transport	1	2	3	4	5
B	Sea / River transport	1	2	3	4	5
C	Air transport	1	2	3	4	5
D	Communication	1	2	3	4	5

21.	**How do you evaluate the Reliability of each mode of transportation and communication?**					
		Very Poor	**Poor**	**Fair**	**Good**	**Excellent**
A	Land transport	1	2	3	4	5
B	Sea / River transport	1	2	3	4	5
C	Air transport	1	2	3	4	5
D	Communication	1	2	3	4	5

22.	When you export/import directly, what was the average and the longest number of days in 2008 that it took from the time your goods arrived in their point of entry/exit (e.g., port, airport) until the time you clear/claim them at customs?		
		days on average	**days of the longest time in 2008**
A	Export	1.	2.
B	Import	1.	2.

Section 4: Future Development

23.	Do you think that the establishment (or improvement) of Special Economic Zones (SEZ) / Industrial Zone will be effective or necessary to improve the investment environment in this country?	**Code**
	Yes	1
	No	2
	No idea / do not know	3

24.	**If your answer is 'yes', please choose the reason(s) from below: Please circle the number.**
	(1) One-stop service
	(2) Faster procedures for starting a business
	(3) Better custom clearance
	(4) Better infrastructure
	(5) Other reason (please specify):

25.	**If your answer is 'No', please specify the reason(s).**
	(1)
	(2)
	(3)
	(4)
	(5)

26.	**What do you think of the future of your industry (in this country)? (SA)**	**Code**
	Very Poor	1
	Poor	2
	Fair	3
	Good	4
	Excellent	5

27.	**Please specify the reason(s) for your opinion.**
	(1)
	(2)
	(3)
	(4)
	(5)

Thank you for your cooperation

Chapter 6

INVESTMENT CLIMATE SURVEY IN CAMBODIA

Sau Sisovanna

Abstract

Most firms in Cambodia have 100 per cent foreign-owned capital, followed by joint ventures and local enterprises. Foreign investors are mostly from Taiwan, China and Hong Kong. The obstacles faced in setting up businesses are the inordinate amount of time spent to prepare the documents and the costs of involved in registering companies. In terms of business operations, the governance was poor due to corruption. Most workers have attended middle high school and elementary school while middle management personnel have attended high school and college or university. Most of engineers have gone to technical/vocational schools and colleges or university. The average wages and salary are US$79 for workers, US$209 for middle managers and US$464 for engineers. Most firms have monthly labor turnover ratios of 1 to 5 per cent.

For current investment incentives, subsidies, rent-free or subsidized land, and access to low-cost financing are rated poor. The main markets for products were the United Stated, Europe and Canada. China and Taiwan are the main import markets for materials. The total average rating on domestic market size and purchasing power of local consumers was poor due to limited domestic market for distributing products, decreased orders from buyers, and lack of tax controls. Firms mostly used sea/river shipping, followed by land and air transports, for importing raw materials and exporting products. The total average rating for the cost competitiveness of each mode of transportation and communication was poor in Phnom Penh and Sihanouk Ville while the efficiency and reliability of these same factors were found poor in Sihanouk Ville. The average number of days for clearance of export and import goods was two and three, respectively.

Most of firms expressed optimism that investments would develop in the future based on implementation of laws and regulations, increase of market demand, improved government services and cooperation, better quality of workers, quality products, and tax administration.

INTRODUCTION

The Economic Research Institute of ASEAN and East Asia (ERIA) conducts policy analyses, provides policy recommendations for the leaders and ministers in the region and serves as a tripartite-type forum for policy dialogues and interactions among policymakers, researchers, and business/civil community and improve policy research capacities, especially in the less developed counties. In 2008, the Institute conducted several research projects. One of them was titled "Development Strategy for CLVM Countries," which focused on the development of the manufacturing sector in Cambodia, Laos, Myanmar, and Vietnam (collectively referred to as CLMV). To implement this project in Cambodia, the Cambodian Institute for Cooperation and Peace undertook the Survey of Investment Climate in cooperation with the ERIA.

1. OBJECTIVES

The objectives of the ERIA Investment Climate Questionnaire are: (1) to recommend policy measures that will enable the CLMV to attract foreign direct investment and to participate in production networks in East Asia; (2) to recommend policy measures to utilize economic corridors and Special Economic Zones (SEZs) effectively; and (3) to recommend appropriate time frames and sequence of policy measures to develop industrial clusters. Among ERIA's research activities, the administration of a questionnaire survey is one of the most important tools for deriving invaluable policy suggestions for CLMV.

2. METHODOLOGY

The survey focused on the business environment for manufacturing industry. The sampling frame of the survey was based on the existing list of firms compiled by the Cambodia Investment Board and the Cambodia Special Economic Zone Board of the Council for the Development of Cambodia. A total of 76 firms were interviewed after being sent a letter explaining the survey's objectives and requesting an interview. Of

these, 62 firms were located in Phnom Penh, six in Sihanouk Ville and eight in Bavet, Svay Rieng province. (Table 1 shows the detailed sample size of firms by location and type of business.)

Table 1: Number of sampled firms by location and business type

Type of Business	Phnom Penh 62 firms			Sihanouk Ville 6 firms		Bavet 8 firms		Total 76 firms			
	IZ	SEZ	Outside	SEZ	Outside	SEZ	Outside	IZ	SEZ	Outside	Total
Food, beverages and tobacco	0	0	4	0	1	0	0	0	0	5	5
Garments and textiles	15	0	37	2	2	1	1	15	3	40	58
Metal products	1	1	0	1	0	3	0	1	5	0	6
Real estate and construction	0	0	0	0	0	2	0	0	2	0	2
Footwear	1	1	2	0	0	1	0	1	2	2	5
Total	**17**	**2**	**43**	**3**	**3**	**7**	**1**	**17**	**12**	**47**	**76**

3. COMPANY PROFILE

Most of the surveyed firms (86.8 percent) had 100 per cent foreign-owned capital (Table2). Table 3 shows that more than 20 per cent of sampled firms in Phnom Penh, the investors came from Taiwan, China and Hong Kong each. Investors in 66.7 per cent of the sampled firms in Sihanouk Ville came from China while 71.4 per cent of sampled firms in Bavet had Taiwanese investors. Table 4 shows the share of firms by the number of full-time employees as of December 2008. The majority of firms (80.3 percent) in Phnom Penh had more than 500 employees. In contrast, the largest proportion of firms in Sihanouk and Bavet had full-time employees numbering 101 to 500 and a maximum of 100, respectively.

Table 2: Ownership of firms

Ownership	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
100% Local	4	5.3	3	4.8	0	0.0	1	12.5
100% Foreign	66	86.8	53	85.5	6	100.0	7	87.5
Joint venture	6	7.9	6	9.7	0	0.0	0	0.0
Total	**76**	**100.0**	**62**	**100.0**	**6**	**100.0**	**8**	**100.0**

Table 3: Share of firms by nationality of foreign investors

Country	Total	Phnom Penh	Sihanouk Ville	Bavet
Hong Kong	16.7	20.3	0.0	0.0
Indonesia	1.4	1.7	0.0	0.0
USA	4.2	3.4	0.0	14.3
Philippines	1.4	0.0	16.7	0.0
Taiwan	29.2	25.4	16.7	71.4
China	26.4	23.7	66.7	14.3
Korea	6.9	8.5	0.0	0.0
Malaysia	6.9	8.5	0.0	0.0
Bangladesh	1.4	1.7	0.0	0.0
Singapore	4.2	5.1	0.0	0.0
Japan	1.4	1.7	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 4: Share of firms by number of full-time employees
As of December 2008

Number of employees	Total	Phnom Penh	Sihanouk Ville	Bavet
Up to 100 persons	9.5	3.3	40.0	37.5
101 to 500 persons	18.9	16.4	60.0	12.5
Above 500 persons	71.6	80.3	0.0	50
Total	9.5	3.3	40.0	37.5

In 2008, nearly 50 per cent of firms in Phnom Penh had annual sales exceeding US$10 million whereas all firms in Sihanouk Ville had annual sales of US$1 million to US$5 million (Table 5). Three-fourths (75 percent) of the companies surveyed in Bavet had US$1 million or less in annual sales.

Table 5: Share of firms by annual sales
As of December 2008 (in US$)

Total assets	Total	Phnom Penh	Sihanouk Ville	Bavet
Up to 1Million US$	16.0	11.4	0.0	75.0
1,000,001 to 5,000,000 US$	32.0	31.8	100.0	0.0
5,000,001 to 10,000,000 US$	16.0	15.9	0.0	25.0
Above 10,000,000 US$	36.0	40.9	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

4. BUSINESS SETUP

The evaluation of the business setup used a five-point scale: 1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good and 5 = Excellent. Table 6 shows a total average rating of fair for the business setup. Bavet obtained the highest average rating (3.8), followed by Phnom Penh (3.5) and Sihanouk Ville (3.3). The factors underlying the lowest average score are (1) unofficial payments (or bribes) and delays in the processing of licenses and permits, and (2) costly legal fees involved in setting up businesses. Other obstacles to setting up businesses are the length of time needed to prepare the necessary documents and exorbitant costs of registering a company.

Table 6: Average rating on business setup by location
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Information necessary to make an objective decision on investment	3.5	3.5	3.2	3.8
Collecting information on the regulatory framework and legal procedures	3.4	3.3	3.2	3.9
Obtaining licenses and permits	3.7	3.7	3.8	3.8
Effectiveness of one-stop service	3.3	3.3	3.0	3.9
Investment regulation	3.6	3.7	3.2	3.8
Total Average	**3.5**	**3.5**	**3.3**	**3.8**

5. BUSINESS OPERATIONS

5.1 Evaluation of business operations

Firms were asked to evaluate the business environment in which they were operating based on a five-point scale mentioned earlier. Table 7 shows the results by location. Overall business operations were rated fair. Phnom Penh rated it the lowest (3.2) owing to unstable macro economy. This was due to high and unstable inflation rate and adverse impacts of the global financial crisis on the domestic industry.

Table 7: Average rating on business operation by location
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Macro economy				
Macroeconomic stability	3.3	3.2	3.5	3.3
Governance				
Crime, theft and disorder	3.3	3.2	3.5	4.0
Quality of policy formulation and implementation	3.4	3.4	3.2	3.9
Quality of government services	3.1	3.0	3.2	3.3
Quality of the legal system	3.1	3.0	3.2	3.5
Corruption	2.7	2.6	2.8	2.9
Total Average	**3.1**	**3.1**	**3.2**	**3.5**
Regulatory framework				
Business licensing and operating permits	3.6	3.5	3.3	3.9
Tax rates	3.3	3.2	3.5	3.6
Tax administration	3.3	3.3	3.3	3.5
Labor regulation	3.4	3.4	3.3	4.0
Land regulation	3.4	3.3	3.5	3.9
Finance regulation	3.4	3.3	3.5	3.8
Intellectual property rights protection	3.3	3.2	3.2	3.8
Total Average	**3.4**	**3.3**	**3.4**	**3.8**
Infrastructure				
Electricity	3.0	3.0	2.8	3.8
Water	3.3	3.4	3.0	3.4
Gas/fuel	3.3	3.3	3.5	3.4
Transportation	3.4	3.3	3.3	3.9
Telecommunications	3.4	3.5	2.8	3.4
Industrial estates	3.5	3.5	3.7	4.1
Accommodation for foreigners	3.7	3.7	4.0	4.0
Total Average	**3.4**	**3.4**	**3.3**	**3.7**
Labor				
Quality of workers	3.2	3.2	2.8	3.5
Quality of middle management	3.4	3.3	3.3	3.5
Quality of engineers	3.3	3.3	3.5	3.4
Labor costs	3.3	3.3	3.2	3.3
Ease of labor recruitment	3.3	3.2	3.7	3.5
Labor turnover (i.e., frequency of movement of workers in and out of a company)	3.1	3.0	3.2	3.3
Labor relation (labor strikes, etc.)	3.1	3.0	3.5	3.6
Total Average	**3.2**	**3.2**	**3.3**	**3.4**
Land				
Office rentals/land prices	3.2	3.1	3.3	3.3
Finance				
Access to loans	2.9	2.8	2.8	3.1

In terms of *governance*, firms across locations (Phnom Penh, Sihanouk Ville, and Bavet) rated it poor due to corruption, as evidenced by high informal charges and unofficial payments. On *regulatory framework*, the average rating for the business environment was fair. Phnom Penh scored 3.3, Sihanouk Ville 3.4, and Bavet 3.8. *Infrastructure* rated fair as well. Overall, the highest average score (3.7) was in Bavet

followed by Phnom Penh (3.4) and Sihanouk Ville (3.3). In Sihanouk Ville, electricity and telecommunication both rated poor, with an average score of 2.8 each. The reasons cited for these scores were frequent power outages and costly and insufficient electricity supply, plus poor and costly Internet access.

In terms of *labor*, the average rating in each location was fair. However, the quality of workers in Sihanouk Ville was rated poor (2.8). This was due to lack of skilled workers and low education. The total average score was fair.

The overall average rating on *land* was fair. Sihanouk Ville in Bavet had the highest average rating at 3.3 while Phnom Penh obtained 3.1. Underlying the lowest average rating was the high cost of land.

Finance got an overall average rating of poor. Bavet rated it fair (3.1) while Phnom Penh (2.8) and Sihanouk Ville (2.8) rated it poor. The poor rating was based on lack of access to financing as well as difficulty in accessing loans and high interest rates.

5.2 Educational background

Table 8 shows the share of respondents by employees' educational background and by location. More than 20 per cent of workers in Phnom Penh, Sihanouk Ville, and Bavet received elementary and middle-high school education. Among the middle management staff, 27.6 per cent in Phnom Penh had attended high school and college/university. Sixty per cent of management in Sihanouk Ville and more than 50 per cent of those in Bavet had attended high school.

Engineers who attended technical or vocational school and college/university comprised 48.4 per cent and 41.9 percent, respectively, of the respondents while only 9.7 per cent attended graduate school. Only one engineer in Bavet had attended college/university and none in Sihanouk Ville.

Table 8: Share of respondents by educational background and type of employees

Educational background	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Workers								
No formal schooling	53	21.0	46	21.3	3	25.0	4	16.7
Elementary school	68	27.0	59	27.3	3	25.0	6	25.0
Middle high school	70	27.8	60	27.8	3	25.0	7	29.2
High school	45	17.9	37	17.1	2	16.7	6	25.0
Technical/vocational school	14	5.6	12	5.6	1	8.3	1	4.2
College/university (BA)	2	0.8	2	0.9	0	0.0	0	0.0
Graduate school (MA/PhD)	0	0.0	0	0.0	0	0.0	0	0.0
Total	**252**	**100.0**	**216**	**100.0**	**12**	**100.0**	**24**	**100.0**
Middle management								
No formal schooling	3	1.6	3	1.7	0	0.0	0	0.0
Elementary school	7	3.7	7	4.0	0	0.0	0	0.0
Middle high school	25	13.2	23	13.2	1	20.0	1	9.1
High school	57	30.0	48	27.6	3	60.0	6	54.5
Technical/vocational school	34	17.9	32	18.4	0	0.0	2	18.2
College/university (BA)	51	26.8	48	27.6	1	20.0	2	18.2
Graduate school (MA/PhD)	13	6.8	13	7.5	0	0.0	0	0.0
Total	**190**	**100.0**	**174**	**100.0**	**5**	**100.0**	**11**	**100.0**
Engineers								
Technical/vocational school	15	48.4	15	50.0	0	0.0	0	0.0
College/university (BA)	13	41.9	12	40.0	0	0.0	1	100.0
Graduate school (MA/PhD)	3	9.7	3	10.0	0	0.0	0	0.0
Total	**31**	**100.0**	**30**	**100.0**	**0**	**0.0**	**1**	**100.0**

5.3 Wages and salary

In terms of average wages and salary, which included allowances, workers received US$79 each, middle managers US$209 and engineers US$464. The average monthly wages and salaries of middle managers (US$217) and engineers (US$467) in Phnom Penh were higher than their counterparts in Sihanouk Ville and Bavet (Table 9).

Table 9: Average monthly wages and salary and type of employees

Employees	Total	Phnom Penh	Sihanouk Ville	Bavet
Workers	US$ 79	US$ 80	US$ 75	US$ 80
Middle Management	US$ 209	US$ 217	US$ 182	US$ 144
Engineers	US$ 464	US$ 467		US$ 400

5.4 Monthly labor turnover rate

Table 10 shows that 18.4 per cent of the firms surveyed did not lose any of their workers. Almost half of the firms (47.4 percent) had a monthly labor turnover ratio of 1 to 5 per cent compared to 6 to 10 for 15.8 percent of the companies surveyed. A little more than a

tenth (10.9 percent) and 7.9 per cent of the respondent firms had a monthly labor turnover ratio exceeding 15 per cent and 11 to 15 percent, respectively. Slightly more than half of the firms (53.2 percent) in Phnom Penh and 37.5 percent of those in Bavet had a monthly labor turnover rate of 1 to 5 percent, which could not be said of Sihanouk Ville.

Table 10: Share of firms by monthly labor turnover ratio

Monthly labor turnover rate	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
No. of workers who changed their jobs	14	18.4	8.0	12.9	5.0	83.3	1.0	12.5
1% to 5%	36	47.4	33.0	53.2	0.0	0.0	3.0	37.5
6% to 10%	12	15.8	9.0	14.5	0.0	0.0	3.0	37.5
11% to 15%	6	7.9	5.0	8.1	0.0	0.0	1.0	12.5
Above 15%	8	10.5	7.0	11.3	1.0	16.7	0.0	0.0
Total	**76**	**100.0**	**62.0**	**100.0**	**6.0**	**100.0**	**8.0**	**100.0**

5.5 Current investment incentives

Respondents were also asked to rate the current investment incentive. Table 11 shows the resulting total average rating. Overall, it was rated fair, with 3.3 in Sihanouk Ville, 3.2 in Phnom Penh, and 3.2 in Bavet. Subsidies, rent-free or subsidized land, and access to low-cost financing were rated poor in Phnom Penh. In Sihanouk Ville, rent-free or subsidized land and access to low-cost financing were also rated poor. In addition, subsidies, rent-free or subsidized land, and exemption from foreign ownership restriction were also rated poor in Bavet. Cited as reasons for the poor rating were the lack of

Table 11: Average rating on current investment incentives by locations (1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Tax incentive (e.g., tax holiday)	3.7	3.7	3.5	4.0
Subsidies	2.7	2.7	3.0	2.6
Rent-free or subsidized land	2.8	2.8	2.8	2.7
Access to low-cost financing	2.8	2.8	2.8	3.1
Exemption from trade restrictions	3.6	3.6	3.8	3.4
Exemption from remittance restrictions	3.6	3.6	3.8	3.5
Exemption from foreign ownership restrictions	3.3	3.3	3.5	2.9
Prioritized supply of utility services such as electricity, telecommunications	3.1	3.1	3.0	3.4
Total Average	**3.2**	**3.2**	**3.3**	**3.2**

subsidies from government, lack of government-provided land, lack of access to or difficulty in accessing financing and high rates on loans, foreigners barred from owning property, and limited ownership.

Measures considered effective in increasing investments were: (1) reducing public holidays; (2) abating bureaucracy and corruption; (3) lowering export management fees; (4) efficiently implementing the laws; (5) reducing transaction time, (6) decreasing taxes such as export and income taxes; and (7) granting property rights to foreigners.

6 LOGISTICS

6.1 Main products and market share distributions

The majority of the respondents (52.9 percent) were manufacturers of food, beverage and tobacco, followed by makers of garments and textiles (17.6 percent), metal products (17.6 percent), and enterprises dealing in real estate and construction (11.8 percent)(Table 12). In Phnom Penh, the percentages of the firms' respondents whose main domestic products were food beverages and tobacco, metal products, and garments and textiles were 64.3 percent, 21.4 percent, and 14.3 percent, respectively. Respondents' main domestic products in Sihanouk Ville were garments and textiles; those based in Bavet were dealing mainly in real estate and construction.

Table 12: Share of respondents sold main products to domestic market

Main products	Total	Phnom Penh	Sihanouk Ville	Bavet
Food, beverages and tobacco	52.9	64.3	0.0	0.0
Garments and textiles	17.6	14.3	100.0	0.0
Metal products	17.6	21.4	0.0	0.0
Real estate and construction	11.8	0.0	0.0	100.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 13 shows that the major products from Phnom Penh were mainly sold in the United Stated, followed by Europe and Canada. For Sihanouk Ville and Bavet, the main markets for their products were the United States and Europe, respectively. Most of products sold to those countries were garments and textiles (90.7 per cent of all products) (Table 14).

Table 13: Share of respondents sold main products to export country by location

Country	Total	Phnom Penh	Sihanouk Ville	Bavet
USA	51.1	53.0	50.0	25.0
Canada	12.6	12.7	0.0	16.7
Europe	26.4	25.3	25.0	41.7
Japan	5.5	5.4	0.0	8.3
Singapore	0.5	0.6	0.0	0.0
Hong Kong	1.6	1.2	25.0	0.0
Taiwan	1.6	1.2	0.0	8.3
Malaysia	0.5	0.6	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 14: Share of respondents sold main products to export countries

Main product	Malaysia	Singa-pore	Hong Kong	Japan	Taiwan	USA	Canada	Europe	**Total**	*Percent*
Food, beverages and Tobacco	1	1	1	1	0	0	0	0	**4**	*2.2*
Garments and textiles	0	0	2	3	2	93	22	43	**165**	*90.7*
Metal products	0	0	0	0	0	0	1	3	**4**	*2.2*
Footwear	0	0	0	6	1	0	0	2	**9**	*4.9*
Total	**1**	**1**	**3**	**10**	**3**	**93**	**23**	**48**	**182**	*100.0*
Percent	*0.5*	*0.5*	*1.6*	*5.5*	*1.6*	*51.1*	*12.6*	*26.4*	*100.0*	

6.2 Main materials and sources

Most firms (61.5 percent) source their raw materials, parts and components locally to produce garments and textiles, followed by those that manufacture food, beverage and tobacco and footwear makers who (Table 15). In Phnom Penh, 64.0 percent, 28.0 percent, and 8.0 per cent of the firms surveyed said they imported the main materials for garments and textiles, food beverage and tobacco, and footwear, respectively. For Sihanouk Ville, the materials imported were only for garments and textiles.

Table 15: Share of respondents sourcing locally available materials

Main products	Total	Phnom Penh	Sihanouk Ville	Bavet
Food, beverages and tobacco	30.8	28.0	100.0	0.0
Garments and textiles	61.5	64.0	0.0	0.0
Footwear	7.7	8.0	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**0.0**

Table 16 shows the shares of the respondent firms importing main materials from selected countries. The main import markets were China and Taiwan. China was the largest external source of raw materials, with 41.2 per cent of all imported raw materials

coming from this country, followed by Taiwan 16.5 percent, Hong Kong 10.5 percent, and Vietnam 9.0 per cent (Table 17).

Table 16: Share of respondents importing materials by location

Country	Total	Phnom Penh	Sihanouk Ville	Bavet
Indonesia	1.1	0.9	9.1	0.0
Canada	1.1	1.3	0.0	0.0
Europe	3.4	4.0	0.0	0.0
Japan	2.2	1.8	9.1	3.4
Brazil	0.4	0.4	0.0	0.0
China	41.2	44.9	36.4	13.8
Vietnam	9.0	6.6	0.0	31.0
Hong Kong	10.5	12.3	0.0	0.0
Taiwan	16.5	13.7	18.2	37.9
Korea	3.7	4.0	0.0	3.4
Pakistan	1.1	0.9	9.1	0.0
Other Asian countries	1.1	1.3	0.0	0.0
USA	1.9	1.8	9.1	0.0
Thailand	3.0	2.2	0.0	10.3
India	1.5	1.8	0.0	0.0
Malaysia	1.9	1.8	9.1	0.0
Singapore	0.4	0.4	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Table 17: Respondents who imported materials by main product and country

Main product	Indo-nesia	Malay-sia	Singa pore	Thai-land	Viet-nam	Brazil	China	India	Hong Kong	Japan
Food, beverages and tobacco	0	0	1	0	0	1	4	1	1	1
Garments and textiles	3	5	0	7	13	0	94	3	23	4
Metal products	0	0	0	0	6	0	5	0	3	1
Footwear	0	0	0	1	5	0	7	0	1	0
Total	**3**	**5**	**1**	**8**	**24**	**1**	**110**	**4**	**28**	**6**
Percent	***1.1***	***1.9***	***0.4***	***3.0***	***9.0***	***0.4***	***41.2***	***1.5***	***10.5***	***2.2***

Main product	Korea	Pakis-tan	Tai-wan	Other Asia	Europe	USA	Cana-da	**Total**	%
Food, beverages and tobacco	0	0	1	0	7	2	0	**19**	***7.1***
Garments and textiles	10	3	31	2	2	3	3	**206**	***77.2***
Metal products	0	0	5	0	0	0	0	**20**	***7.5***
Footwear	0	0	7	1	0	0	0	**22**	***8.2***
Total	**10**	**3**	**44**	**3**	**9**	**5**	**3**	**267**	***100.0***
Percent	***3.7***	***1.1***	***16.5***	***1.1***	***3.4***	***1.9***	***1.1***	***100.0***	

6.3 Markets

Table 18 shows the average rating by respondents for the domestic market. Overall, domestic market size and purchasing power of local consumers were rated poor while smuggling control was rated fair in Phnom Penh. In Sihanouk Ville, local consumers' purchasing power received a poor rating. In Bavet, domestic market size and domestic consumers' purchasing power were rated very poor while smuggling control was rated poor. Cambodia concentrates only on exportation while its domestic market was too limited to accommodate all manufactured products. Some industries had to content with decreased purchasing orders from buyers and the lack of tax control. (The average rating for the foreign market is shown in Table 19.)

Table 18: Average rating on domestic market by locations
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Domestic market size	2.0	2.0	3.0	1.9
Purchasing power of local consumers	2.0	2.0	2.8	1.7
Smuggling control	3.1	3.2	3.0	2.3
Total Average	**2.4**	**2.4**	**2.9**	**2.0**

Table 19: Average rating on foreign market by location
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Procedures for export	3.4	3.4	3.3	4.0
Export tax	3.5	3.5	3.2	4.5
Rules of origin for GSP	3.5	3.4	3.8	4.2
Uncertainty of the GSP status	3.1	3.0	3.5	3.8
Total Average	**3.4**	**3.3**	**3.5**	**4.1**

6.4 Procurement

In Phnom Penh and Bavet, collecting information about local suppliers and quality of local supplier base was rated poor. These were due to the perceived difficulty in locating local suppliers, who were also noted for their slow turnaround time and high rates. The total average rating on procurement was fair in Phnom Penh and Sihanouk Ville and poor in Bavet (Table 20). The total average rating on foreign procurement in Phnom Penh, Sihanouk Ville, and Bavet was fair (Table 21).

Table 20: Average rating on domestic procurement by locations
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Collecting information about local suppliers	2.8	2.8	3.0	2.0
Quality of local supplier base	2.7	2.8	3.2	1.8
Access to capable international suppliers	3.4	3.4	3.3	3.7
Total Average	**3.0**	**3.0**	**3.2**	**2.5**

Table 21: Average rating on foreign procurement by location
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Procedures for importation of raw materials/parts	3.5	3.5	3.7	4.2
Customs clearance	3.3	3.3	3.3	3.7
Tariff barrier	3.3	3.3	3.3	3.3
Non-tariff barrier	3.1	3.1	3.2	2.8
Drawbacks of import duty and value-added tax	3.2	3.2	3.2	3.2
Trade regulations	3.3	3.3	3.3	3.5
Foreign exchange regulations	3.4	3.4	3.5	3.3
Total Average	**3.3**	**3.3**	**3.4**	**3.4**

6.5 Mode of transport

As shown in Table 22 most of the firms in Phnom Penh and Sihanouk Ville utilized sea/river shipping services (Sihanouk port), followed by enterprises that relied on land transport (National Road No. 4 and No. 3), for importing their materials. On the other hand, more than 70 per cent of firms in Bavet used land transport (National Road No. 1) for their imported materials. About 67.7 per cent of firms in Phnom Penh, 16.7 per cent of those in Sihanouk Ville, and 12.5 per cent of those in Bavet used Phnom Penh International Airport for importing raw materials.

Table 22: Share of firms by mode of transport and location

Transport Used	Total	Phnom Penh	Sihanouk Ville	Bavet
Import materials				
Land	94.7	98.4	83.3	75.0
Sea/waterway	90.8	100.0	100.0	12.5
Air	57.9	67.7	16.7	12.5
Export products				
Land	92.1	95.2	83.3	75.0
Sea/waterway	85.5	95.2	83.3	12.5
Air	56.6	64.5	33.3	12.5

To export their products, most firms in Phnom Penh and Sihanouk Ville also used sea/river shipping services (Sihanouk port), followed by land transport (National Road No. 4). In contrast, the majority of firms in Bavet used land transport (National Road No. 1) for their export products. About 64.5 per cent of firms in Phnom Penh, 33.3 per cent in Sihanouk Ville, and 12.5 per cent in Bavet used Phnom Penh International Airport to export their products.

6.6 Evaluation of transportation and communication

The firms were asked to evaluate the cost competitiveness, efficiency and reliability of each mode of transportation and communication. Table 23 indicates that the total average score rating for the cost competitiveness was poor in Phnom Penh and Sihanouk Ville.

Table 23: Average rating on transportation and communication by location (1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)

Evaluation	Total	Phnom Penh	Sihanouk Ville	Bavet
Cost competitiveness				
Land transport	2.9	2.9	2.6	3.5
Sea/waterway transport	3.2	3.2	3.0	3.5
Air transport	2.6	2.6	2.3	2.8
Communication	2.9	2.9	3.0	3.2
Total Average	**2.9**	**2.9**	**2.7**	**3.3**
Efficiency				
Land transport	3.3	3.3	2.8	3.8
Sea/waterway transport	3.4	3.5	3.5	3.3
Air transport	3.2	3.3	2.3	2.7
Communication	3.2	3.1	3.0	3.3
Total Average	**3.3**	**3.3**	**2.9**	**3.3**
Reliability				
	3.5	3.5	2.8	3.8
Sea/waterway transport	3.6	3.6	3.5	3.7
Air transport	3.4	3.6	2.3	2.5
Communication	3.3	3.3	3.0	3.0
Total Average	**3.4**	**3.5**	**2.9**	**3.3**

The total average rating on efficiency of each mode of transportation and communication was poor in Sihanouk Ville and fair in Phnom Penh and Bavet. Similarly, the total average rating on reliability of each mode of transportation and communication was poor in Sihanouk Ville but fair in Phnom Penh and Bavet.

6.7 Length of time for clearance/claims at Customs

Firms exporting or importing directly were asked about the average and the longest number of days it took them in 2008 to clear or claim they goods, that is, from the time of entry or exit (e.g. port, airport) of their goods at Customs.

In Phnom Penh, 60 per cent of firms in Phnom Penh said the average length of time they spent to clear their exported goods was one day, 28.3 per cent indicated two days on average, and 6.7 percent, three days (Table 24). The total average number of days for clearance of exported goods was approximately two days. In Phnom Penh, the longest number of days to clear or claim goods was seven.

In terms of the average number of days it took the respondents to claim import goods, Table 24 shows that 40.3 per cent of those in Phnom Penh spent two days; 21.0 percent, three days, and 19.4 percent, only one day for this purpose. The total average number of days to clear imported goods was approximately three days. The longest length of time respondents in Phnom Penh said it took them to clear their goods was seven days.

Table 24: Share of firms by number of days for clearance/claim at Customs

Number of days	Total	Phnom Penh	Sihanouk Ville	Bavet
Days on average by export				
1	64.8	60.0	80.0	100.0
2	23.9	28.3	0.0	0.0
3	7.0	6.7	20.0	0.0
4	1.4	1.7	0.0	0.0
5	1.4	1.7	0.0	0.0
7	1.4	1.7	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**
Total Average	***1.6***	***1.6***	***1.4***	***1.0***
Days on average by import				
1	24.3	19.4	50.0	50.0
1.5	1.4	1.6	0.0	0.0
2	39.2	40.3	33.3	33.3
3	20.3	21.0	16.7	16.7
4	2.7	3.2	0.0	0.0
5	8.1	9.7	0.0	0.0
6	1.4	1.6	0.0	0.0
7	2.7	3.2	0.0	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**
Total Average	***2.4***	***2.6***	***1.7***	***1.7***

7 FUTURE DEVELOPMENT

7.1 Improving the investment environment

Managers of the respondent firms were also asked managers whether the establishment or improvement of the SEZ/industrial zone would be effective or necessary to improve the investment environment in Cambodia. Table 25 shows that most firms in Phnom Penh (66.1 percent), Sihanouk Ville (83.3 percent) and all firms in Bavet said yes.

Table 25: Share of firms by awareness of improving investment

Awareness of Improving Investment	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	54	71.1	41	66.1	5	83.3	8	100.0
No idea/ Don't know	22	28.9	21	33.9	1	16.7	0	0.0
Total	**76**	**100.0**	**62**	**100.0**	**6**	**100.0**	**8**	**100.0**

When the respondents were asked about specific measures that would improve Cambodia's investment climate in the future, 27.0 cited one-stop service; 26.4 percent; better custom clearance; 23.6 percent, faster procedures for starting a business; and 23.0 percent, better infrastructure (Table 26). In Bavet, 33.3 per cent of the respondents expressed belief that improved customs clearance and infrastructure were vital to boosting the business environment.

Table 26: Share of respondents by reason for improved investment

Reasons of improvement	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
One-stop service	40	27.0	31	27.0	2	22.2	7	29.2
Faster procedures for starting a business	35	23.6	28	24.3	1	11.1	6	25.0
Better custom clearance	39	26.4	29	25.2	3	33.3	7	29.2
Better infrastructure	34	23.0	27	23.5	3	33.3	4	16.7
Total	**148**	**100.0**	**115**	**100.0**	**9**	**100.0**	**24**	**100.0**

7.2 Industry prospects

Firms were likewise asked about what they thought of the future of Cambodia's industrial sector. Most firms in Phnom Penh (58.1 percent) and Bavet rated it fair while half of those

in Sihanouk Ville evaluated it as good. The total average rating on the industry's prospects was fair, with Sihanouk Ville registering the highest score (3.8), followed by Bavet (3.5) and Phnom Penh (3.2) (Table 27).

Table 28 shows the perceptions of respondents for developing the future industrial sector in Cambodia. Cited as factors for future industry development are efficient implementation of laws and regulations, increased market demand, improved government services and cooperation, quality of workers, quality products, and better tax administration.

Table 27: Share of firms evaluating the future of industry

Evaluation of future investment	Total		Phnom Penh		Sihanouk Ville		Bavet	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Very poor	1	1.3	1	1.6	0	0.0	0	0.0
Poor	6	7.9	6	9.7	0	0.0	0	0.0
Fair	43	56.6	36	58.1	2	33.3	5	62.5
Good	24	31.6	19	30.6	3	50.0	2	25.0
Excellent	2	2.6	0	0.0	1	16.7	1	12.5
Total	**76**	**100.0**	**62**	**100.0**	**6**	**100.0**	**8**	**100.0**
1= Very Poor, 2 = Poor, 3 = Fair, 3 = Good, 5 = Excellent		3.3		3.2		3.8		3.5

Table 28: Perceptions of respondents on the future industry

Future development of industry	Total	Phnom Penh	Sihanouk Ville	Bavet
Implementation of laws and regulations	29.3	29.8	50.0	12.5
Market demand	18.5	19.1	0.0	25.0
Government services and cooperation	10.8	11.5	20.0	0.0
Quality of workers	12.7	12.2	20.0	12.5
Quality of products	4.5	3.1	10.0	12.5
Economic stability	4.5	5.3	0.0	0.0
Global financial crisis	6.4	6.9	0.0	6.3
Access to loan	1.3	1.5	0.0	0.0
Political stability	3.8	4.6	0.0	0.0
Tax administration	4.5	3.8	0.0	12.5
Technology and equipment	1.3	0.8	0.0	6.3
Transportation and communications	1.3	1.5	0.0	0.0
Raw materials	0.6	0.0	0.0	6.3
SEZs expansion	0.6	0.0	0.0	6.3
Total	**100.0**	**100.0**	**100.0**	**100.0**

CONCLUSION

The survey found that most firms were 100 per cent foreign-owned, specifically Taiwan, China and Hong Kong. The majority of firms had over 500 employees with annual sales above US$10 Million. The total average rating for the business setup was fair. The obstacles faced in setting up the business are lengthy processing time for the requisite documents and the costs of registering new businesses.

In terms of business operations, the total average rating for governance was poor due to corruption, as evidenced by payment of unofficial fees, or bribes. The infrastructure in Sihanouk Ville was rated poor, particularly electricity and telecommunications, owing to insufficient power supply and poor Internet network. Additionally, in Sihanouk Ville, the quality of workers was rated poor for lack of skills and low education. Financing also rated poor due to either difficulty of accessing, or outright inaccessibility of, needed funds, and high interest rates on loans.

Most workers had middle high school and elementary education while most middle management staff had attended high school and college or university. The largest proportion of engineers had attended technical or vocational schools and college or university. The average wages and salary were US$79 for workers, US$209 for middle managers and US$464 for engineers. Most firms had a monthly labor turnover ratio of 1 to 5 percent.

On the current investment incentives, respondents rated the following poor: subsidies, rent-free or subsidized land, and access to low-cost financing. Lack of government-provided land, lack of access to or difficulty in accessing financing and high rates on loans, foreigners barred from owning property, and limited ownership all accounted for this low rating.

Other incentives measures deemed effective to increase investments were: (1) reducing public holidays; (2) abating bureaucracy and corruption; (3) lowering export management fees; (4) efficiently implementing the laws; (5) reducing transaction time, (6) decreasing taxes such as export and income taxes; and (7) granting property rights to foreigners.

The main markets where major products were sold were the United Stated, followed by Europe and Canada. These products consisted mainly of garments and textiles. Raw materials were sourced mainly from China and Taiwan.

The total average rating on domestic market size and purchasing power of local consumers was poor, because Cambodia concentrated only on exportation while the domestic market was too narrow to accommodate the manufacturers' goods. Some industries had been faced with decreased orders from buyers and high tax rates. Information on local suppliers and quality of local supplier base was rated poor, as respondents cited the difficulty of locating them, and that some supplies were slow to deliver and charged high fees.

Most firms used sea or waterway, and others land and air, transport for importing raw materials and exporting products.

The total average rating on the cost competitiveness of each mode of transport and communication was poor in Phnom Penh and Sihanouk Ville. Rating on efficiency and reliability of transport and communication was poor in Sihanouk Ville.

Clearance for exporting and importing goods took two and three days, respectively. The longest number of days respondents said it took them to clear or claim their goods was seven.

Most of firms expressed optimism that the investment climate would improve in the future. The total average rating on the future of industry was fair. Measures believed to boost future industry development were better enforcement of laws and regulations, increased market demand, better government services and cooperation, improved quality of workers and products, and enhanced tax administration.

Recommendations

To hasten industrial development, the following measures are recommended:

- Maintain macroeconomic stability and social security.
- Improve governance through enhanced efforts to fight corruption, pursuit of legal and judiciary reforms, streamlined public administration reforms that will facilitate the provision of highly qualified support services that will in turn enhance the investment

climate; promotion of technology transfer, increased professional training, and setting up of industrial zones.

- Improve physical infrastructure in both quantity and quality in all sectors to ensure ease of transport and affordable and reliable electricity.
- Boost human resource development and develop vocational or technical training to bring about an increase in the number and quality of professional and skilled workers, such as architects, engineers and IT specialists. These are vital to increasing productivity and attracting other types manufacturing investors from the region.
- Open up access to the entire domestic market, so that private enterprises will be encouraged to locate even in the more remote areas of the country.
- Lastly, supplement long-term resources of domestic banks through direct loans so short- and long-term capital could be made available to private firms.

REFERENCES

Leila Webster and Don Boring. 2000. "The Private Manufacturing Sector in Cambodia: A Survey of 63 Firms" Private Sector Discussion No. 11.

Malaysian Institute of Economic Research (MIER). 2008. "Analyses of Industrial Agglomeration, Production Networks and FDI Promotion - the Case Study of Malaysia." ERIA JRP Series No. 20.

Philippine Institute of Development Studies (PIDS). 2008. "Analyses of Industrial Agglomeration, Production Networks and FDI Promotion – Industrial Agglomeration and Industrial Policies: The Philippine Experience." ERIA JRP Series No. 21.

Tatsufumi Yamagata. 2006. "The Garment Industry in Cambodia: Its Role in Poverty Reduction through Export-Oriented Development." Discussion Paper No. 62.

Chapter 7

Investment Climate in Lao PDR

Syviengxay Oraboune

Abstract

Lao PDR has various bottlenecks for foreign investors. Macroeconomic instability is the most serious problem. Although investors are satisfied with the low labour costs, high labour turnover rates cause labour shortage. Moreover, the high cost of transportation has reduced the competitiveness of competitiveness of communities in Lao PDR. Many companies in Savannakhet experienced export and import delay.

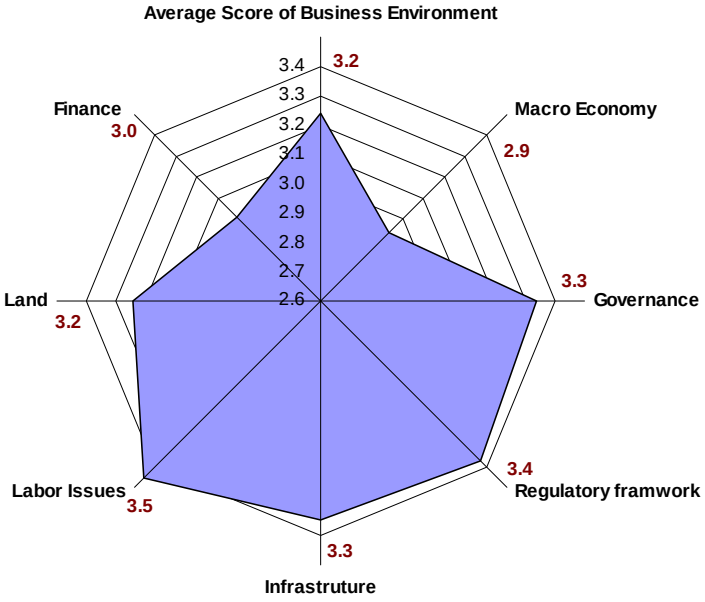
1. Objectives and Characteristics of the Survey

This ERIA investment climate survey aims to review the investment environment in Lao PDR, in particularly in Vientiane, where there is a selected industrial estate, and in Savvanakhet, which has the Savan-Seno Special Economic Zone (SSEZ) along the East-West Economic Corridor (EWEC). A total of 60 companies (30 foreign direct investment [FDI] companies in Vientiane and 30 firms in Savannakhet, including 15 FDI and 15 local companies with international transactions) were selected as sample companies. Empirical reviews suggest that good investment climate, especially to attract FDI, can stem from lower production cost links. Production cost links for FDI refer to several environmental factors, including business setup, business operations, labour issues, logistics, and other service cost links. The survey analyses the situations in the said areas and the results/findings of the survey are summarised in the following section.

2. Results of Investment Climate in Vientiane

Thirty sampled FDI companies were interviewed on the investment climate in Vientiane. From the survey, findings suggest that the overall investment environment in Vientiane is not that attractive to foreign investors. The investment climate was rated on a five-point scale (1 Very poor; 2 Poor; 3 Fair; 4 Good; 5 Excellent) based on such factors as macroeconomy, governance, regulatory framework, infrastructure, labour issues, land, and finance. Results show that the average score given by these companies reached 3.2 only (Figure 1). This indicates that the investment climate in Vientiane is fair although it is much better in infrastructure provision compared to other regions of the country.

Figure 1: Investment Climate/Business Environment in Vientiane



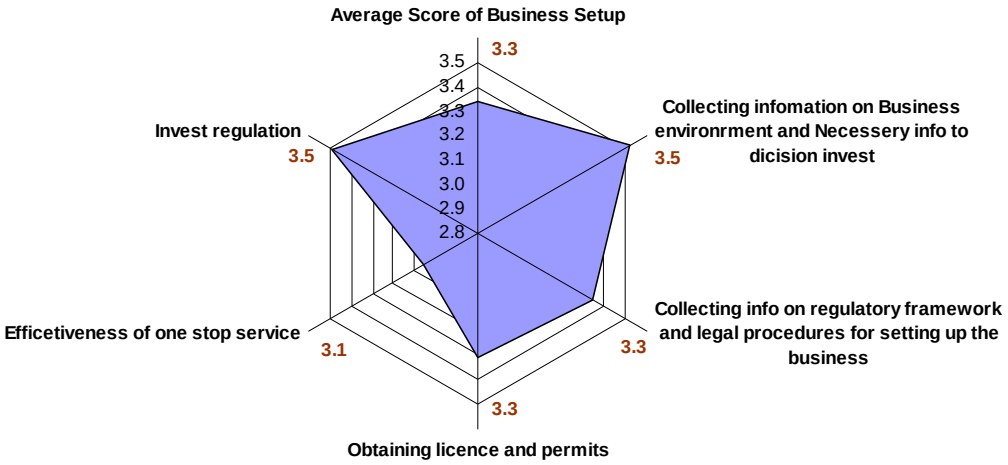
According to the results, of most concern to the companies is the macroeconomic environment, which garnered an average score of lower than 3. Therefore, macroeconomic stability is a very important factor for investors in Vientiane and in Lao PDR as the whole. Although the macroeconomic environment in Lao PDR has improved in recent years, several macrosystems have not been strong enough to secure some external impact. Inflation is still high and fluctuating although it has stayed at one digit for some time. Other monetary policy issues, including those on the

exchange rate, have to be well addressed so as to improve this investment climate in Vientiane.

Labour issues received the highest score at 3.5. Although investors are satisfied with the low labour costs, most have experienced labour turnover. This caused labour shortage for some production periods as well as made it difficult for companies to recruit new labour in Vientiane. Over 40 percent of the companies have labour turnover rate at between 6 percent to 40 percent while over 20 percent experience monthly labour turnover of 11 percent to 40 percent. The survey also reports that at least 5 percent of workers change jobs every month on average.

To determine which cost link environment requires the most attention, the survey analysed the business setup situation in Vientiane, where the average score is slightly above 3.3 (Figure 2). Figure 2 shows that all factors concerning business setup were rated as fairly average, while “One Stop Service” (OSS) garnered the highest concern, receiving the lowest score among all factors. Recently, the Department of Investment Promotion of the Ministry of Planning and Investment implemented the OSS to improve its investment procedures. However, the OSS does not yet cover all the procedures handled by an office of investments, in a sense. Therefore, it is important to

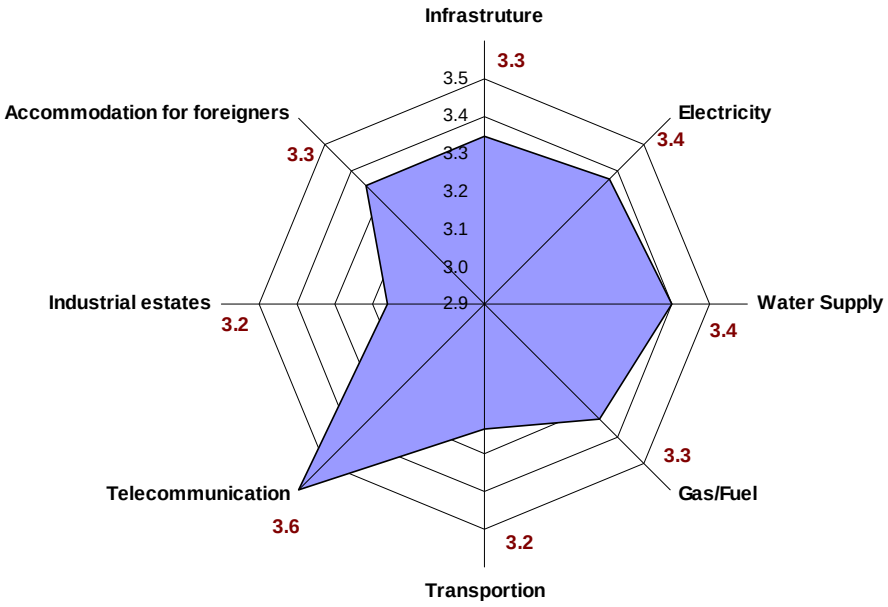
Figure 2: Business Setup Environment



have such services gradually improved---by shortening the processing time and reducing the cost of setting up a business---if one were to make Vientiane an attractive investment site.

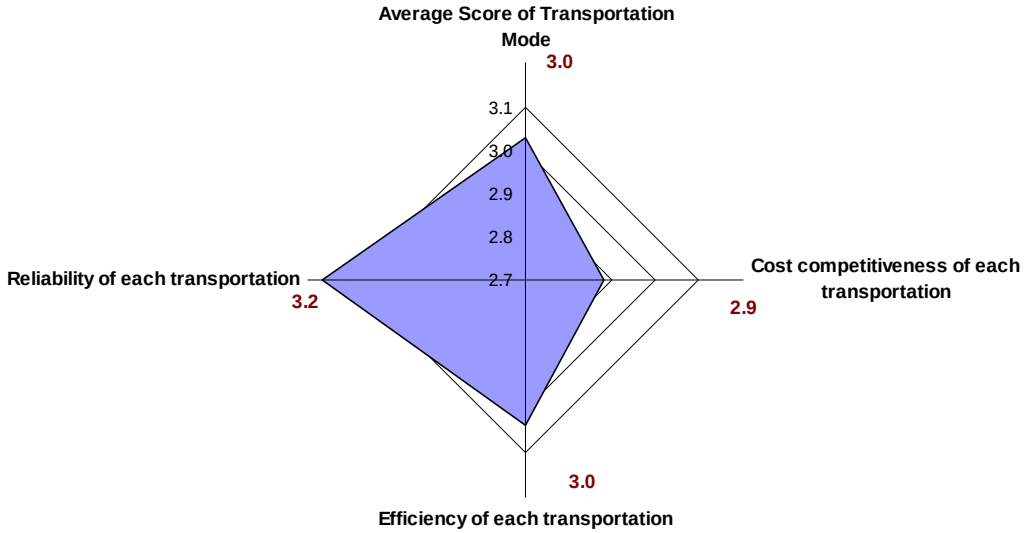
Other cost links such as infrastructure also garnered a fair score of 3.3 (Figure 3), and had industrial estates and transportation as its main areas of concern (average score: 3.2). As earlier mentioned, while Vientiane has been identified as an industrial estate site but there are no other infrastructure (building, road) or even utilities such as water supply in the area.

Figure 3: Infrastructure



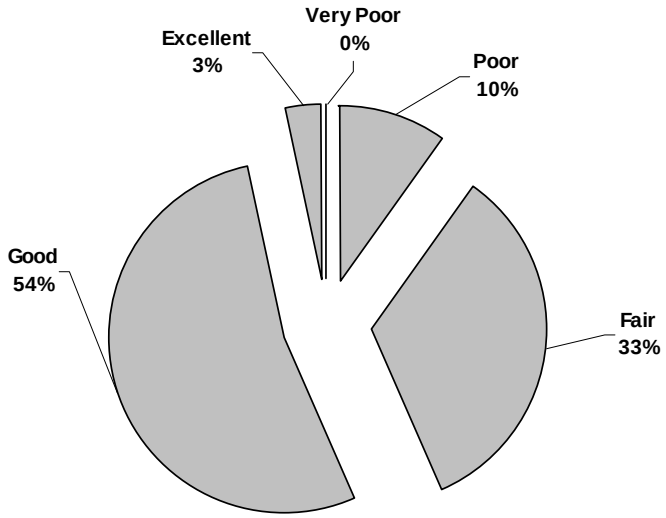
Since there are not many choices of modes of transportation and routes in Vientiane, this has become a bottleneck for the export sector of the country. The high cost of transportation has reduced the competitiveness of communities in Vientiane or in Lao PDR. Therefore, developing more transportation routes is another important consideration. Figure 4 presents the transport score as at only 3.0 while competitiveness has the most transportation-related concern, getting a score of lower than 3.

Figure 4: Average Score of Transportation Mode for Business in Vientiane



Finally, the investment climate in Vientiane is at an average of 3.3. This means that the environment is not highly attractive to foreign investors. According to some findings, the most attractive factor is from the external side, including the generalised system of preferences (GSP), and this is not very sustainable. However, when asked about the future of their businesses, almost 60 percent thought that their business still has a bright future while 33 percent believed that their business would fairly continue in the future. Respondents gave this item an average score of 3.5 (Figure 5). Therefore, in this area, Vientiane needs appropriate policies regarding FDIs to make it more attractive to investors.

Figure 5 Future of Industry (Average Score: 3.5)



3. Results from the Investment Climate Survey in Savannakhet

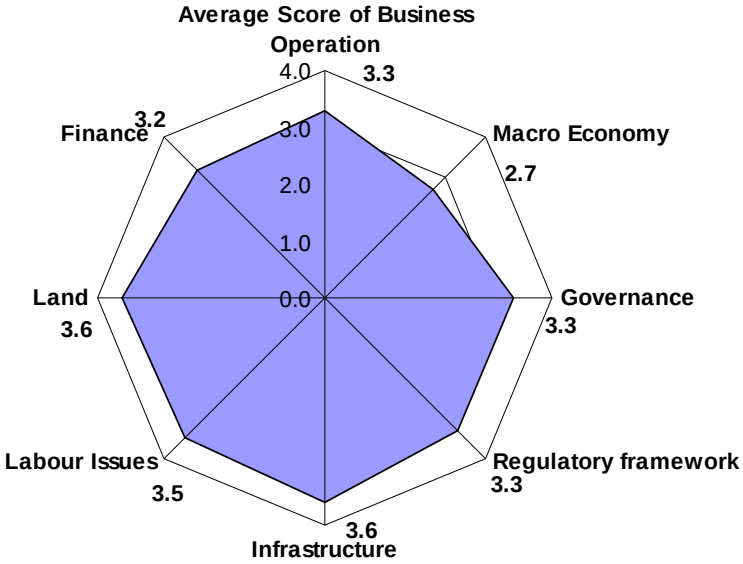
Savannakhet is located in a very strategic area in the East-West Economic Corridor (EWEC). Therefore, to make use of such advantage, the government of Lao PDR introduced the development of a special economic zone called Savan-Seno Special Economic Zone (SSEZ) in the early 2000s. The objective of SSEZ is to attractive FDIs and export-oriented investors to the area.

Similar to what was done in Vientiane, an investment climate survey was conducted in Savannakhet . In sum, 30 sample companies were interviewed for this survey. Out of the 30, 15 were foreign firms and 15 were local companies involved in international transactions.

The overall business or investment environment is generally affected by several factors. Just like in Vientiane, Savannakhet's average score stood at about 3.3 (Figure 6), where the macroeconomic situation elicited the most concern (score of 2.7) when it came to doing business in Savannakhet or in Lao PDR. Business people in Savannakhet have more interaction with Thailand and Vietnam, such that the completion of the EWEC and the second Lao-Thai Friendship bridge is expected to

make them better off compared to the past. This is why the score given to infrastructure reached 3.6.

Figure 6: Business Operation/Investment Climate Environment in Savannakhet



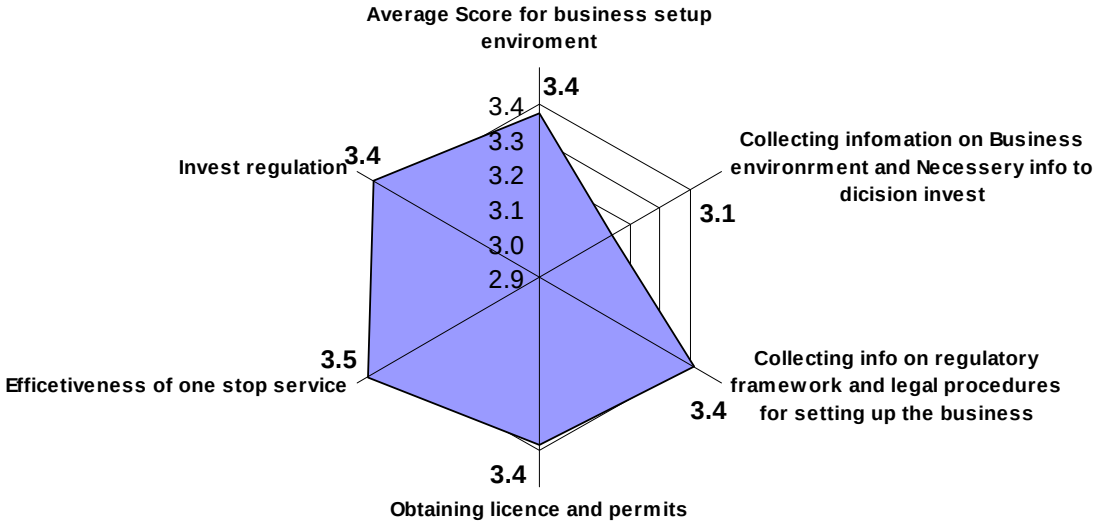
From respondents' perspective, infrastructure in Savannakhet seems to augur their businesses. This is because majority of the sampled companies in Savannakhet are in service and agriculture and are local companies, while firms in Vientiane are FDIs and engaged in manufacturing. Telecommunication and electricity are the most advantaged industries in Savannakhet. Although electricity in Savannakhet is still being importing from Thailand, such will improve after the completion of the Nam Teun 2 hydropower project.

Labour issues scored 3.5, like in Vientiane's case. There is not much difficulty in finding agricultural workers in Savannakhet, but the area faces a number of constraints on both its skilled and unskilled labour.

Another similarity with Vientiane is that over 90 percent of the companies in Savannakhet pay less than US$300 per worker, while about 46.7 percent pay under US$100 per worker per month. About 76 percent of sampled companies experience labour turnover every month. An average of about 5 percent of the total workers change jobs every month.

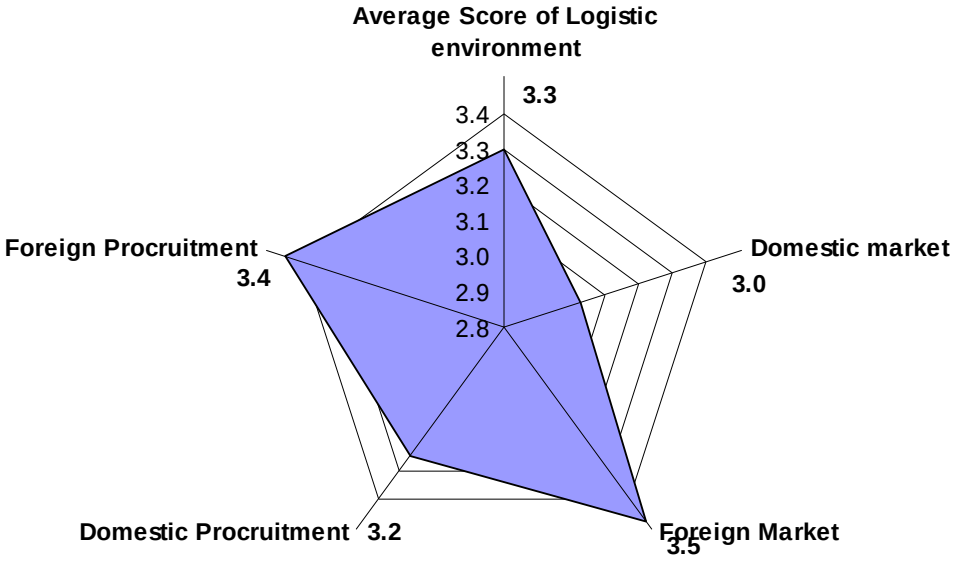
Business setup received an average score of 3.4 (Figure 7), a rating 0.1 higher than in Vientiane. However, note that the majority of the sampled companies in Savannakhet are local firms while most of those in Vientiane are FDIs. Information regarding investment decisionmaking garnered the most concern from respondents. However, there is a lack of publications, figures, and statistics that most foreign investors look for. Local investors cope with such by relying on oral information to help them decide on investments. This is one of the differences in the situation between Vientiane and Savannakhet.

Figure 7: Business Setup Environment in Savannakhet



There are other service links that are important concerns. Lao PDR is a land-locked country, which is a constraint to its business environment. Logistics is an important issue in the country, especially in Savannakhet. According to the survey, the logistics-related environment garnered a rating of 3.3, where such concerns centered on the domestic markets. The foreign market is in a much better position in terms of the logistics environment, with an average score of about 3.3 (Figure 8).

Figure 8: Logistic Related Environment

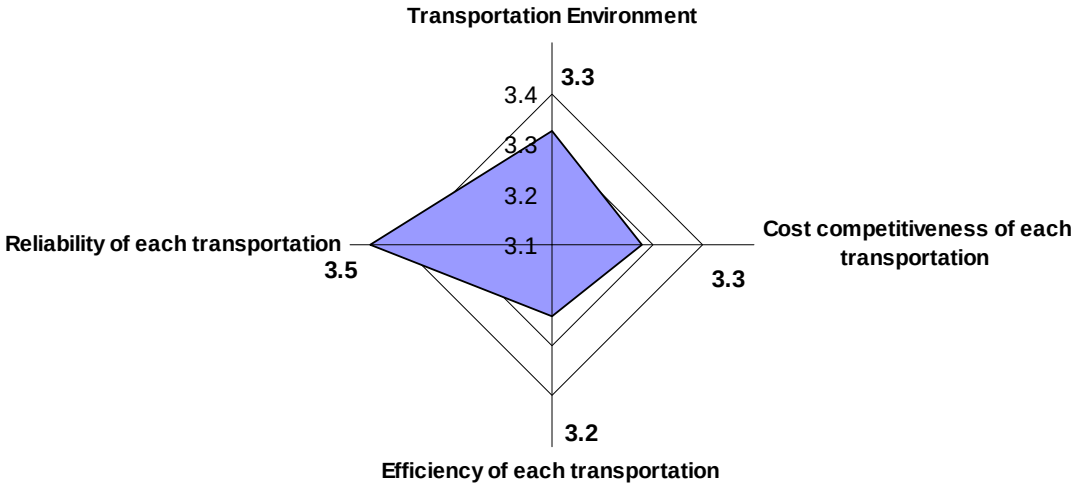


Similar to the case of Vientiane, majority of Savannakhet's raw materials and components are outsourced. Their access to international suppliers of raw materials is easier when compared to access to local suppliers, since there is lack of information regarding the latter. The average score for foreign and domestic procurement is therefore 3.4 and 3.2, respectively.

When it comes to procurement of raw materials and components from abroad, most concerns centered on nontariff barriers and foreign exchange regulations. On the other hand, the quality of local suppliers' work is also another concern, as gleaned from its score of about 3.1.

The overall transportation environment received a score of only 3.3, a reflection of the concern over the efficiency of Savannakhet's transportation sector. In 2008, almost 70 percent of the exporting companies experienced transport delay. According to sample companies about 18 percent of them experienced export delay in two days; 14 percent saw delays of between five days to one week; and 10 percent suffered delays from over one month up to 45 days.

Figure 9: Transportation Environment



On the other hand, only 24 percent of the sampled companies did not encounter import delays in 2008. According to sample companies about 10 percent of them experienced import delays of up to 30 days. Altogether, about one-third of the companies experienced an import delay of one week to four weeks in 2008. Such weaknesses significantly annoy business people simply because the longer time means extra costs to business. This directly reduces the competitiveness of doing business in the area.

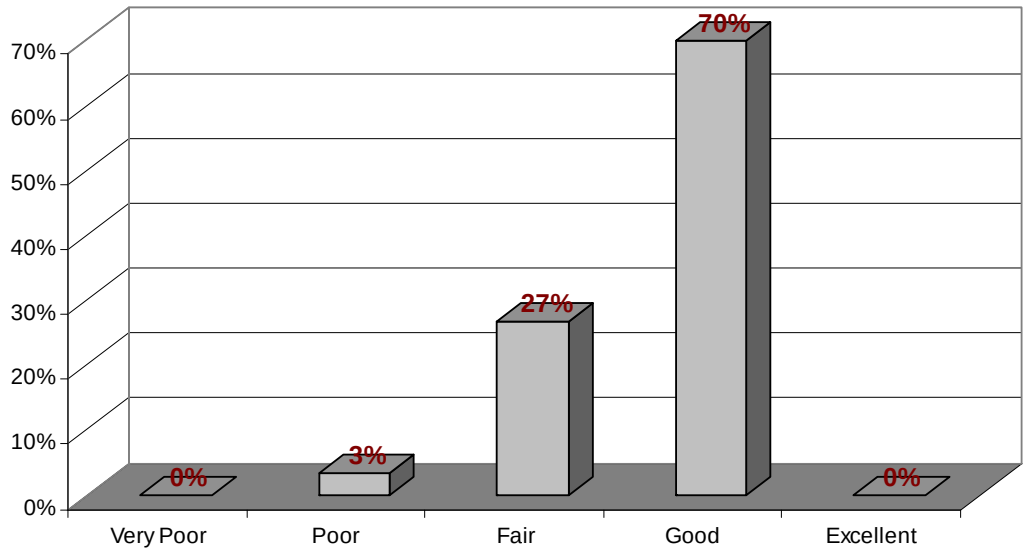
Other related cost links include the governance and regulatory frameworks environment, both of which scored 3.3. Respondents indicated that, not unlike Vientiane's situation, Savannakhet had to contend with corruption in government. Such respondents, however, do not have problems with crime, theft, and disorder. Results also show that the quality of the government's service is not satisfactory. Meanwhile, when it comes to the regulatory framework, the protection system of the intellectual property rights (IPR) and tax rate were the biggest causes for concern in Savannakhet. Both issues have a score of less than 3.

On the provision of incentives for the business community in Savannakhet, respondents assigned an overall score of about 3.5 since the business community is generally satisfied with the area's tax exemption guidelines in the investment law as

well as the regulation of the SSEZ. It is the access to low cost loans that is the biggest concern for the business community. The sampled companies gave these an average score of 3. Some of the related issues of concern, per the survey results, are the high interest rate, short loan period, and complicated guidelines on collaterals. Currently, there is no specific export and import bank in Lao PDR.

Finally, this paper assessed sampled companies' views on future trends in their industry. Most respondents remained optimistic about the future of their businesses. Seventy percent still believe that their business will have a positive trend in the future while 27 percent are fairly optimistic about their businesses. The overall score on the trend of the industry is 3.7 (Figure 10).

Figure 10: Perspective on Future Trend of Industry (Score 3.7)



Results from the flowchart approach survey and investment climate questionnaires for Vientiane and Savannakhet suggest that their investment environments are not attractive enough to bring in FDIs. Both were given an overall score of about 3.2 and 3.3, respectively. By reviewing all related factor cost links, we can see that both locations still face a number of obstacles for doing business, including factors related to business setup, business operation, and logistics. As for those factor links, none could score above 3.5. Although there are some FDI in both locations, most

of these companies are in those industries that could benefit from a generalised system of preferences, which Lao PDR receives via its Least Developed Country (LDC) status.

Conclusion and Recommendation

Results of the investment climate survey suggest that the current investment climate of Lao PDR---specifically, Vientiane and Savannakhet---is not highly attractive to investors because of obstacles such as the costs of setting up a business, business operation cost, logistics cost, and other service links costs. The development of more strategic industrial estate/special economic zones in both areas is needed to improve the investment environment. At the same time, targeting industry is an important exercise, which includes identifying a specific industry in each zone so that the business environment in the zone would need to be specific to the targeted industry.

4. Policy Recommendations

Focusing on the development of industrial estate/special economic zone as a way to attract FDIs is significantly important to Lao PDR's industrialization. How one appropriately allocates the industrial estate/SEZ into specific industrial advantages is also a way to achieve the objectives. At the national level, targeting specific industries in neighbouring countries, especially the dynamic economies of China, Thailand, and Vietnam, will have more geographical advantage. The use of an official development assistance (ODA), especially from the origin of target industry/FDI, to provide appropriate environment to the target industry/FDI ensures that the environment is appropriate in terms of the type of infrastructure and other requires links in the areas.

Vientiane: Although Vientiane has more advantages than other regions of the country in terms of better infrastructure, the development of its industrial estate is not well recognized. Most manufacturing industries currently concentrate in Vientiane, due to its better infrastructure, regulatory frameworks, and other linked issues. Even in logistics/transportation, Vientiane remains more competitive than other area in Lao

PDR. Although there is no other competitive mean of transportation modes via Bangkok, most manufacturing companies still prefer to locate in Vientiane due to its GSP status.

Savannakhet: Savannakhet is located in a very strategic area of the EWEC of the Greater Mekong Sub-region (GMS). Although its location is more strategic than Vientiane's, its infrastructure leaves much to be desired. Survey results show that most exporters from Savannakhet use the road-sea mode via Bangkok rather than via Danang in Vietnam, where the distance is shorter. This indicates that the situation, including the export environment in Danang, is not as competitive as Bangkok's.

Finally, all are in agreement that a SEZ development policy is significant to the industrialization of the country. However, the small population as well as the fact that there is low population density has put a constraint on the labour supply for the SEZs. Such labour shortage might be a constraint to the country's development. Therefore, for industrial estate/SEZ development to take place, an in-depth study as well as a case-by-case review of the potentials and constraints of each area is in order. This way, we can identify an appropriate policy and mechanism for each area.

Chapter 8

INVESTMENT CLIMATE UNDER ECONOMIC INTEGRATION THE CASE OF MYANMAR

Moe Kyaw

Abstract

The results of the survey shows Myanmar's high inflation and application of a multi-exchange rate system have adverse impact on its macroeconomic stability. Moreover, shortage of power supply restrains businesses to operate at full capacity and this leads to low productivity. Changes in regulations have reduced the investment opportunity. By collaborating with the business community in planning and by adopting a basic law, the government can provide investors with a consistent law which may help raise investor confidence.

1. Objectives of Investment Climate Study

The objectives of the Investment Climate Questionnaire Survey of the ERIA project are:

(1) to recommend policy measures for CLMV to attract foreign direct investment and to participate in production networks in East Asia;
(2) to recommend policy measures to effectively utilize economic corridors and special economic zones; and
(3) to recommend appropriate timing and sequential policy measures to develop industrial clusters.

The questionnaire surveys are assumed to be one of the effective research methods for making policy suggestions based on empirical analyses and comparative studies.

2. Research Methodology

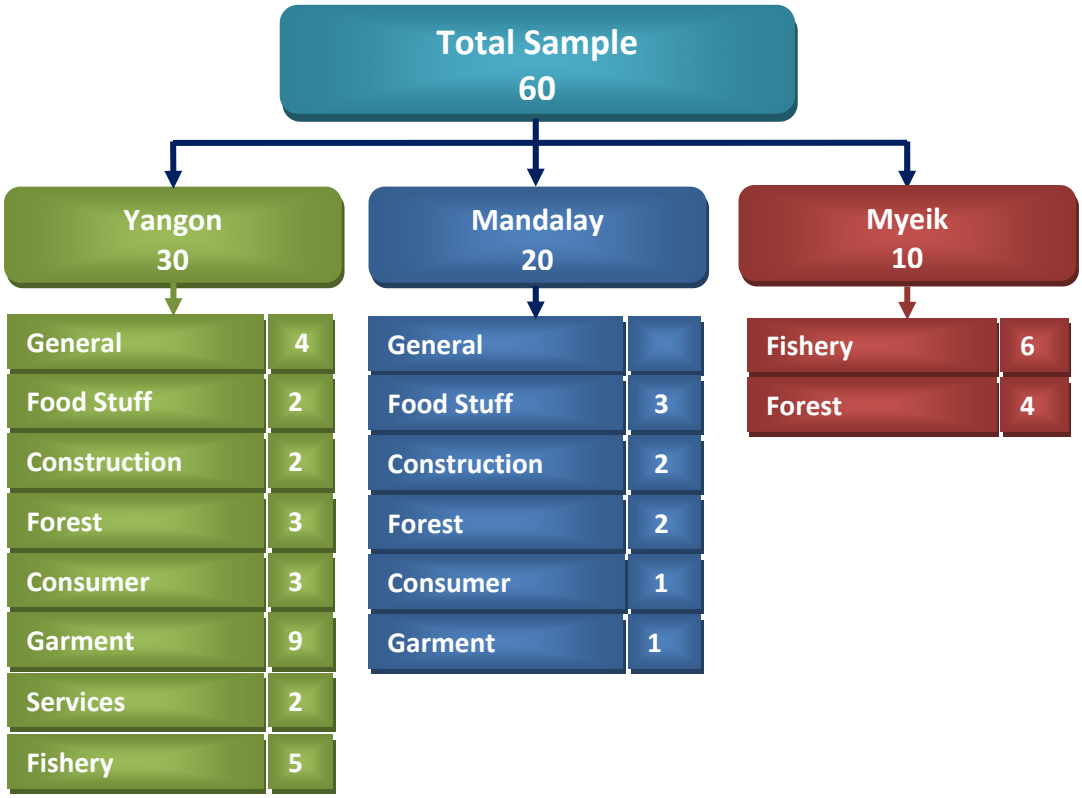
The survey investigated the business environment for the manufacturing industry. Participants were 60 firms engaged in international business transactions. The survey areas were selected based on three types of industrial location: Yangon as a metropolitan area, Mandalay which is a transport hub, and Myeik as a city connecting to

border area. In the survey, the researchers used questionnaire forms with a five-scale rating. The sample size and number of industries of each industrial zone and share distribution by business type are shown in the table and figure below.

Table 1 Survey samples and universe

Industrial zones	Samples	Share (%)	Universe
Yangon	30	0.5	5,469
Mandalay	20	1.6	1,267
Myeik	10	13.1	76
Total	60	0.9	6,812

Figure 1 Share distributions by city and business types



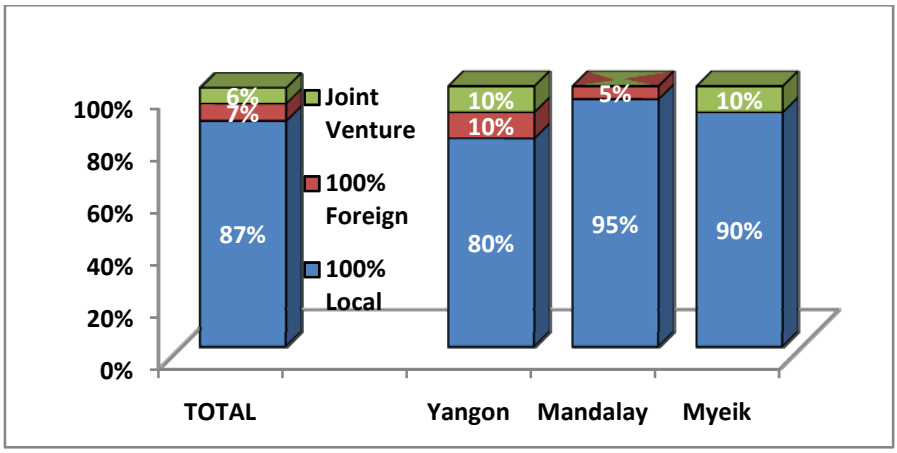
3. Company Profile

3.1 Industries by type of ownership and market direction

Out of 60 surveyed industries, 87% was run by local investors, 7% was run by foreign investors, and 6% was jointly run by local and foreign investors. According

to market direction, 32 industries were producing for the foreign market and 29 industries for the domestic market.

Figure 2 Industries by type of Ownership



3.2 Foreign Experts

Thirty-three (33) percent of the firms have foreign experts, with Chinese experts taking the biggest share at 35%, followed by Malaysian experts at 20%.

Figure 3 Number of Foreign Experts and Share of Nationality

4. Business Setup

The survey evaluated the business environment related to business set up on a five-scale rating as follows: 1= Very Poor, 2= Poor, 3= Fair, 4= Good and 5= Excellent.

4.1 Collecting information on the business environment

The average rating in this section is 3.5. Business owners make investment decisions based on their experience and some owners acquire technology transfer by acquiring existing factories.

4.2 Collecting information on the regulatory framework and legal procedures

Some businesses appoint legal experts to do regulatory and legal procedures whereas other businesses do these on their own. Information about how to do business in Myanmar is available at the Directorate of Investment and Company Registration. The average rating is 3.6.

4.3 Licenses and permits

Most respondents had a few problems to get license or permit to do business because they established the businesses in line with the market-oriented economy in the early 1990s. If foreign investors follow the procedures of the Myanmar Investment Commission (MIC), it is easy to get permit and approval from MIC. Negotiation between the MIC and the investor usually takes about two months and sometimes even up to a year. Some businesses have little or no problem in terms of approval and permit application if they are joint-ventured with State Owned-Economic Enterprises. The average rating is 3.5.

4.4 Effectiveness of one-stop service

Effectiveness of One-Stop Service is rated as 2.5 and interpreted as poor. There was lack of one-stop service in the industrial zones. Businesses have to contact many departments of various locations including those in the new capital city, Nay Pyi Taw, to obtain licenses and permits.

4.5 Investment regulation

The average rating is 2.9. Tax exemptions and reliefs should be enjoyed according to the Foreign Investment Law.

Table 2 Business Setup - Rating by Sector

1= very poor, 2= poor, 3= Fair, 4= good, 5= Excellent

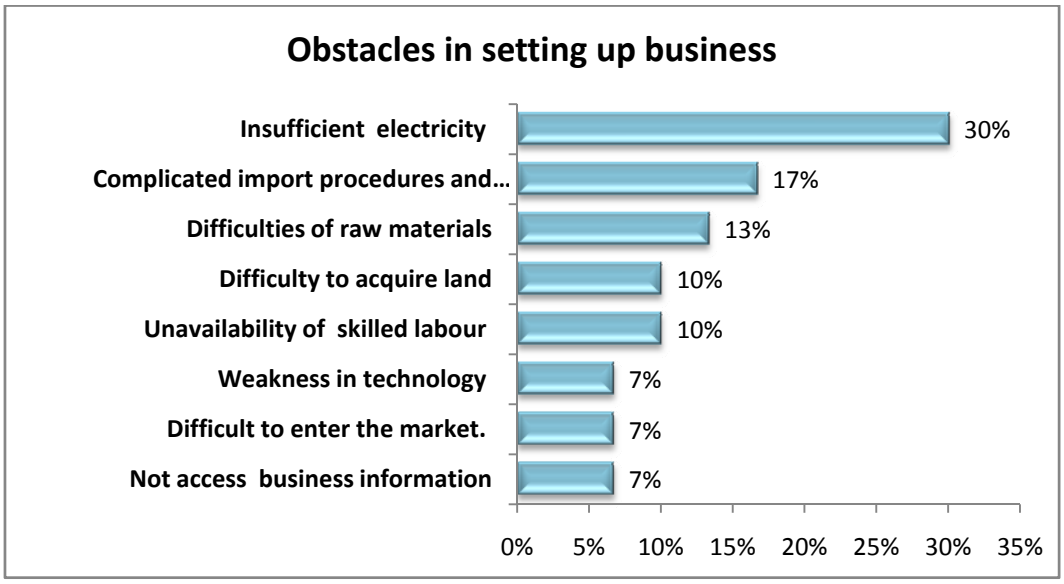
No	Particular	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Information necessary to make an objective decision on investment	3.5	3.7	3.1	3.0	3.2	4.0	3.3	4.5	3.7
2	Collecting information on the regulatory framework and legal procedures for setting up the business	3.6	3.6	3.3	3.1	4.0	3.8	3.3	4.0	3.9
3	Obtaining licenses and permits	3.5	3.2	3.5	3.4	3.6	3.3	3.8	3.5	3.6
4	Effectiveness of one-stop service	2.5	2.5	2.5	2.2	3.0	3.3	2.3	2.0	2.5
5	Investment regulation	2.9	3.3	2.5	2.8	3.0	3.5	2.8	2.5	2.7
	Total Average	3.17	3.26	2.96	2.91	3.36	3.55	3.05	3.30	3.28

In brief, the average rating by sector on effectiveness of one stop service and investment regulation is below average. The average rating by sector on other areas such as collecting information necessary to make an objective decision on investment, collecting information on the regulatory framework and legal procedures for setting up the business, and obtaining licenses and permits are above average.

4.6 Obstacles in setting up the business

Shortage of power supply restrains businesses to operate at full capacity and this leads to low productivity. Lack of technology arising from complicated import procedures and regulations affects the efficiency of businesses. Timely business information is not available and lack of skilled technicians impacts on the operations. Scarcity of raw materials limits the setting up of a resource-based industry. Restraints on market entry constitute another obstacle.

Figure 4 Obstacles in setting up business



5. Business Operation

5.1 Macroeconomic stability

Myanmar's high inflation rate of about 30 percent per annum and its application of a multi-exchange rate system have adverse impact on its macroeconomic stability. Due to the shrinking world economy in 2008-2009, the export sector has declined and unemployment has also increased. Therefore, the average rating in this section is 2.6.

5.2 Governance

Industrial zones enforce security measures such as by assigning guards yet some factories still experience internal theft. There is a defect in policy formulation and implementation because it is not applicable to all businesses. The enforcement of law is weak in combating corruption.

The average rating by sector on macroeconomic stability is below average (Table 3).

Table 3 Macro economy - Average Rating by Sector

No	Macro Economy	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Macroeconomic stability	2.6	2.7	2.6	2.7	2.6	2.5	2.5	2.5	2.5
2	Governance _ Crime, theft & disorder	3.5	3.6	3.5	3.2	3.8	3.5	3.5	3.0	3.5
3	Quality of policy formulation and implementation	3.0	2.6	3.1	2.9	3.0	3.0	3.5	3.0	3.0
4	Quality of government services	3.3	3.3	3.3	2.9	3.6	3.0	3.5	3.0	3.3
5	Quality of the legal system	3.3	3.3	3.1	3.2	3.6	2.8	3.0	3.0	3.5
6	Corruption control	3.0	3.0	2.7	3.0	4.2	2.5	3.3	3.0	2.8
	Total Average	3.09	3.08	3.05	2.98	3.47	2.88	3.21	2.92	3.12

5.3 Regulatory framework

As a regulation, company registration must be renewed yearly. Registration renewal, which is compulsory for the extension of exporters/importers license, takes two to six months. The 10% export tax is high and there are misdeeds in collecting taxes. Labor regulation is fairly enforced but labor right is still limited compared to other countries. Factories are allowed to build within industrial zones and land regulation allows ownership and transfer by local industries.

The average rating by sector on regulatory framework such as tax rates is below average whereas the average rating on other areas is above average (Table 4).

Table 4 Regulatory Frameworks - Average Rating by Sector

No	Regulatory Framework	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Business licensing and operating permits	3.5	3.3	3.4	3.6	3.2	3.3	3.5	3.5	4.0
2	Tax rates	2.6	2.7	2.1	2.6	2.8	2.8	2.8	2.5	2.6
3	Tax administration	3.3	3.5	3.5	2.9	2.8	3.0	3.0	4.0	3.4
4	Labor regulation	3.3	3.0	3.3	3.1	3.6	3.0	3.5	3.5	3.5
5	Land regulation	3.6	3.7	3.5	3.2	3.2	3.5	4.0	3.0	3.9
6	Finance regulation	3.4	3.6	3.5	3.0	3.4	3.5	4.0	3.0	3.5
7	Intellectual property right (IPR) protection	3.3	3.2	3.3	3.2	3.6	3.5	3.3	3.0	3.3
	Total Average	3.28	3.29	3.19	3.08	3.23	3.21	3.43	3.21	3.45

5.4 Infrastructure

Industries could not enjoy 24-hour supply of electricity and most industries rely only on tube wells to access water. Myanmar has poor and unreliable transportation and telecommunication infrastructures. Over the years, the development of industrial estates has not significantly improved and the facilities to accommodate foreign experts are below standard. However, this aspect appears to be still acceptable to the Chinese experts, which constitute the biggest proportion (35%) of foreign experts in the study.

The average rating by sector on infrastructure such as electricity and industrial estates is below average at 2.2 (Table 5). The average rating by sector on other areas such as water, gas/fuel, transportation, telecommunication and accommodation for foreigners is above average.

Table 5 Infrastructures - Average Rating by Sector

No	Infrastructure	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Electricity	2.2	2.0	2.2	2.2	1.8	2.0	2.3	2.5	2.4
2	Water	3.5	3.7	2.8	2.9	4.0	4.0	4.0	3.0	3.7
3	Gas/Fuel	3.2	3.3	2.8	3.0	3.4	3.3	3.8	4.0	3.0
4	Transportation	3.3	3.2	2.5	2.9	3.4	3.5	3.3	4.0	3.8
5	Telecommunication	3.1	3.1	2.8	3.2	3.6	2.5	3.0	2.5	3.4
6	Industrial estates	2.9	2.5	2.6	3.4	2.8	3.0	3.0	3.0	2.9
7	Accommodation for foreigners	3.3	3.2	2.7	3.8	3.2	3.3	3.5	4.0	3.4
	Total Average	3.05	3.00	2.65	3.06	3.17	3.07	3.25	3.29	3.24

5.5 Labor

Most of the workers are hardworking and some industries carry out capacity-building programs to enhance operations. The engineers are technically qualified and some factories pay attractive salaries with good fringe benefits to employees to keep their presence. There are no serious problems concerning management-employee relationship although labor turnover is high in some industries.

The average rating by sector on labor is above average (Table 6). For sectors such as forest and services, the average rating on labor cost is below average, whereas in the garment sector, the average rating on labor turnover is below average.

Table 6 Labour - Average Rating by Sector

No	Labour	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc -tion	Consumer Product	Services	General Industries
1	Quality of workers	3.3	3.2	3.0	3.3	3.2	3.0	3.5	4.0	3.5
2	Quality of middle management	3.4	3.6	3.2	3.3	3.8	3.8	3.5	3.0	3.4
3	Quality of engineers	3.5	3.6	3.3	3.9	3.2	3.3	3.8	3.0	3.4
4	Labor cost	3.1	3.2	3.1	2.8	3.2	3.3	3.0	2.5	3.2
5	Easiness of recruitment of workers	3.5	3.1	3.3	3.4	3.6	3.3	4.3	3.0	3.7
6	Labor turnover	3.4	2.7	3.5	3.2	3.8	3.5	3.3	3.0	3.9
7	Labor relation	3.6	3.7	3.5	3.4	4.0	4.0	3.0	3.5	3.8
	Total Average	3.40	3.30	3.26	3.35	3.54	3.44	3.46	3.14	3.57

5.6 Educational background of employees

The educational backgrounds of workers, mid-level managers and engineers are shown in the figures below. The educational level of workers is acceptable to the owners and most workers have formal education. More than 83% of mid-level managers are college/university graduates and nearly 50% of engineers are products of technical institutes.

Figure 5 Educational background of worker

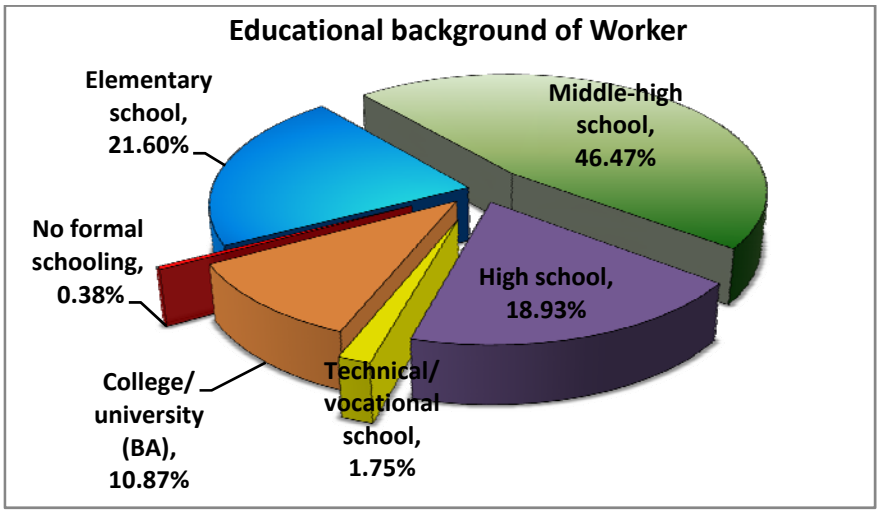


Figure 6 Educational background of Middle – level employee (Manager)

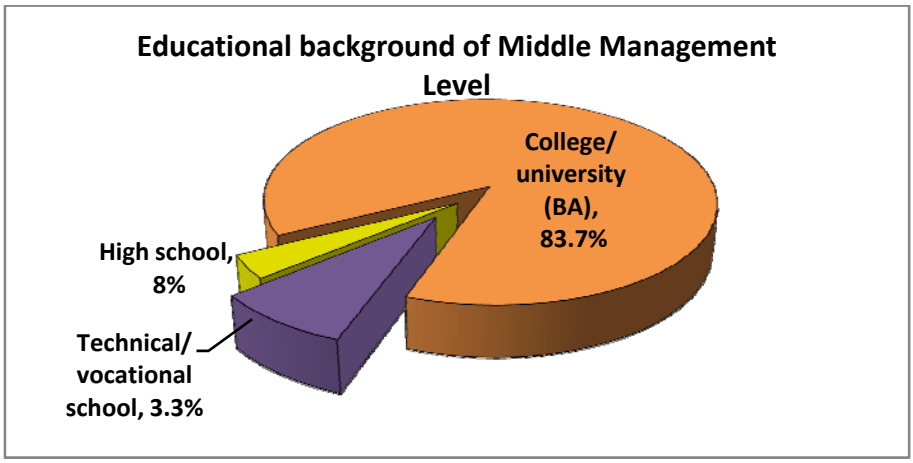
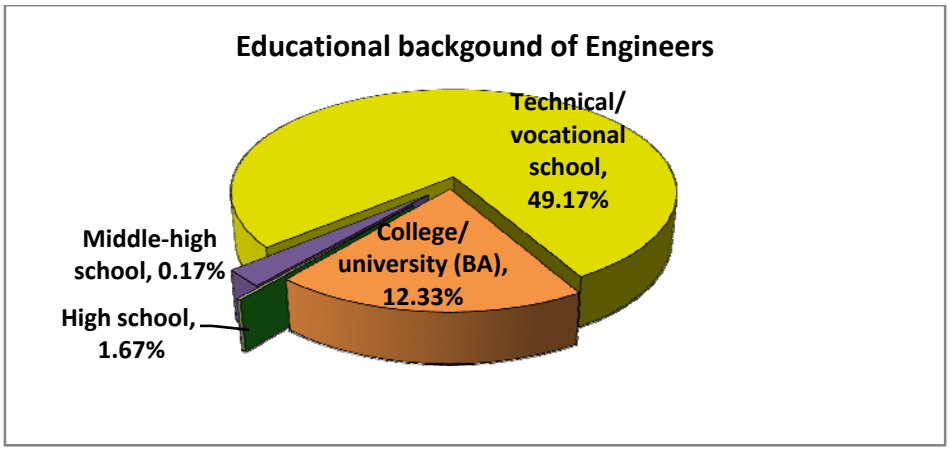


Figure 7 educational backgrounds of Engineers



5.7 Employees' wages and salaries

The average wage and salary (excluding other benefits such as travel allowance) are US$45 for workers, $138 for mid-level managers and $139 for engineers. The level of wages in Yangon and Myeik is normally higher than in Mandalay. In this survey, most respondents in Mandalay are workers from auto manufacturing firms and other consumer goods industries. The workers enjoy flat wages that are paid according to the work done. The average monthly wage and salary according to city is presented in Table 7.

Table 7 Average Monthly Wage and Salary by City (Kyats)

No	Particulars	TOTAL	City		
			Yangon	Mandalay	Myeik
1	Worker	45,183 (US$ 45)	43,700	50,000	40,000
2	Middle management	138,276(US$ 138)	148,000	122,778	137,000
3	Engineer	139,079(UD$ 139)	145,789	120,454	148,750

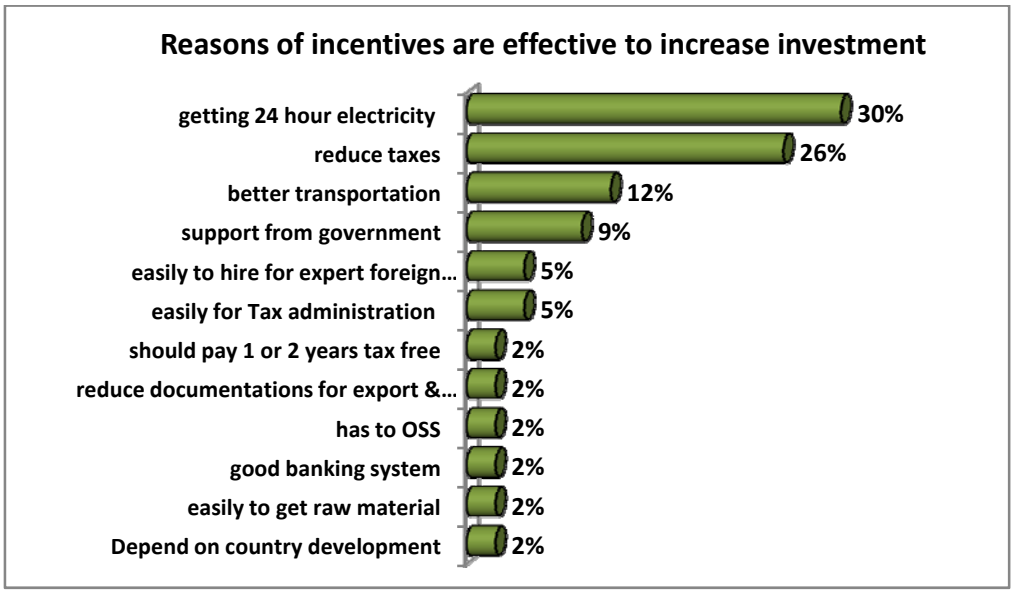
5.8 Average Monthly Turnover rate by city

A total of 88% of industries has monthly turnover rate of fewer than 10% followed by between 11 and 20% of industries with 8% monthly turnover rate. The rate is highest in Yangon than in other cities. The garment industry has the highest turnover rate among all the business sectors surveyed.

5.9 Current investment incentives

Only 30% out of 60 firms said the current investment incentives are attractive and the rest said these are not attractive. Effective investment incentives are uninterrupted power supply, tax incentives, better transportation infrastructure, government policy of industrialization and institutional support, and availability of foreign experts (Figure 8).

Figure 8 Incentives to be attracted to increase investment



6 Logistics

6.1 Export Markets

Japan is the most common destination market of the respondents' export products, followed by China and Malaysia. Export products ranging from garments and fishery products mostly go to Japan.

6.2 Import Countries

China is the topmost source of imported raw materials and machinery of the respondents. In the second and third places are Thailand and Singapore, respectively.

6.3 Domestic market

Some industries concentrate on exporting and do not distribute their products locally. Other industries which concentrate on the domestic market face a declining purchasing power due to the scarcity of jobs. Most industries say there is no smuggling control, giving the presence of biscuits from China as an example.

Table 8 Domestics market - Average Rating by Sector

No	Domestic Market	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Domestic market size	3.13	2.75	2.89	2.83	3.40	3.00	3.75	2.50	3.47
2	Purchasing power of local consumers	3.14	3.13	3.00	3.00	3.60	3.50	3.25	3	3.00
3	Smuggling control	3.09	3.50	3.00	3.00	2.80	3.50	3.00	3	2.93
	Total Average	3.12	3.13	2.96	2.94	3.27	3.33	3.33	2.83	3.13

6.4 Foreign market

There was a delay in the procedures for export. Regarding the rules of origin for the Generalised System of Preferences (GSP), most industries do not have or are not aware of GSP and other privileges such as the ASEAN Integration System of Preferences (AISP) and China's Special Preferential Tariff. Industries are hopeful for the GSP status since Myanmar is a least developed country (LDC).

The average rating by sector on foreign market such as export tax procedure, rules of origin for GSP, and uncertainty of the GSP status in the future is below average whereas the average rating by sector on procedures for export is above average (Table 9).

Table 9 Foreign market – Average Rating by Sector

No	Foreign Market	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Procedures for export	3.07	3.10	3.00	3.22	2.75	3.00	3.25	3.00	3.08
2	Export tax procedure	2.88	2.80	2.55	2.89	2.75	3.25	2.75	4.00	3.00
3	Rules of origin for GSP	2.71	3.00	2.64	2.78	2.75	2.75	2.50	3	2.57
4	Uncertainty of the GSP status In future	2.89	3.00	3.00	2.78	3.00	3.00	2.25	3	2.93
	Total Average	2.89	2.98	2.80	2.92	2.81	3.00	2.69	3.25	2.89

6.5 Domestic Procurement

Most of the raw materials are imported and some industries face difficulties contacting capable international suppliers. Others have limitations to meet their client's requirement. Other independent industries have no difficulties finding international clients through the internet.

The average rating by sector on domestic procurement such as collecting information about local suppliers, capability of local supplier base, and access to capable international suppliers is above average (Table 10).

Table 10 Domestic Procurement - Average Rating by Sector

	Domestic Procurement	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Collecting information about local suppliers	3.40	3.00	3.18	3.22	3.80	3.25	3.75	4.00	3.67
2	Quality of local supplier base	3.28	3.13	3.09	3.33	3.80	3.25	4.00	3.00	3.13
3	Access to capable international suppliers	3.33	3.00	3.27	3.11	3.40	3.00	3.75	4.00	3.60
	Total Average	3.34	3.67	3.17	3.83	3.67	3.47	3.83	3.67	3.47

6.6 Foreign Procurement

There is a long process for importing raw materials/parts and components. Regarding custom clearance, there is no delay in the process as long as the industries provide the required documentation. Regarding tariff, there is no appropriate rules imposed and there is no refund for value added tax. Industries can change money at market exchange rate and the market rate is higher in favor of the US dollar compared to the official exchange rate.

The average rating by sector on foreign procurement such as procedures for import of raw materials/parts and components, custom clearance, tariff barrier, non-tariff barrier, trade regulation, and foreign exchange regulation is above average (Table 11). In contrast, the average rating on drawbacks of import duty and value added tax is below average.

Table 11 Foreign Procurement - Average Rating by Sector

No	Foreign Procurement	TOTAL	Business Type							
			Garment	Fishery	Forest	Food stuff	Construc-tion	Consumer Product	Services	General Industries
1	Procedures for import of raw materials/ parts and components	3.13	3.30	2.44	3.00	2.80	3.25	3.50	4.00	3.40
2	Custom clearance	3.39	3.50	3.09	3.38	3.00	3.25	3.50	4.00	3.60
3	Tariff barrier	3.27	3.30	2.91	3.00	4.00	3.50	3.25	3.00	3.40
4	Non-tariff barrier	3.36	3.50	3.09	3.11	4.00	3.25	3.75	3.50	3.29
5	Drawbacks of import duty and value added tax	2.53	2.70	2.18	2.33	2.75	2.67	2.50	n/a	2.75
6	Trade regulation	3.12	3.40	2.82	3.00	3.40	2.75	3.25	2.50	3.27
7	Foreign exchange regulation	3.27	3.50	3.00	3.22	3.25	2.75	3.50	4.00	3.33
	Total Average	3.15	3.31	2.79	3.01	3.31	3.06	3.32	3.50	3.29

6.7 Modes of transport in trading

About 80% of the respondents normally use sea shipping as mode of transport, 33% prefer land route through the Chinese border and only 13% use air transport. Yangon has all modes of transport where it has access to ports, airlines and borders.

6.8 Transportation and communication cost and efficiency

Sea transport is the most cost-effective mode of transportation and air transport is the least effective. Cost of communication is rated below average (2.85). Efficiency and reliability of transportation and communication are fair in average.

Table 12 Condition of Transportation and Communication efficiency average rating

No	Particulars	Total	Yangon	Mandalay	Myeik
1	Land transport	3.03	3.00	3.31	2.20
2	Sea transport	3.26	3.33	3.70	2.60
3	Air transport	2.90	3.00	n/a	2.33
4	Communication	3.08	2.96	3.33	2.89

Table 13 Condition of Transportation and Communication reliability average rating

No	Particulars	Total	Yangon	Mandalay	Myeik
1	Land transport	3.03	3.23	3.13	2.20
2	Sea transport	3.55	3.73	3.82	2.70
3	Air transport	3.63	3.88	n/a	2.33
4	Communication	3.27	3.13	3.61	3.00

6.9 Time span on transportation

Average time spent for import and export is the duration of time spent from the entry or exit of goods to customs clearance. Average period for import in Yangon is two weeks. In Mandalay and Myeik, the average time spent for import is only within a week because of their proximity to the borders.

Average period for export in Yangon is three weeks. The reason for the longer time spent on export than on import is because Myanmar mostly imports goods from neighboring countries (and thus the shorter time spent given the proximity of these countries to Myanmar) but exports goods to Japan, Korea and other countries. Exporters from Mandalay export through Yangon and Muse. In Mandalay and Myeik, the average time spent on export is within a week.

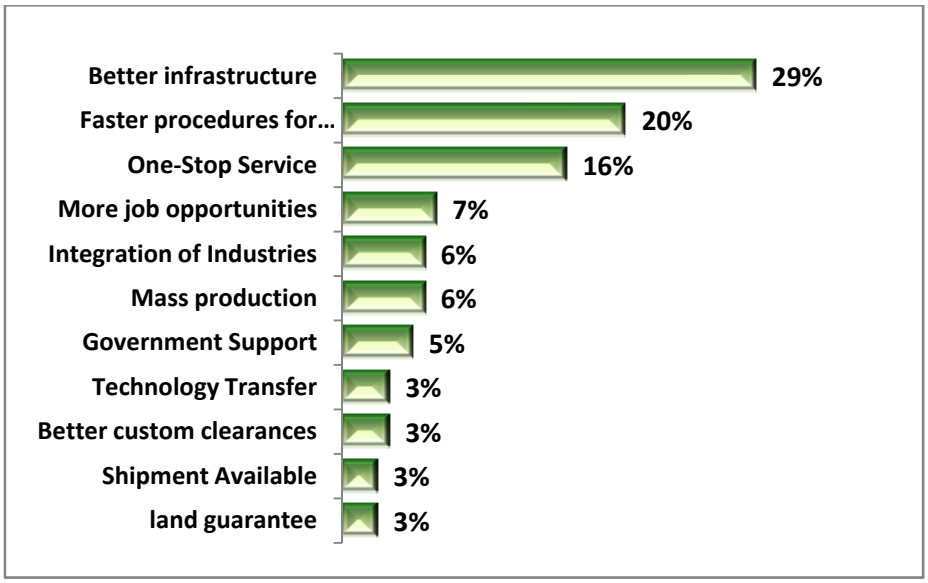
7. Future Development

7.1 Improvement of the Investment Environment

About 95% of the respondents think the establishment of SEZ/IZ will be effective in improving the investment environment because these economic zones have a better network within a cluster environment and can acquire land at less expensive prices. With the promotion of SEZ, the procedures for starting a business in Myanmar has become faster. These economic zones can also create more job opportunities, generate foreign currency for the country, and increase value-added goods production.

Establishing SEZ could also result in better infrastructure and information accessibility. Import substitute industries would be created so that consumers can buy quality products at less expensive prices.

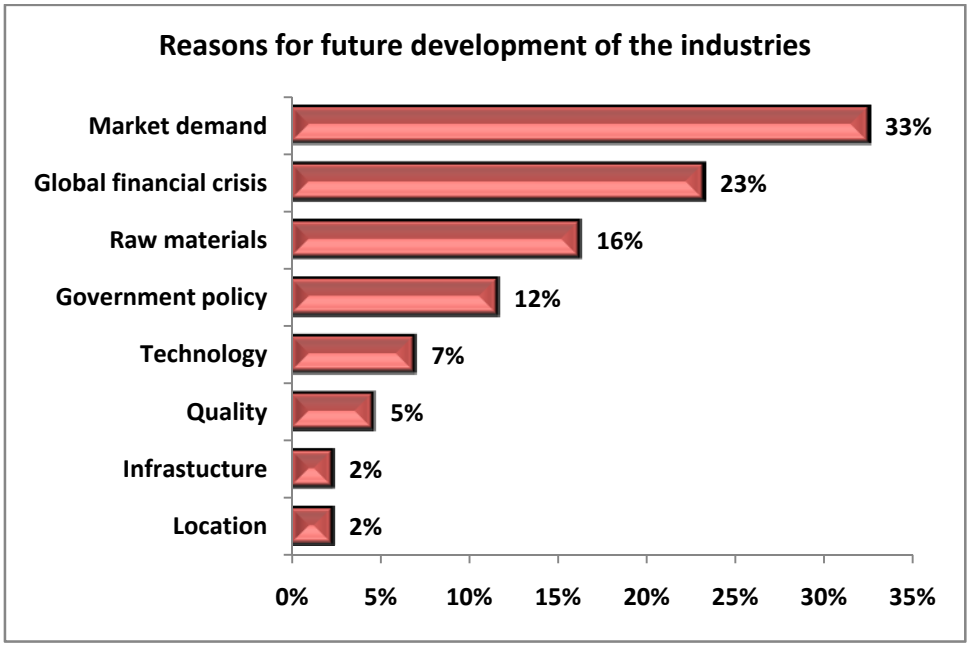
Figure 9 Facts about better investment environment through establishment of SEZ/IZ



7.2 Reasons for future development of the industry

The most important reason is the promising market demand. Most businesses are hopeful about the positive political development in Myanmar by 2010. The impact of the global financial crisis is considered an influential factor that will affect businesses to some extent.

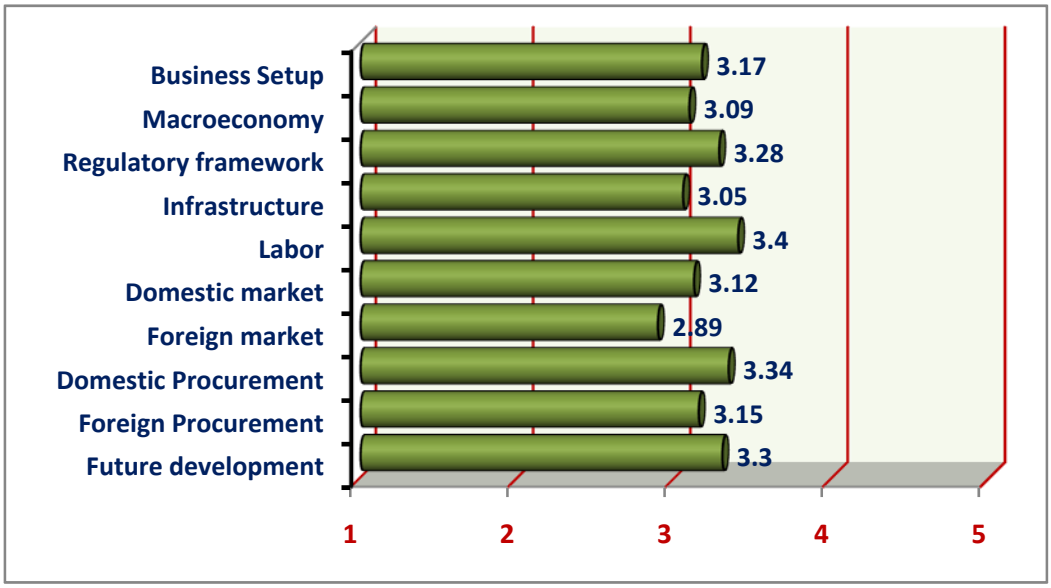
Figure 10 Reasons for future development of the industry



8. Evaluation and Cost-Benefit Analysis

8.1 Evaluation of the survey findings

Figure 11 Evaluation of Overall Investment Climate



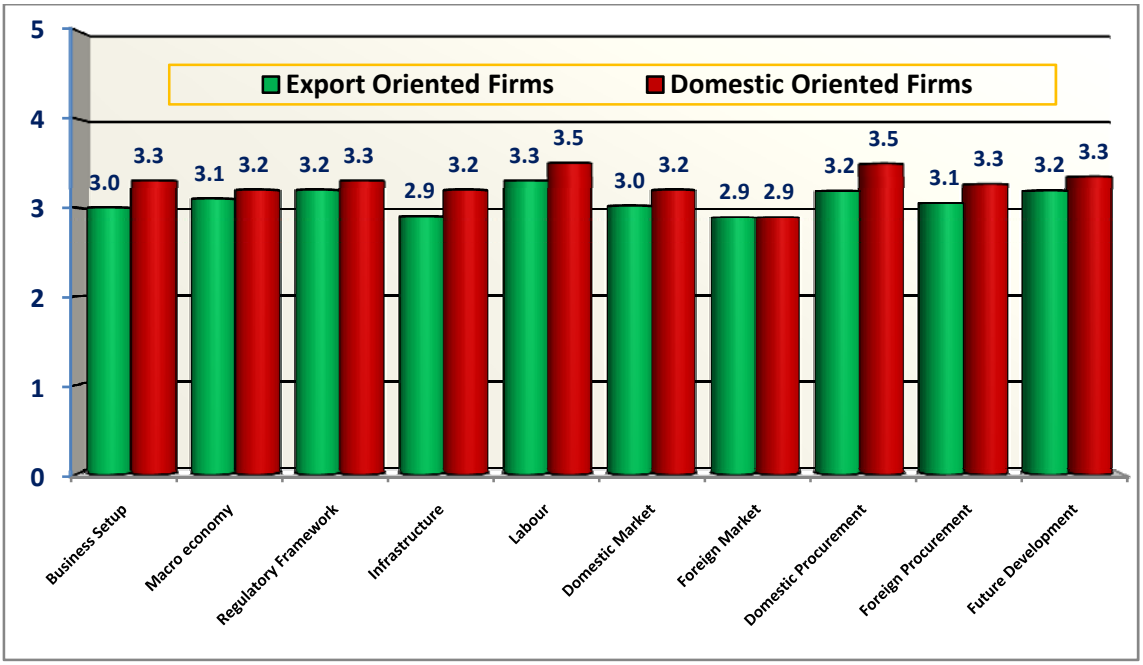
The survey has four main components for assessing the investment environment on a five-point scale. The total scores of the rating are 3.17 for business setup, 3.205 for business operation, 3.125 for logistics and 3.3 for future development of the industries. The future development of industries depends on government's

supportive measures such as tax relief, impartial treatment to all investors, and consistent and effective regulation.

Industries which concentrate on the domestic market have suffered less from the global financial turmoil compared to those concentrating on the export market. Though consumer demand may be on a decline, the firms enjoying large domestic market shares are less likely to go bankrupt.

Figure 8.2 also shows the evaluation rating scale of investment climate by export-oriented firms and domestic market-oriented firms. Despite the lower ratings of export-oriented firms than those of domestic market-oriented firms, the difference is not significant.

Figure 12 Evaluation Rating Scale of Overall Investment Climate by Export and Domestic Oriented Firms



8.2 Cost-benefit analysis

Cost-benefit analysis is made by comparing investment incentives between Thailand and Myanmar. Table 14 clearly shows the tax incentive, ownership and cost of infrastructure. Table 15 compares the wages and salary between the two countries. The wages in Myanmar are three times lower than in Thailand. It also has a favorable economic environment for labour-intensive industries. Table 16 describes the cost comparison and Table 8.4 shows the costs and benefits.

Table 14 Comparison of investment incentives between Thailand and Myanmar

No	Particular	Thailand			Myanmar
		Zone 1	Zone 2	Zone 3	Hlaingtharyar Industrial Zone
1	Corporate income tax/tax exemption	3 years	7 years	8 years	3 years + extension
2	Exemption of import duty on imported machinery and raw materials used in manufacturing	1 year	None	5 years	3 years
3	Export tax	0% (Export Processing Zone)			10%
4	Right to withdraw net profit to abroad				Allowed by Foreign Investment Law 26
5	Right of foreign ownership	100%			100%
6	Period of lease to foreign company	30 years renewable			30 years
7	Annual land rental	$71/square meter (General Industrial zone)			$3/square meter
8	Initial Capital (Capital Investment)	10 Million Bt ($285,714)			Industrial: $ 500,000, Service: $ 300,000
9	Monthly electricity charges			Double deduction (10 yrs from the date of first sales)	$ 0.8/kilowatt
10	Monthly water charges			ouble deduction (10 yrs from the date of first sales)	$ 0.88/cubit meter, $ 4/1000 gallon
11	Industrial development cost				Kyat 1.5 million/acre
12	Monthly maintenance fee				$20/acre

Table 15 Comparison of wages between Myanmar and Thailand

No	Average wages	Thailand (Baht)		Myanmar* (Kyat)
		Migrant	Local	
1	Worker	4,500 ($128.57) (industry)	6,420 ($183.43) (manufacturing)	45,183 ($45.18)
2	Middle management	47,994 ($1371.26) (Office manager)		138,276 ($138.28)
3	Engineer	26,051 ($744.31)		139,079 ($139.08)

Source: *Investment Climate Survey in Myanmar ; ANU E press and Asia Pacific Press 2007, National Statistical Office, Thailand ,first quarter, 2005

Table 16 Cost Comparison between Myanmar and Thailand

No	Factor	Thailand	Myanmar
1	Labor cost	High	Low
2	Land price	High	Low
3	Finance/Loan	Available	Unavailable
4	Infrastructure	Good	Poor
5	Services	OSS available	Limited OSS
6	Logistics cost	Low	High
7	Operating cost	Low	High
8	Set up cost	Low	High

Table 17 Cost and benefit analysis of relocating industry to Myanmar

NO	COST	BENEFIT
1	Cost for permission for doing business	Raw material availability
2	Set up/ relocation cost	Water availability and quality
3	Service link cost (communication)	Cheap labor wages
4	Infrastructure development cost	Availability of workers
5	Logistics (transportation)	Land and building available
6	Training cost	Market size of over 50 million population
7	Export tax	Geographical location, access to huge markets
8		Governance, security
9		Special privileges within ASEAN, China

9. Link with economic corridors

9.1 Link with East-West Economic Corridor (EWEC)

The Greater Mekong Sub-region (GMS) develops its plans of economic corridors and Myanmar plays a decisive role in the successful completion of the East-West Economic Corridor (EWEC). EWEC is a connection route between DaNang in Vietnam on the eastern end and Mawlamyaing in Myanmar on the western end. It is the only land link that connects the Indian Ocean to the Pacific.

The main objective of EWEC is to develop a highly efficient transport system. This will allow goods and people to move around the GMS without significant impediment of excessive cost or delay. Improvement in the transportation network plays a key role in promoting economic growth and regional development.

9.2 Link with South-West Economic corridor (SWEC)

The South-West Economic Corridor (SWEC) links Ho Chi Min City in Vietnam, Phnom Penh in Cambodia, Bangkok in Thailand and Myanmar via the Myanmar-Thai border. There are two ways to link Myanmar. One is through the Pharyar thonzu or the three-pagoda pass and the other is through the Dawei route. A plan to turn Dawei into a sea gateway to Southeast Asia will shorten the long sea route round the tip of the Malaysia peninsula.

Myanmar and Thailand signed a memorandum of understanding on the development of a deep seaport in Dawei. The two countries would jointly develop the deep

seaport and build a 130-kilometre road stretching from the Dawei deep seaport to the Myanmar-Thai border.

In Myanmar's view, the objective for developing the Dawei deep seaport is to promote trade, investment, tourism, fishery, mining, natural gas and other industries by launching an integrated regional development programme. From the business aspect, the industries in Myanmar are hoped to enjoy the benefits of these economic corridors and facilitate the industrial linkages among industries in Myanmar and other regional industries.

10. Recommended industries

Recommended to invest in Myanmar are resource-based industries to link up regional production networks. Among these industries are the following:

a) **Cold storage and processing** - Myanmar's marine product exports in 2007 totaled US$550 million. There are 116 cold storage and processing factories in Myanmar that consist of 77 factories in Yangon,13 in Tanintharyi, 4 in Ayeyarwaddy, 14 in Rakhine,7 in Mon and 1 in Shan State. Up to December 2008, only about US$350 million had been earned from the export of 180,000 MT of fisheries products.

b) **Processing of fish products** – Out of the total marine exports, Myanmar's fish product exports in 2007 were worth US$240 million. Apart from the cold storage and processing plants, fish paste and fish sauce products should be produced in accordance with international standard.

c) **Battery factory** - Myanmar's battery requirement and market demand are high. The country imports $20 million worth of battery products a year and exports a few of its imported and locally made battery products to India and Bangladesh. It has also been manufacturing and locally distributing lead acid automobile battery, industrial stand-by battery and other specialized battery.

d) **Rubber-based industries** - Myanmar produces car tires and car accessories. It exported more than 60,000 tons of raw rubber (US$120 million) in 2008. Rubber cultivation has grown in Mon State and Taninthayi Division for years. These days, neighbouring countries use Myanmar's raw rubber to produce finished goods.

e) **Agro-based products processing industries** - Myanmar produces plenty of food crops such as onion, garlic, turmeric, potatoes and chili. Fruits like mango, banana, citrus, pears, durin, mangosteen, pineapple and runbutan are also abundant. These are exported as natural and fresh fruits to neigbouring countries. Tropical and temperate vegetables are also grown in Myanmar. Agro-based products can be made into processed food such as sauce, ketchup, onion powder, fruit juice and snack food. At present, Myanmar imports these products from neighbouring countries. The seasonal output of tree crops, fruits and vegetables is unprofitable at times due to over production.

f) **Metal-based industries**- The main attraction for foreign investors to invest in Myanmar is its abundant mineral resources. Myanmar has considerable supply of copper, gold, lead, iron, zinc, silver, tin, chronium and nickel. In terms of mineral potential, Myanmar ranks high among countries in Asia and there are

foreign mining companies engaged in the exploration of copper, gold and other base metals. Cable, wire, iron casting and machinery parts using mineral raw materials can be produced.

11. Policy recommendations

The main objective of the investment climate survey is to provide the key points of policy recommendations for improving the investment environment in Myanmar and for facilitating its integration with regional production networks. Myanmar as an LDC will enjoy the benefits of industrialization from an integrated regional economy. The following focus areas and suggested solutions are being offered as policy recommendations for improving the investment environment of Myanmar.

a) Consistency

Changes in regulations have reduced the investment opportunity. By collaborating with the business community in planning and by adopting a basic law, the government can provide investors with a consistent law which may help raise investor confidence.

b) Regulation

A lengthy documentation process restrains business activities to be carried out on time. It acts a significant disincentive to inventors. Relaxing certain rules but still adopting appropriate standard laws and procedures will help investors enjoy the efficiency and flexibility of the investment process as an advantage for market competition.

c) Information

Because information on rules and procedure is not well circulated, investors have difficulty accessing information. If information is transparent and provided on time, more opportunities can be opened up for investors in making investment decisions.

d) Fair tax policy

In terms of taxation, some businesses are taxed low regardless of the huge profit they make. The opportunities rate of taxation applied to business is essential and it will lead to increases in budget allocation for the public sector and help the government expand the priority sectors.

e) IPR and protection

Protection and promotion of intellectual property right (IPR) through an effective legal system is essential. Protecting IPR could lead to more innovations and lessen IPR violations. By encouraging the establishment of research and development centers, there will be more environment-friendly products acceptable under international standards.

f) Reliable infrastructure

Institutional cooperation is needed for infrastructure development to reduce production cost and improve productivity. Moreover, by improving infrastructure through the development of economic corridors, resources would be utilized rationally for the welfare of the region.

Figure 11.1 Policy recommendations and solutions

Chapter 9

Investment Climate under Economic Integration in Vietnam

Case Studies in Danang and Ho Chi Minh City

Dinh Hien Minh[1]

Abstract

This paper is about the role of the investment climate in Viet Nam to plug its industries into the regional production network. A standard questionnaire were administered to firms in Danang and Ho Chi Minh City. Findings from the survey are as follows: (1) *All the five sectors such as physical infrastructure, institutions, human resources, logistics and development of IZs/SEZs related to business setup and business operation are of fair status. Among them investment incentives have the lowest average where business set up has the highest score.(2) Physical infrastructure is a major concern, specifically electricity and land/road transportation.(3)Quality of governance, policy formulation and implementation, quality of government services and quality of legal systems still remain low. (4) Easiness of recruitment of workers and labor costs as well as employee retention are considered business challenges. (5) procedures for import of raw materials/ parts and components, custom clearance, tariff barrier; non-tariff barrier, drawbacks of import duty and value added tax, trade regulation, and foreign exchange regulation are still a concern of enterprises. All this shows that Viet Nam still has a lot to accomplish if it is to achieve its goal of plugging its industries into the regional production network.*

[1] Dinh Hien Minh is Deputy Director of Dept for Macroeconomic Policy & Integration Studies
Central Institute for Economic Management

INTRODUCTION

This investment climate survey in Danang City and Ho Chi Minh City (HCMC) aims to determine the bottlenecks to investment with the focus on East-West Economic Corridor (EWEC) and industrial zones (IZs), since they are instrumental in attracting foreign direct investment (FDI) and setting up production networks in East Asia. Local small and medium enterprises (SMEs) may become suppliers to foreign firms, if industrial clusters are developed in Vietnam. The study concludes with policy recommendations for the local governments, as well as for the central government: (1) to utilize effectively EWEC and IZs to attract industries (2) to develop industrial clusters; (3) to participate in production networks in East Asia.

This paper is organized as follows. Section 2 discusses the conduct of an investment climate survey in Danang City and HCMC. Section 3 presents the survey findings and overall evaluation. It also examines some of the findings relating to certain issues about industrial cluster policy. Section 4 concludes the paper by proposing policy implications to improve investment climate in Vietnam in order to plug its industries into the regional production network.

1. CONDUCT AND RESULT OF INVESTMENT CLIMATE SURVEY

The survey investigated business environment for manufacturing industry. The research team has conducted the survey of 65 firms in Viet Nam engaged in international businesses. Foreign investment firms and local firms located inside industrial zones were given priority while the respondents consisted of high-ranking managers. The survey areas were carried out in two cities that had extensively benefited from the EWEC, namely, Danang City in the central area and HCMC in the southern part of the country. In the

survey, a five-scale rating was used in the questionnaire: 1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good and 5 = Excellent.

In Danang City, 30 firms were covered by the survey. Of these, 16 firms belonged to the garments/leather/footwear industry. The rest were in mechanics, electronics, and electrical equipment production. Most of the firms were small and medium-sized. A total of 19 firms were based in industrial zones and 13 were FDI enterprises.

In HCMC, 35 firms participated in the survey. Of these, 14 firms were in garments/leather/footwear industry; three in aqua processing industry; three in food (other than aqua products) processing; two in pharmaceutical industry; two in wood processing; and others in mechanics, electronics and electrical equipment production. Seventeen out of 35 firms were FDI enterprises; 10 firms were located in IZs and export processing zones (EPZs).

The surveyed enterprises evaluate business environment related to physical infrastructure, institutions, human resources, logistics, IZs/EPZs/ special economic zones (SEZs).

1.1. Physical Infrastructure

In HCMC and Danang City physical infrastructure have been much invested and improved over time. Recent economic development of both cities remains still required a huge investment. Physical infrastructure is still not comprehensive to meet that demand of economic development and its usage is costly. It is one of reasons to lead Vietnamese goods to become more expensive to compete with other countries. This fact can be recognized from the survey. Almost respondents in Danang were concerned about electricity, transportation and gas/fuel supply. These obtained an average score of 3.10, 3.13 and 3.24, respectively. Those businesses in HCMC cited water supply, industrial estates, and gas/fuel supply, with an average score of 3.03, 3.06, and 3.23, respectively. Of the respondents in Danang City, 23 percent said electricity supply and transportation system are either poor or very poor while 23 percent of those in HCMC considered water supply poor or very poor.

Relating to electricity, businesses, especially businesses in Danang City complaint about the regular electricity cutoff, especially cutoff without early notification. And sometimes, the cutoff lasted too long and hugely affected their production. Moreover, some enterprises also complains about the price of electricity is little high, and push the production cost increased slightly.

Enterprises in HCMC complain about the lack of water supply and poor quality of water supply due to the monopoly in water supply. Not only was water supply of inadequacy and of poor quality, water waste system in the industrial estates was also very out-of-date. The infrastructure in industrial zones is not comprehensive as what the developers promised when the enterprises established their production facilities

Accommodations for foreigners are the biggest concerns of businesses, both in HCMC and in Danang City. The average score, 3.06, is slightly higher than the average score of 3.

Table 1: Infrastructures: Average Rating by City*

Indicators	**Vietnam**	**Danang**	**HCMC**
Electricity	3.54	3.10	3.91
Water	3.32	3.64	3.03
Gas/Fuel	3.23	3.24	3.23
Transportation	3.32	3.13	3.49
Telecommunication	3.46	3.57	3.37
Industrial estates	3.19	3.35	3.06
Accommodation for foreigners	3.06	3.05	3.08

*Note: * Investment climate survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

In both HCMC and Danang City, businesses are dissatisfied with the current state of the land transportation system in terms of cost, efficiency and reliability, compared to other transportation modes such as sea/river and air. They assessed these three factors at average scores of 2.87, 2.98 and 3.07, respectively. It's not surprised that land

transportation is a major problem for businesses in HCMC, where traffic jams are frequent objects of complaint in Ho Chi Minh

Businesses in Danang City and HCMC were generally satisfied with the cost, efficiency and reliability of telecommunications. These were rated 3.28, 3.30 and 3.33, respectively, which are higher than average score of 3.

Table 2: Cost Competitiveness, Efficiency and Reliability of Transportation and Communications Average Rating by City*

Condition of Transportation and Communications Cost Average Rating			
	Total	***Danang***	***HCMC***
Land transport	2.87	3.05	2.75
Sea / River transport	3.12	3.17	3.09
Air transport	3.10	3.08	3.11
Communications	3.28	3.35	3.24
Condition of Transportation and Communication Efficiency Average Rating			
	Total	**Danang**	**HCMC**
Land transport	2.98	3.15	2.84
Sea / River transport	3.28	3.30	3.26
Air transport	3.34	3.33	3.34
Communication	3.30	3.37	3.24
Condition of Transportation and Communication Reliability Average Rating			
	Total	***Danang***	***HCMC***
Land transport	3.07	3.21	2.94
Sea / River transport	3.41	3.43	3.38
Air transport	3.56	3.72	3.44
Communications	3.33	3.41	3.27

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

2.2. Institutions

In general, firms do not have any problem with *setting up a business*. However, businesses rated two indicators - collecting information on business environment, which is necessary to make an objective decision on investment; and investment regulations - rather low compared with other indicators, namely, collecting information on the regulatory framework and legal procedures for setting up businesses; obtaining licenses

and permits; and effectiveness of one-stop service. Businesses in HCMC also rated the collection of information on regulatory frameworks and legal procedure low. This is reflected in the proportion of firms who rated such indicators either difficult or very difficult. For example, more than 15 percent of the respondents in HCMC felt that collecting information on the regulatory framework and legal procedures for setting up the business was fairly difficult; 14 percent agreed that obtaining licenses and permits was not smooth.

Table 3. Business Setup Average Rating by City *

Indicators	***Total***	***Danang***	***HCMC***
Collecting information on the business environment – information necessary to make an objective decision on investment	3.35	3.30	3.39
Collecting information on the regulatory framework and legal procedures for setting up the business	3.63	3.93	3.39
Obtaining licenses and permits	4.13	4.27	4.00
Effectiveness of one-stop service (if any)	3.61	3.46	3.75
Investment regulation	3.37	3.40	3.33

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

On average, businesses rated *macroeconomic issues* at a little bit higher than the average score of 3. This is due to low ratings of two indicators: macroeconomic issues and corruption. In fact, currently high inflation and the likelihood of an economic downturn in Viet Nam make enterprises worried about the macroeconomic stability, based on an average score of 2.94. Twenty percent and 17 percent of the firms in HCMC and Danang City, respectively, considered the macro economy unstable. Corruption is also a serious problem, especially in HCMC, where 19 percent of enterprises considered it either serious or very serious .

Although the other indicators such as governance, quality of policy formulation and implementation, quality of government services and quality of legal systems have the average score higher than average score of 3, the rate is not high, i.e. the proportion of those who consider such indicators are good and very good is low.

In general, the proportion of respondents in HCMC suggested that the current macro economy is not so good for their businesses is just a little higher than that in Danang City. Hence the lower-than-average scores among businesses in HCMC.

Table 4: Macroeconomic Issues
Average Score by City*

Indicators	***Viet Nam***	***Danang***	***HCMC***
Macroeconomic stability (low inflation, stable exchange rate)	2.94	2.90	2.97
Governance: Crime, theft and disorder	3.45	3.43	3.46
Quality of policy formulation and implementation	3.31	3.30	3.31
Quality of government services	3.16	3.17	3.15
Quality of the legal system	3.25	3.33	3.17
Corruption	2.93	3.03	2.84

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Businesses seem to be just satisfied with the *current regulatory framework* of Viet Nam. All the indicators rated higher than the average score of 3. However, the average score for the regulatory frameworks obtained from the survey is slightly higher than 3. That means the country needs to do more to improve its regulatory frameworks.

The biggest concerns of businesses, according to respondents, are tax rates, land regulation and intellectual property rights (IPR) protection. According to businesses, tax policy change fast and unpredictable, not follow the initial commitment at the time, when they set up their business. Moreover, there is some kind of tax such as tax imposing on the inputs to produce sample is irrational. While they have submitted tax on time, the tax offices are slow to repay their tax return/rebate. A tenth of enterprises in Danang City and

9 percent of those in HCMC said IPR protection is not good enough. Therefore, they are hesitant to put new products into the domestic market. Regarding to land regulation, in Danang City, where the industry have not developed strongly as in HCMC and where there are still amble land for industry development, firms don't view land regulation is a big problem for them, while firms in HCMC felt that land regulation is not good and fast changing.

Table 5: Regulatory Frameworks - Average Rating by City*

Indicators	***Viet Nam***	***Danang***	***HCMC***
Business licensing and operating permits	3.42	3.62	3.26
Tax rates	3.23	3.27	3.20
Tax administration	3.28	3.30	3.26
Labor regulation	3.25	3.27	3.23
Land regulation	3.17	3.20	3.14
Finance regulation	3.28	3.30	3.26
Intellectual property right (IPR) protection	3.10	3.17	3.03

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Businesses are not satisfied with *current investment incentives*, which score low. Subsidies only rated 2.86 and access to low cost financing 2.89. Other indicators such as rent-free or subsidized land; exemption from trade restrictions; exemption from remittance restrictions, exemption from foreign ownership restrictions; prioritized supply of utility services such as electricity, telecommunication scored around 3, which is slightly higher than average score of 3.

Table 6: Investment Incentives - Average Rating by City*

Indicators	*Total*	*Danang*	*HCMC*
Tax incentive (e.g. tax holiday)	3.29	3.30	3.29
Subsidies	2.86	2.85	2.88
Rent-free or subsidized land	3.02	3.04	3.00
Access to low-cost financing	2.89	2.86	2.93
Exemption from trade restrictions	3.00	2.96	3.03
Exemption from remittance restrictions	3.09	3.14	3.06
Exemption from foreign ownership restrictions	3.11	3.10	3.13
Prioritized supply of utility services	2.97	3.00	2.94

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

2.3. Human Resources

Among the labor-related indicators, employee retention (frequency of movement of workers in and out of a company) is the biggest issue confronting businesses in both HCMC and Danang City, which scored it an average of 2.87 and 2.89, respectively.

Easiness of labor recruitment and labor costs are also considered major challenges for businesses. Businesses in HCMC and Danang City considered easiness of recruitment of workers as their second biggest problem, giving it an average score of 2.86 and 3.13, respectively. A fourth of firms in Ho Chi Minh claimed recruitment of labor is either difficult or very difficult.

Businesses scored “labor cost” low, averaging 3.13 in Danang and 3.15 in HCMC, but most of them considered labor cost fair.

Quality of workers is the third biggest issue facing businesses in HCMC, with an average score of 3.11. But like their counterparts in Danang City, they are satisfied with the quality of middle management and engineering in their businesses. On average, the score for quality of middle management and engineers in HCMC are 3.50 and 3.39, respectively, while the corresponding figures in Danang City are 3.40 and 3.41,

respectively. More than 40 percent of businesses perceived quality of middle management and quality of engineers as either good or excellent.

Table 7: Quality of Labor - Average Rating by City*

Indicators	***Viet Nam***	***Danang***	***HCMC***
Quality of workers	3.18	3.27	3.11
Quality of middle management	3.45	3.40	3.50
Quality of engineers	3.40	3.41	3.39
Labor cost	3.14	3.13	3.15
Easiness of recruitment of workers	2.98	3.13	2.86
Labor turnover	2.88	2.87	2.89

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
(1 = Very Poor, 2 = Poor, 3 = Fair, 4 = Good, 5 = Excellent)
Source Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Most middle managers and engineers have higher degree of education, while most workers only have certificates of secondary school. Hence the respondents' satisfaction with the quality of middle management and engineers in their businesses.

In Danang City, about 68 percent of workers have at least finished high school. Of these, 20 percent have vocational training. In HCMC, the proportion of workers with at least high school education is only 52 percent. Of which only 11 percent graduated from vocational school. In general, the proportion of workers with vocational education is only 12.5 percent while those with only elementary and secondary education is quite high, at 38.7 percent.

In Danang City, the proportion of middle managers with at least vocational training is very high, at about 90 percent. Of which, more than half (60 percent) have college or university education. In HCMC, nearly 30 percent of middle managers either have no vocational training or college or university degrees. This figure is much higher compared with that in Danang City. In general, in both cities nearly 20 percent of middle managers have only either secondary or high school degree. Engineers may have only vocational school or college/university (BA) or graduate (MA/PhD) degrees.

Table 8: Educational Background of your Workers, Middle Management and Engineers*

	Worker (%)	Middle management (%)	Engineer (%)
Viet Nam			
No formal schooling			
Elementary school	6.6		
Middle-high school	32.1	3.7	
High school	42.6	15.6	
Technical/vocational school	15.2	24.7	32.69
College/university (BA)	3.5	56	43.94
Graduate school (MA/PhD)			23.37
	100.0	**100.0**	**100.0**
Danang City			
No formal schooling			
Elementary school	2.0		
Middle high school	26.5	1.0	
High school	47.5	9.0	
Technical/vocational school	20.0	30.0	30.2
College/university (BA)	4.0	60.0	47.4
Graduate school (MA/PhD)			22.4
	100.0	**100.0**	**100.0**
HCMC			
No formal schooling			
Elementary school	11.0	0.1	
Middle high school	37.0	6.0	
High school	38.0	21.4	
Technical/vocational school	11.0	20.4	35.2
College/university (BA)	3.0	52.2	40.5
Graduate school (MA/PhD)			24.3
	100.0	**100.0**	**100.0**

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Although in general, the educational level of workers and middle managers in HCMC is lower than that in Danang City, the *average monthly salary* per laborer in HCMC (VND 3.587 million/month) is much higher than that in Danang City (VND 1.623 million/month).

The *turnover rate* in Ho Chi Minh seems higher than in Danang. Enterprises in Ho Chi Minh have suffered a turnover rate of 4.85 percent compared to 3.83 percent in Danang. In overall, the turnover rate of enterprises who participated in the survey is 4.38 percent.

2.4 Logistics

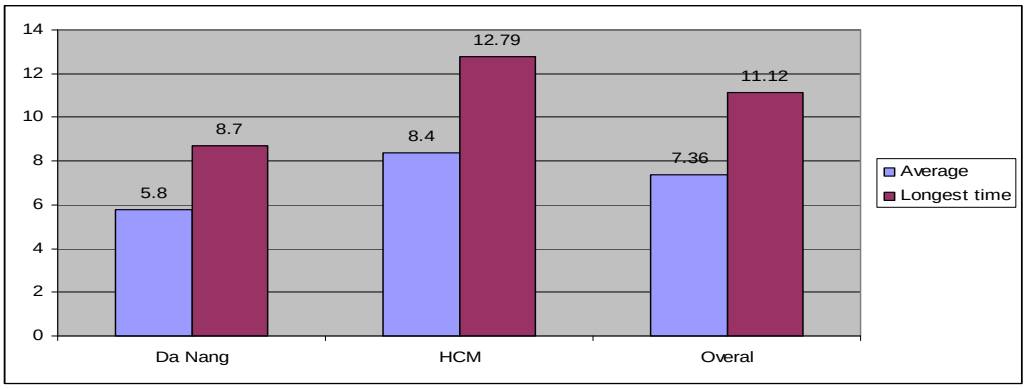
In Danang City, 23 of 30 enterprises have *export activities*. Only 9 percent of enterprises, which participated in exports, have exported goods to ASEAN. In HCMC, 33 of 35 enterprises have export activities. Only 30 percent of enterprises said that they exported their products to ASEAN countries. Therefore, EU and US are two major markets for exports of firms in HCMC and in Danang City. Only 21 percent of firms participated in the survey exports their products to ASEAN countries.

Regarding *import activities*, only 2 firms in Danang City do not import anything for production. 71 percent of enterprises admit that they import something from China. Only 11 percent of enterprises import something from ASEAN. 30 of 35 enterprises in HCMC import something for production. The import markets seem more diversified than in Danang City. But, China is still the most important suppliers for HCMC, about 43 percent of enterprises import something from China. Interestingly, in HCNC more than one third of enterprises import from ASEAN. In general, more than 57 percent of enterprises participated in the survey imported goods from China, 37 percent imported from ASEAN.

Sea transportation is the mode of transportation that enterprises in both HCMC and Danang City use for imports as well as for export.

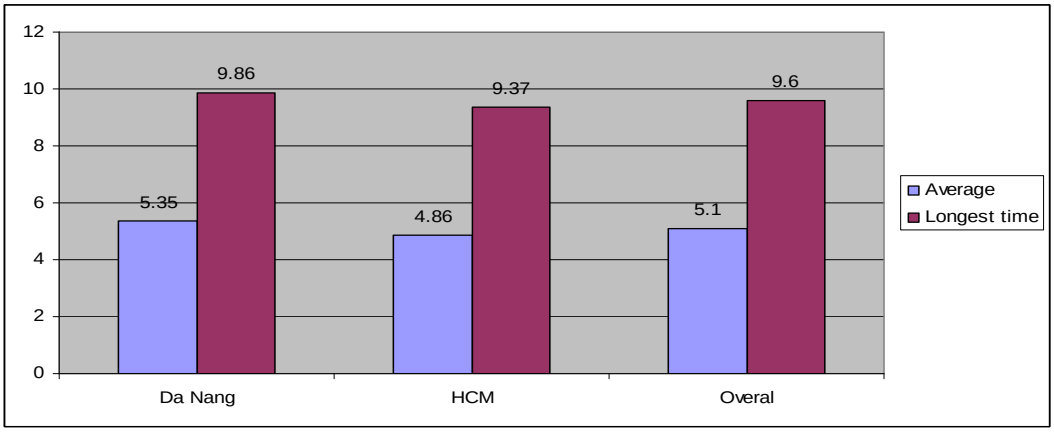
On average, it took 7.36 days to deliver imported goods from the port to the business storage is rather long. Moreover, in HCMC, which have Vietnam's biggest international seaport it took nearly 8 days and a half to truck goods from ports to business facilities. The average days to truck goods from business to port is little bit lower than that for imports. On general, it took more than 5 days to do so. And the average time for goods exporting from HCMC is little bit shorter than in Danang City.

Figure 1: **Time Span on Transportation for Import**



Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Figure 2: Time Span on Transportation for Export



Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

With an underdevelopment of supporting industry, it's not surprised that quality of local based supplier gets the lowest score among indicators relating to *domestic procurement (*collecting information about local suppliers, quality of local supplier base and access to capable international suppliers).

There is a big different between HCMC and Danang City when assessing the *foreign procurement* - including procedures for import of raw materials/ parts and components, custom clearance, tariff barrier; non-tariff barrier, drawbacks of import duty and value added tax, trade regulation, and foreign exchange regulation. While businesses in HCMC assessed these indicators are rather low, businesses in Danang City gave such indicators much higher score. In HCMC businesses rated average score lower than average score of 3 for every indicator, with only two indicators are assessed as little better than average. Therefore, it can be understood that it take longer time to import goods from port to business storage in HCMC.

Table 9: Foreign Procurement: Average Rating by City*

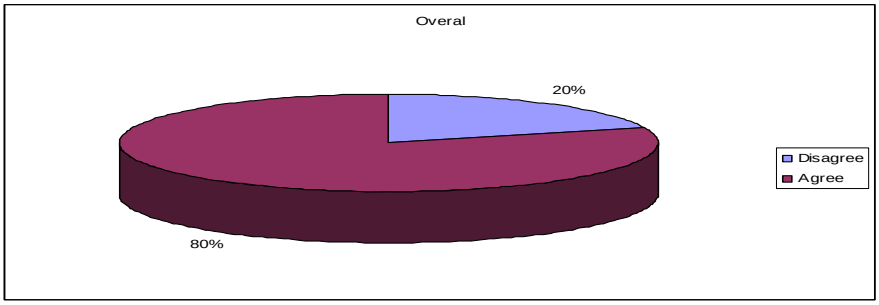
Indicators	***Total***	***Danang City***	***HCMC***
Procedures for import of raw materials/ parts and components	3.25	3.50	3.00
Custom clearance	3.24	3.40	3.09
Tariff barrier	3.11	3.28	2.97
Non-tariff barrier	3.07	3.22	2.97
Drawbacks of import duty and value added tax	3.08	3.28	2.91
Trade regulation	3.11	3.30	2.94
Foreign exchange regulation	3.10	3.17	3.03

*Note: * Investment Climate Survey in Danang and Ho Chi Minh City*
Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

2.5 IZs/ SEZs

Over time in Vietnam IZs/SEZs have been built with relatively good package of investment incentives in order to attract investors to come in. However, it is noted that from the survey, most respondents (eighty percent in both HCMC and in Danang City) agreed that the establishment of IZs/SEZs is necessary to improve the investment environment.

Figure 3: Opinions of the Establishment (or improvement) of IZs/ SEZs will be effective or necessary to improve the investment environment in Vietnam*

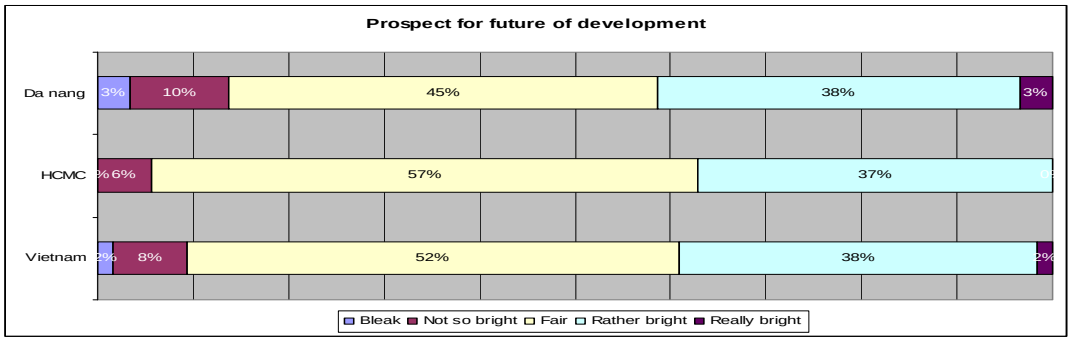


Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

The majority of businesses surveyed in both cities (75 percent in HCMC and 79 percent in Danang) admit that the establishment of IZs/SEZs would result in better infrastructure for the investment environment. In fact, they expected it to be the biggest benefit to emerge from the setting up of SEZs and IZs. Better custom clearance was ranked second in the list of the benefits, followed by one-stop service and faster procedures for starting a business.

On the prospect of future development**,** the average score for HCMC is 3.31, slightly higher than that for Danang City (3.28). Most enterprises at least have positive view on the prospect of future development of their industry (90 percent of enterprises). Enterprises in HCMC seem to be more positive than enterprises in Danang City, and they also are not extreme as business in Danang City.

Figure 4: **The Prospect of Future Development**

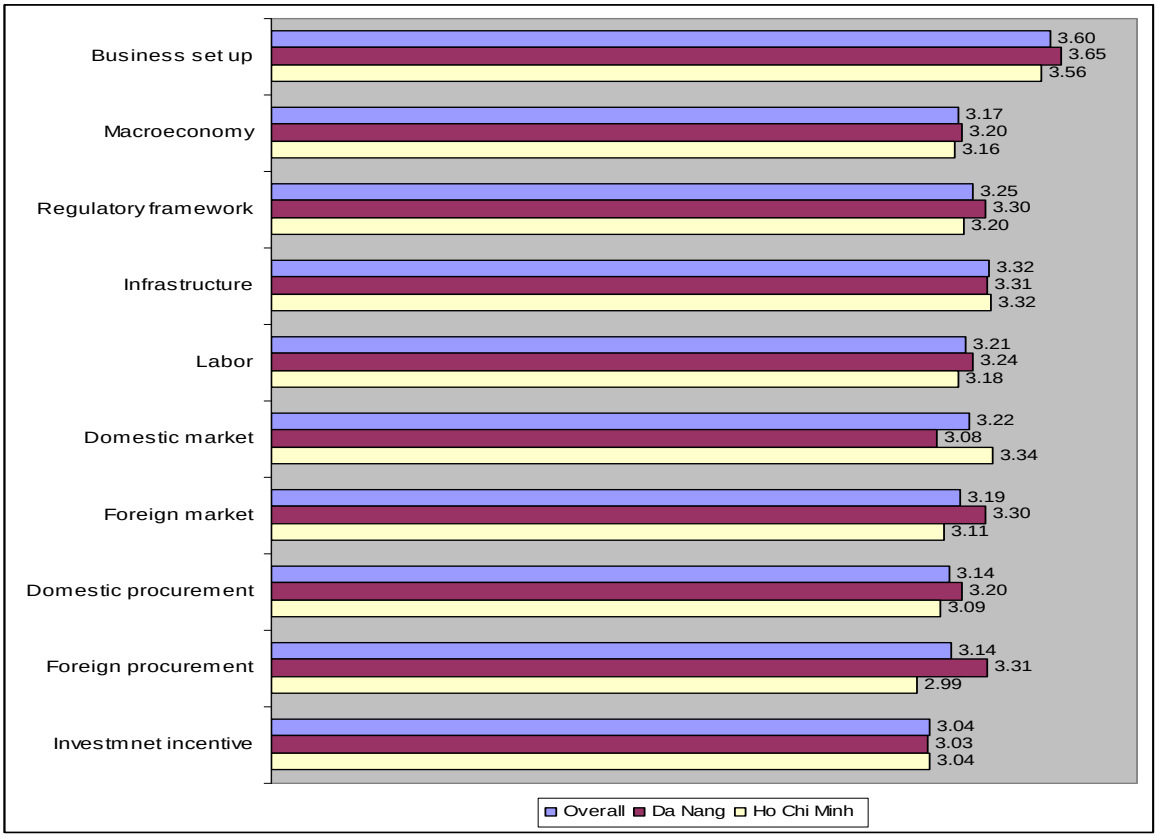


Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

2. MAIN FIDINGS ON HINDRANCES TO INVESTMENT FROM THE SURVEY

The survey has five main parts in order to assess the investment environment by 5 rating scales. All the five sectors such as physical infrastructure, institutions, human resources, logistics and development of IZs/SEZs related to business setup and business operation are of fair status, but almost indicators are around the average score of 3. Among them investment incentives have the lowest average where business set up has the highest score of 3.6.

Figure 5: **Evaluation of The Survey Findings**



Source: Dinh Hien Minh, Trinh Quang Long and Nguyen Minh Thao (2008)

Physical infrastructure is a major concern for the respondents, specifically electricity and land/road transportation. Moreover, road system is not at good quality and international standard, but enterprises feel payment for its usage costly, inefficiently and unreliably. With respect to *institutions* on average, businesses indicate that recently the macro economy in Viet Nam is not stable due to the global economic downturn and corruption still is a serious problem. Quality of governance, policy formulation and implementation, quality of government services and quality of legal systems still remain low. Indicators relating to the current state of regulatory framework in Viet Nam such as tax rates, land regulation and intellectual property rights protection reflect a need to improve .

On *human resources*, easiness of recruitment of workers and labor costs as well as employee retention are considered business challenges. The quality of workers is also a major issue. Monthly average salaries in HCMC are higher than in Danang. This is understandable, since the former is more developed than the latter. The formation of more industrial clusters in Danang should mean higher salaries and therefore better quality of life for the city.

In terms of logistics, the EU and US market are main trading partners of Vietnamese enterprises in terms of export, while china is a main trading partner in terms of imports.. As a result Vietnamese enterprisses depend much on them in terms, if is a shock in these markets. For imports and for export the mode of transportation that enterprises in both HCMC and Danang City use is sea transportation. However, it seem procedures for import of raw materials/ parts and components, custom clearance, tariff barrier; non-tariff barrier, drawbacks of import duty and value added tax, trade regulation, and foreign exchange regulation are worried by enterprises.

Businesses considered the establishment of *IZs/SEZs* very important, because they could bring better infrastructure inside as well as outside IZs.

3. POLICY RECOMMENDATIONS

The main objective of the investment climate survey is to explore the current perception of business on the current situation of investment climate in Vietnam. And, then it aims to determine the bottlenecks to investment and to recommend policy measures to Vietnamese policy makers in order to reach the goal on plugging enterprises into regional production network. To attract Vietnam industries into regional production blocks, service link costs, network set-up costs, and production cost per se must be reduced. Setting up of IZs/ SEZs is effective to attract industries which require better investment environment. Therefore, investment environment in Vietnam should be improved as follows:

a) Infrastructure

In comparison with other groups of indicators related to investment climate in Danang City and HCMC, indicator "infrastructure" is rather better, but a large proportion of businesses share the view that if there is better infrastructure, development of industrial zones would be much better. Therefore, Danang City and HCMC should:

- Develop the land transportation system and it should be given a priority.
- Have deep water port in order to reduce the cost (cut the middle fee when freighting goods to Singapore, Taiwan and Hong Kong to go to the importing countries)
- Develop the domestic logistics system (from transportation, to storage)
- Build more power plants, especially in the central area where there is any big power plant yet. This will reduce the dependence of the area on the power transmitted from the North and South, where the electric shortage is becoming serious.
- Should pay attention to build a system of housing and other social services that serve the recreational activities of workers and their daily life, when developing

industrial zones,. In other words, to make the workers feel home when working in the industrial zone, or in other provinces that are not their origin.

b) Institutional reforms

- Policy making process should be transparent, consistent, and readily enforceable. There is a need to involve business person in the process.
- Regulation regarding land, tax, especially in the period of economic downturn should be more flexible.
- Although much information is available, for example on the internet, business still found it difficult to access. It's due to (i) the way that authority distributes the information are not synchrony with the way businesses people receive information; (ii) sometimes information provided on the internet make businesses more confused; it is not usually clearly explained. Local authorities should have different methods to provide information for businesses. For example, weekly newsletters sent to businesses about regulation updates with clearly explanation about how the new updates will be applied.
- Although the country has an IP law, it's regularly broken. It's partly due to (i) the law is not strict enough to punish those who break the law and (ii) it is implemented effectively; (iii) it's not adequately caught up with the new, fast development of science, technology and business innovation. A new, update, Law with stronger mechanism to deal with IP violation should be issued.

c) Human resource

The process of training and retraining the labor forces should be fasten in order to meet the demand of businesses. Especially skilled labor and professionals need to be trained at international standards to solve the lack of skilled labor and professionals as well as to reduce recruitment of foreign skilled labor and professionals.

d) Logistics

- Procedures for import of raw materials/ parts and components, tariff barrier; non-tariff barrier, trade regulation, and foreign exchange regulation should be clear and transparent.

- Custom clearance should be smoothly and convenient and short in terms of time.
- Drawbacks of import duty and value added tax, should be improved to meet doing business time

e) IZs/SEZs

To attract more investments, the government has considerable work to do. Part of this should be to give businesses a sense of certainty that the investment climate is at least better than average.

REFERENCES

Dinh Hien Minh, Trinh Quang Long, Nguyen Minh Thao. 2008. Firm survey on investment climate in Danang and Ho Chi Minh city.

Chapter 10

SMALL AND MEDIUM ENTERPRISES IN CAMBODIA, LAOS, AND VIETNAM

Shuji Uchikawa

Souknilanh Keola

Abstract

Small and medium enterprises (SMEs) are categorized into four groups: supporting industries, export-oriented industries, domestic market-oriented industries and cottage industries. Supporting industries are defined as having backward linkages with the machinery industry. The creation of such linkages may accelerate industrialization, create more employment, and diversify economic activities.

Apparel and footwear are the main export industries in Cambodia, Laos, and Vietnam (CLV). Domestic market-oriented SMEs and cottage industry SMEs enjoy close linkages with distributors through informal financing. Although it is not easy for domestic market-oriented SMEs to enter supporting industries because they require technology and management skills, some SMEs invest in high-tecnology equipment and improve management methods. Taking a cue from cottage industries that have started exporting, proponents of SME policies can promote such shift and diversification.

Expansion of demand and competition encourages the entry of local SMEs. Policies cannot control demand but facilitate imports of components and capital goods and exports of products. It is important to develop local SMEs to accumulate skill and know-how. There are two possibilities for new entrants. First, domestic-oriented SMEs like replacement parts manufacturers can join supporting industries. Second, employees in existing factories of MNEs can set up their own enterprises to supply components to them. In both cases, there are bottlenecks in low technology, unskilled management and unskilled workers. Strengthening SME finance and training management and workers are can solve these bottlenecks.

Most SMEs in CLV belong to domestic market-oriented and cottage industries. As they are not registered, they are operating illegally. Tax concessions may encourage them to register. Most cottage industries depend on middle persons to procure materials and sell their products. These middle persons play an important role in improving informal financing that benefits households.

Distribution of cottage industries should be modernized. Public organizations can replace middle persons only in marketing promotion in domestic and export markets. Therefore, microfinance and cooperative society should support crafts manufacturers.

INTRODUCTION

Policy framework that sought to foster small and medium enterprises (SMEs) was introduced in Cambodia, Laos, and Vietnam (CLV) from 1990s onwards. These countries shared some things in common. First, although they had foreign direct investments, the linkage between foreign companies and local enterprises were weak. Second, private enterprises could not thrive under a socialist regime. Although state enterprises, foreign companies and private companies, mainly SMEs, were operating, existing economic policies were biased in favour of state enterprises. Private companies could not secure production promises. And while the governments were encouraging registration of SMEs through reduced registration costs, many SMEs were still operating illegally. Third, cottage industries accounted for a large share of SMEs.

Cottage industries are important from the social policy and rural development perspectives, yet manyof them are losing their base as industrialization progresses. Others are increasing exports. This means these industries still have a chance to survive.

Notwithstanding their current state, SMEs are expected to promote industrialization and to generate employment. SMEs have potentiality to become large enterprises. SME policies must encourage the establishment of new manufacturing enterprises, boost the growth of the private sector, and develop market access.

As SMEs refer to size of enterprises, their markets, technology, and financial source are heterogeneous. In this paper, SMEs are classified into four groups and their development examined. Finally, policy recommendations are given at the conclusion of this paper.

1. FOUR CATEGORIES OF SMES

SMEs are categorized into four groups: supporting industries, export-oriented industries, domestic market-oriented industries and cottage industries. They can shift from one category to another in the process of development, or belong to two categories at the same time in the course of diversification. Since they cater to the domestic market, they

can get contracts from multinational enterprises (MNEs). Those in cottage industries start exporting through contracts with foreign buyers.

1.1 **SMEs in Supporting Industries related with Machinery Industry**

Supporting industries are defined as industries with backward linkages with the machinery industry, including electric machinery and transport equipment. They supply parts and components, capital goods such as die and machine tools, and materials like steel and plastics. Although MNEs create employment and facilitate management transfer to employees, their effects are limited without backward linkages. The creation of such linkages accelerates industrialization, creates more employment, and diversifies economic activities.

When MNEs set up assembly factories of final products in developing countries to take advantage of cheap labour, some of them start production from complete knockdown of imported components. Others bring to their host countries their related companies back home as suppliers. As production volume increases and reaches the minimum level where economies of scale work for suppliers, suppliers can start production. In some cases, local replacement parts manufacturers become suppliers to MNEs. In other cases, employees of MNEs establish their own enterprises and subcontract with the MNEs. As a result, MNEs can procure parts and components at lower prices, since they do not have to pay for transportation costs and tariffs.

As supporting industries develop, a cluster of SMEs is formed around the factories of MNEs. SMEs have production linkages with MNEs through a multi-tier supply chain. MNEs occupy the top tier. First-tier suppliers, which mainly consist of large enterprises that include foreign enterprises, supply parts and components to MNEs. Second-tier suppliers, comprising mainly of SMEs, supply parts and components to first-tier suppliers.

Suppliers must meet customer demand at three points: (1) price reduction by some targeted percentage within a certain time span, reflecting efforts to reduce costs; (2) high reliability in quality assurance; and (3) high reliability in keeping up the delivery schedule. The contract is not necessarily rigid and exclusive. Electric machinery and automobile companies produce many models. They change models regularly. Specifications for each part of the new model as well as the price thereof are

determined during development period prior to the model change. Once a supplier receives an order for a part when the commercial production of the new model is launched, his delivery normally continues. There is a tendency for each large enterprise to assign responsibility for the supply of part of a model to a single supplier to avoid duplicate investment. But when the life cycle of a given model ends, there is no guarantee that the concerned supplier can receive an order for the same model part. On the other hand, customers support improvement of production efficiency among suppliers by providing technical assistance like training of suppliers' employees and dispatching engineers to suppliers' factories.

Moreover, learning through constant interactions with a particular customer facilitates skills formation around basic technological capability that suppliers have accumulated. Asanuma defines accumulated learning acquired through transactions as relation-specific skill. The effect can be expected from competitive spot bidding if the transaction is repeated for over a certain period (Asanuma 1989)[1]. Such multi-tier supply system is not formed in all industries. Supply systems on the basis of specializations are selected when the upstream production requires specialized technology (Kimura 2001). Although the multi-tier supply system is typically observed in Japan, a similar system is working in developing countries in Asia.

The linkages between local enterprises and MNEs increase value added in CLV, promote technology transfer to local enterprises, and bring market information to local enterprises. The involvement of local enterprises in international production network promotes industrialization. In some developing countries, many foreign SMEs operate as first- and second-tier suppliers. Foreign SMEs have the same impact on production and employment. Yet, those that are based in developing countries withdraw quickly when they face problems. Lessons from experience, including failure, do not accumulate in their host countries. Japan's experience, for example, shows that SMEs with accumulated skills can change products and customers, thus adjusting themselves to market conditions.

The development of supporting industries may lead to the next stage of industrialization. In this sense, it is important to develop local SMEs to accumulate

[1] Asanuma focuses on the relations between typical LEs that manufacture the final products of automobile and electric machinery industries and their suppliers of parts.

skills and know-how without excluding foreign SMEs. There are two ways to do this. First, domestic market-oriented SMEs like replacement parts manufacturers can join supporting industries. Second, employees in existing factories of MNEs can set up their own enterprises to supply components to them. Both schemes, however, are faced with low technology, unskilled management, and unskilled workers.

1.2 SMEs in export-oriented industries

Labour-intensive industries for exports such as apparel and footwear industries have developed in CLV. As the Multi-Fibre Arrangement (MFA) restricted export quantity from developing countries to the U.S. and European markets, exports from factories in China had been regulated by quota. This encouraged foreign direct investments in CLV from Taiwan and Korea. Apparel manufacturers in CLV could take advantage of cheap labour and utilize export quotas for CLV under the MFA before 2005. Even after the MFA was withdrawn, they maintained exports due to the advantage of generalized system of preferences and quantitative regulations on exports from China based on safeguards by the European Union (EU) and the United States.

In Vietnam, foreign companies as well as local public and private companies set up factories and started exports under contract with foreign buyers. The apparel industry developed rapidly beginning in the 1990s. Cambodia and Laos followed suit. Its apparel industry has promoted industrialization and contributed to employment creation. Most apparel manufactures in CLV depend on buyers from the US and Europe for material, design, and marketing. Foreign buyers procure textiles, distribute them to manufactures, and take inventory risks under a cut-make-trim (CMT) contract. The former extends technical assistance and management guidance to the latter. Manufacturers must meet international standards on quality control. As such, they need to invest in machinery, which only medium- or large-scale enterprises are capable of doing.

Footwear is another product manufactured under contract with foreign buyers. Foreign and local private enterprises are set up and begin exporting, taking advantage of low-wage labour and utilizing the Generalized System of Preferences (GSP). As export manufacturers must invest in machinery to maintain international standards on quality control, they mostly comprise mdieum- or large-scale enterprises.

Although apparel and footwear are main export industries in CLV, their share in SMEs are low. In addition to apparel and footwear, some industries are increasing exports to CLV. In Vietnam, these include the wood products industry.

1.3 SMEs in domestic market-oriented industries

As the economy grows and quality of life improves, demand for daily needs such as food, apparel and household goods may expand as well. SMEs manufacture these products for the growing domestic market. This market does not require international quality standards, so its entry barrier is low. As such, household and small enterprises can enter the market easily.

Although many SMEs have closed down due to luck of funds, their operations are dynamic. Some of them have grown to be come medium and large enterprises. Domestic market-oriented SMEs are characterized by the following:

- Low investment in equipment and low technological level
- Dependence on cheap labour
- Limited access to bank loans and dependence on informal and traditional financial markets
- Close linkages with distributors through informal financing

In some cases, domestic market-oriented SMEs have been affected by trade liberalization due to low competitiveness. In fact, cheap goods from China are flooding the CLV markets. On the other hand, SMEs enjoy close ties with distributors through informal financing. This is the case of the Vietnamese apparel market. While Chinese apparel are selling fast in the northern region, cheap but low-quality apparel produced by SMEs are being sold in the southern region.

1.4 Cottage Industries

CLV's cottage industries make essential items and supplies using traditional production methods. They include food processing, cane and bamboo work, ceramics, lacquer ware, embroidery and textiles. Those SMEs create non-farm employments and raise rural income levels. Rural households in Cambodia and Laos operate handlooms as a sideline to growing rice. Most of them cater to local markets near production sites.

Because the national market is divided into local markets, cottage industries can survive in spite of their low productivity. But as the local economy gets integrated into the national economy and foreign trade through improved transport infrastructure, cottage industries may suffer due to their low productivity, unable to match products made in large factories in the same market. But cottage industries can still develop. One way this can happen is to secure outlets through marketing. This means that SMEs must get accruate market information and meet demand. In many cases, however, middle persons withhold market information like those on design for cottage industry SMEs.

SME policies can support marketing. One possible method of marketing promotion is the "One Village, One Product" movement. As cottage industries have the potential to cater to tourists in CLV and export markets, products made by cottage industries must have value added so they can stand out. Some cottage industry SMEs could get orders from foreign buyers. In fact, Vietnam was able to increase exports of products made in cottage industries in the 2000s (Table 1).

Table 1. Exports of Major Handcrafts **(Million US $)**

	2000	2001	2002	2003
Cane, bamboo and rush works	78.6	93.9	107.9	136.1
Ceramics	108.4	117.1	123.5	135.9
Lacquer ware and handcraft	36.2	34.0	51.0	59.6
Embroidery	50.5	54.7	52.7	60.6
Carpet and textiles	13.9	9.2	5.3	5.1

Source: Idei (2006:161)

Original Source: Tong cuc Thong ke (2005) Tu lieu kinh te-xa hoi 64 tinh and thanh pho Viet Nam (Economic and Social Material of 64 Province and Cities in Vietnam), Ha Noi, NXB Thong ke.

1.5 **Characteristics of SMEs**

Table 2 shows the characteristics of four SME groups. There is a huge technological gap between supporting industry SMEs and domestic market-oriented SMEs even across the same products. In the supporting industry, suppliers are required to supply parts and components with consistent quality and on schedule. But many local SMEs do not have quality control and production capability to meet buyers' requirements.

Table 2. Characteristics of Four SME Groups

Category	Main player	Main Customer	Technology	Possibility of backward linkage
Supporting industry	Foreign SMEs Local SMEs	MNEs	High	High
Export-oriented	Foreign SMEs Local SMEs	Foreign buyers	High	Low
Domestic market-oriented	Local SMEs	Domestic market	Low	Low
Cottage industry	Local SMEs	Local market	Low	Nil

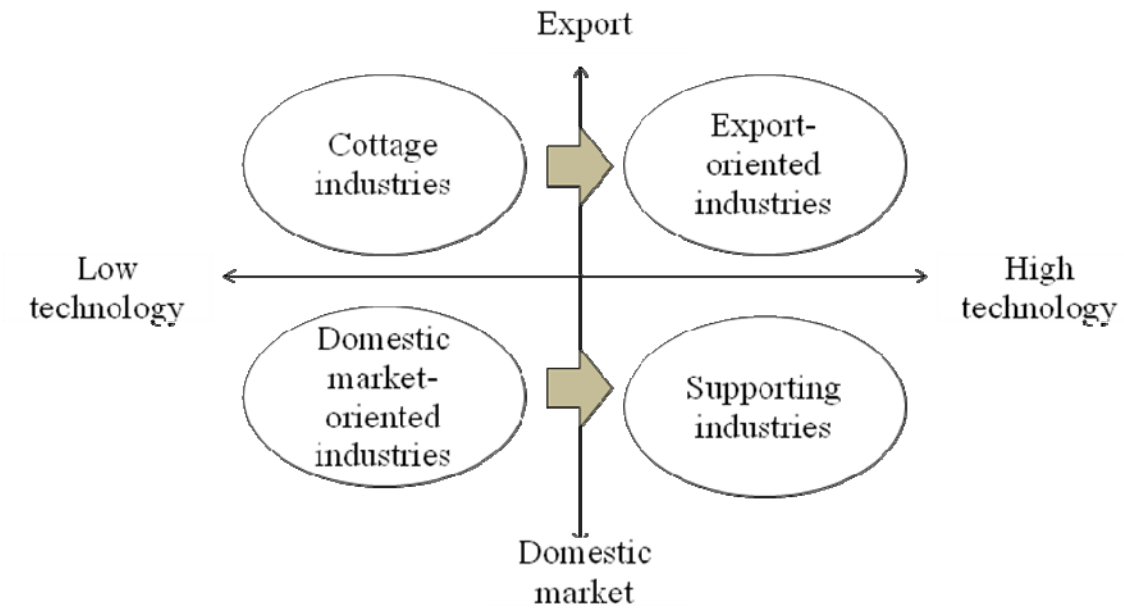
The Vietnamese motorcycle industry is an exception, though. Some SMEs catering to the domestic market have grown and are currently supplying parts to large enterprises as suppliers. By the late 1990s, three Japanese and one Taiwanese MNEs had set up assembly factories for motorcycles. A crucial turning point was the inflow of cheap knocked-down components from China in 2000 and 2001. Many local assembly factories were established to avoid import prohibitions on assembled vehicles. Prices of motorcycles made of cheap and low-quality imported components were one-fourth to one third those made by Japanese MNEs. These motorcycles have been able to penetrate medium- and low-income consumer markets in urban and rural areas that have remained unexploited by Japanese and Taiwanese enterprises.

A remarkable market expansion created by the entry of Chinese *[pls. check as edited]* components caused structural change in the industry structure. A Japanese MNE launched a new cheap model to compete with products made of imported components. It hiked procurement from local first-tier suppliers to reduce production costs. Soon the model became popular among local consumers. In January 2001, the Vietnamese government began more strictly implementing selective import tariffs for components with the right local content ratios. These encouraged Japanese and Taiwanese first-tier suppliers to replace imported components with locally sourced ones. They aslo replaced components sourced from Japanese second-tier suppliers with components from Taiwanese or Vietnamese second-tier suppliers. The majority of second-tier local suppliers were SMEs located near the first-tier suppliers. Some of them were originally manufacturers of replacement parts (Fujita 2008b). This was a rare but welcome

development for the domestic market-oriented SMEs. Without structural change in the domestic market, SMEs would not have the incentive to change their business style dramatically.

Although it is not easy for SMEs to enter supporting industries because they do not have the required technology and management skills, some domestic market-roiented SMEs are investing in equipment to introduce high technology and improve management methods. Cottage industries have started exporting. SME policies can promote such shift and diversification. (Figure 1 shows the direction of development and diversification.)

Figure 1 Relation of Four SME Group



2. SMES IN VIETNAM

2.1 Policy Framework

The SME policy framework came about gradually. The Enterprise Law that came into effect on 1 January 2000 abolished many licences and simplified enterprise establishments. As a result, the number of newly registered enterprises from 2000 to 2004 grew 3.5 times higher than the last nine years.

The central government Decree 90/2001/ND-CP, issued on 23rd November 2001, defines SMEs as "independent production and business establishments which make business registration according to the current law provisions, each with registered capital not exceeding 10 billion dongs or annual labour not exceeding 300 people." SMEs with less than 300 employee made up almost 100 per cent of all business establishments and over 77 per cent of all non-agriculture labour force in 2002. The decree covers the direction of SME policies such as SME finance, guarantee fund for SMEs, construction of industrial park for SME, among others. The Agency for SME Development was set up under the Ministry of Planning and Investment in 2003.

The New Enterprise Law and Investment Law came into effect on 1 July 2006. Foreign and domestic investments had been governed by two separate laws: the Law on Foreign Investment in Vietnam and the Law on Domestic Investments. As part of Vietnam's efforts to meet the criteria for accession to the World Trade Organization, the principles relating to investment by foreign and domestic investors were unified in the new law. The New Enterprise Law is also intended to apply equally to domestic and foreign enterprises. The establishment of legal frameworks improved business environment and encouraged the entry of new businesses into the private sector and inflow of foreign direct investment.

The SME Development Five-Year Plan 2006-2010 was published in 2006. The plan assessed the development of SMEs in Vietnam and pointed out their weak points: (1) lack of skills, (2) lack of information on input markets, (3) limitation of market access, (4) low technology, and (5) non-transparent financial management, etc. The plan suggested four policy directions to develop SMEs, namely, (1) improvement of business

environment, (2) creation of access to land and production premises, (3) creation of access to finance, and (4) improvement of competitiveness (ASMED 2006).

Bias of policy implementation for state enterprises and unstable policies had discouraged investment in the private sector under the transitional period. As expected, low investment kept competitiveness of private sector low. The establishment of legal frameworks and improvement of infrastructure have enhanced the business environment of the private sector, including SMEs.

The development of SME finance happened when donors provided large funds to SME finance through Oversease Development Aid (ODA). Yet, there are still three major problems confronting SME finance. First, reliable information for credit assessment is not available from SMEs. Second, because the definition of non-performing loans became restrictive, banks tended to contain credit risk through cautious lending practices and dependence on collateral. Third, banks have pursued a business model which focuses on lending to state enterprises rather than SMEs (NRI 2008). As a result, only some SMEs can secure loans from banks and other formal financial institutions. Most household enterprises are getting traditional and informal finance.

2.2 SMEs in Supporting Industries

After hearing from 32 Japanese assemblers and part suppliers of electric machinery, electronics, motorcycles and automobiles, Vietnam Development Forum (VDF 2006) concluded that overcoming the demand side problem is the most important condition for the development of supporting industries. Supporting industries require large minimum orders to enter the market. Consider what happened in 2004: When domestic demand for motorcycles reached 2 million units in 2004, market size was enough to cause the rapid development of supporting industries.

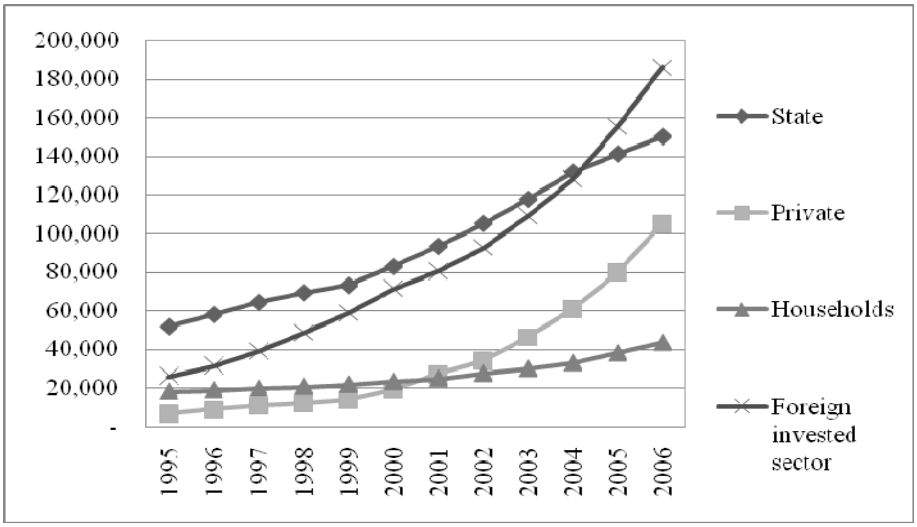
On the other hand, the market size of consumer electronics, including exports in Vietnam, is smaller than that in Thailand and Malaysia although domestic demand is growing. Japanese parts of electric machinery and electronics suppliers prefer to export parts from their existing factories in Malaysia or Thailand to Vietnam, rather than taking the risk to invest in Vietnam. The VDF has proposed the reduction of parts tariffs to zero to improve the cost competitiveness of electric machinery and electronics. It

assumes that expansion of production by final assemblers could generate larger orders for existing parts suppliers and encourage more foreign parts suppliers to invest in Vietnam.

Ohno, a member of VDF, has stressed the need for policies to focus on specific stages of promoting the supporting industries. According to Ohno, the first stage is to invite many assemblers among MNEs. The second is to invite foreign parts suppliers or foster local part suppliers to supply parts and components to them. The third and final stage is to enhance technology transfer and learning. Vietnam is currently in the first stage (Ohno 2003). In electric machinery and electronics industry, some MNEs concentrate on assembling—a labour-intensive process—importing most of its materials and exporting most of its products.

The focus of this three-pronged strategy is to accelerate industrialization in the short term and to establish industrial clusters in the long term. In fact, the foreign investment sector has led the manufacturing sector. Figure 2 shows that the private sector has increased its industrial output, next to foreign investors. In this context, the strategy could take advantage of the production network of MNEs, thus successfully promoting industrialization. This strategy, however, gives priority to large enterprises in the first tier.

Figure 2 Industrial Output Value at 1994 Prices (Billion Dongs)



Source: General Statistics Office of Vietnamhttp://www.gso.gov.vn/

As has been pointed out, a supporting industry has been developing in motorcycle industry. Some local second suppliers have grown from small enterprises to middle or large enterprises. This shows that local SMEs have the potential to become suppliers. SME policies should thus encourage the entry of local SMEs in supporting industries over the long term to create backward linkages.

2.3 SMEs in Export Oriented Industries

In Vietnam, main manufactured export goods are apparel, footwear, wood products and electronics. In 2007 they accounted for 16.0 per cent, 8.2 per cent, 5.0 per cent and 4.4 percent, respectively, of total exports (JETRO 2009).

Private and foreign investment sectors significantly increased exports of apparel from 2000 onwards. Yet, both sectors depend on contract production with foreign buyers. Goto (2003) pointed out the difficulty to create backward linkages with the textile industry. Although Vietnam has many textile factories, they do not have the ability to meet the demand for high quality by apparel export manufacturers. More investment in equipment is necessary to improve the quality of locally manufactured textiles.

Beginning in 2000 the private sector raised footwear exports to EU dramatically. This eventually prompted the EU to impose anti-dumping duties on footwear from Vietnam in 2006. Such an action did not bode well for the country's footwear industry, which depends on contract production with foreign buyers. It did not help that Vietnam was getting low margin since it imports material.

The wood products industry began to develop in 1990. Ten years later its exports started to grow dramatically. Vietnam has two kinds of wood product manufacturers. One group consists of newly set up private enterprises and foreign enterprises. They are located near major ports in the southern region, exporting products under contract from foreign buyers. Another group consists of SMEs located in traditional art and craft villages in the northern region.

SMEs are based on household enterprises, an example of which is Dong Ky village. Craft makers set up companies and expand production, thus increasing exports. In 2003, 79 companies were registered, each of which had less than 50 workers. The local government has supported the development of cottage industries by establishing

industrial estates for cottage industries.[2] Dong Ky village has benefitted from the establishment of industrial estates that in turn led to the development of the wood products industry (Ishizuka and Fujita 2006).

2.4 SMEs in Domestic Market Oriented Industries

SMEs have been mushrooming in domestic market-oriented industries. Entry barrier is low because large amounts of investment are not necessary. When government protection was withdrawn, the domestic market-oriented industries, which had no international competitiveness (Ohno 2003), were expected to decline. Today, this sector is growing.

Fujita (2006a) surveyed 19 plastic moulding companies in Ho Chi Minh in 2003. Sixteen of these were SMEs, which employed less than 300 workers. Three large companies started production before 1990 and are producing household goods and other products. Twelve SMEs, which were set up after 1991, produce packing materials, specifically motorcycle parts. Products have been diversified in the plastic industry but SME technology has not reached the level required by MNEs.

Based on the 2002 and 2003 field survey conducted by Goto (2005) in Ho Chi Min City, there is a difference between exporting enterprises and domestic market-oriented enterprises. The former consists of medium and large enterprises that use modern sewing-related equipment, pre-sewing equipment and systems, and finishing equipment and systems to meet high-quality standards and complex specifications from buyers. They partly depend on bank loans to buy machinery. On the other hand, the latter are small enterprises employing less than 50 workers and using secondhand machinery. They must depend on their own funds or informal loans to buy equipment.

Goto points out two characteristic features of apparel SMEs catering to the domestic market. First, they utilize subcontracting based on blood and shared territorial bonds while exporting apparel manufacturers do not rely on them due to the difficulty of maintaining quality control. He compares workers' wages in SMEs as parent companies and those in their small enterprises, or their subcontractors, who employ less than 20

[2] As land is owned by the state, the private sector cannot secure production premises without the local government's cooperation.

workers. The former's wages are 1.3 to 1.5 times higher than those of the the latter. SMEs take advantage of cheap labour through subcontracting and provide sawing machines for small enterprises during the contract period at no cost to the latter. Second, SMEs extend informal loans to wholesalers through "goi dau," or the traditional system of sale on credit. Part of the payment is paid in cash at the time of the transaction and the remainder forms part of the credit. SMEs transact with wholesalers every four days on the average. The return on the loan is 3.76 per cent per month. Wholesalers can avoid inventory risks by paying high credit to SMEs. This means apparel SMEs catering to the domestic market can benefit from low wages through subcontracting and high return through traditional finance system.

SMEs can secure outlets under the present market conditions and distribution system. They can survive before the distribution system changes dramatically even if tariff rates are reduced.

2.5 SMEs in Cottage Industries

Cottage industries are mainly located in the northern region. The Japan International Cooperation Agency (JICA) had a survey on cottage industries and found 2,017 arts and crafts villages in 2002. Arts and crafts villages are defined as having more than 20 per cent of the total village households engaged in the cottage industry, or where the industry accounts for more than 20 per cent of total village income. Of the 2,017 arts and crafts villages, 80 per cent are located in the northern region, particularly in the Red River delta. As some villages have plural industries, 2,971 industries were listed in the survey. Cane and bamboo work, textiles, wood products and embroidery accounted for 24 per cent, 15 per cent, 12 per cent, and 12 per cent, respectively, of the industries. The survey did not include the food industry, which produces traditional foods (Idei 2006).

In 1986 the Vietnamese government initiated economic reforms, which came to be known as the doi moi reforms. These reforms have had an impact on the cottage industry. Kojin (2006) conducted a survey at the Bat Trang village in Vietnam in 2004. Of the 1,625 households surveyed, 796 were engaged in ceramic manufacturing. Most of them were full-time manufacturers and employed workers from the neighbouring villages. Before the reforms were implemented, state and collective enterprises had been mainly producing ceramics for the domestic and export markets in socialistic countries.

Beginning in the second half of the 1990s, household enterprises increased exports rapidly, diversifying products to meet demand from Asian and European markets.

Kojin identifies the common characteristics of growing exporters following the *doi moi*. First, they looked for export outlet by themselves at the beginning of the reform period. Second, they could get valuable information on markets through foreign buyers. Third, they invested in equipment to improve the quality of their products. Although state and collective enterprises could not adjust themselves to market conditions, SMEs could do it well.

The central government started promoting cottage industries in 2000. Decision No. 132/2000/QĐ-TTg, dated 24th November 2000, of the Prime Minister on some policies which encouraged the development of rural trade was one of the first decisions the state promulgated with specific priority regulations for home craft production and handmade products (MARD 2009).

In spite of the promotion policies, cottage industry SMEs expected some policy assistance: (1) expansion of SME finance to encourage investment in equipment, (2) guidance of technology, including introduction of information on production technology, (3) establishment of a stable supply system for materials like agricultural products, and (4) marketing support, including participation in exhibition (Idei 2006). This shows that local governments must play an important role to promote cottage industry SMEs in addition to the establishment of industrial estates in arts and crafts villages.

3. SMES IN CAMBODIA

3.1 Policy Framework

In Cambodia, the economic policy framework was formed when in July 2004, the government announced the Rectangular Strategy for Growth, Employment, Equity and Efficiency. As a component of the strategy, SME promotion is further delineated into 13 policies, which are as follows:

- Encourage the development of SMEs, especially through the provision of medium- and long-term finance.
- Suppress smuggling.
- Reduce registration procedures and start-up processing for companies.
- Facilitate export-import activities by simplifying procedures such as those for licensing and obtaining letters of permission.
- Support newly established industries for an appropriate period.
- Promote linkages between SMEs and large enterprises.
- Assist SMEs to enhance their productivity and reduce production costs.
- Ensure the quality of domestic products to meet regional and international standards.
- Establish national laboratories to quality tests and product testing.
- Strengthen the mechanism for the protection of industrial intellectual property rights.
- Promote vocational/skills training, both domestic and overseas.
- Expand and accelerate the “one village, one product” programme.
- Strengthen the legal framework by creating appropriate laws.

The focus of the strategy is to promote SME registration to facilitate tax collection and collect statistical information. Many SMEs choose to remain informal since the cost of incorporating outweighs the benefits (SMES 2005).

Cambodia became a member of World Trade Organization (WTO) on 13 October 2004. Although it has reduced import tariffs on agricultural goods and non-agricultural goods, it has enjoyed the benefits of a GSP at export markets in

developed countries. WTO requires member countries to adjust their laws according to WTO conditions.

In 2005, the Small and Medium Enterprise Development Framework was announced by the government. It was a medium-term strategy with two phases. In the first phase (from 2005 to 2007), the emphasis was on establishing a framework for an enabling environment for SME development. The second phase (from 2008 to 2010) sought to enhance and expand the framework for an enabling environment. It was intended to serve as the government‘s road map for the development of the SME sector.

The framework focuses on developing three kinds of industries to encourage diversify production, increase range of exports and improve productivity. They are agribusiness, labour intensive industries such as garment, toys and footwear, and industries based on processing existing natural resources such as fish, meat, cement production, brick and tile. It mentioned two ways to promote agribusiness. The first way was to strengthen the legal framework for longer-term land management. The second way was to provide tax incentives for establishing factories to process agricultural products, such as cotton, jute, sugar, palm oil, cashew nuts, rubber, cassava and fruits.

The framework identifies four key issues: (1) regulatory and legal framework, (2) access to finance, (3) SME support activities, and (4) policy coordination. SMEs in Cambodia are facing high costs and uncertain business. In particular, the legal framework has missing key legislation dealing with contracts, bankruptcy, and mechanisms for dispute resolution. Law on the Amendment to the Law on Investment, Law on the Amendment to the Law on Taxation, Sub-Decree No.148 on the Establishment and Management of the Special Economic Zone and Law on Management of Factories and Handicrafts were enacted in 2003, 2003, 2005, and 2006 respectively. But important laws such as Civil Code, Law on Commercial Contract, Law on Secured Transaction and Law on Insolvency had not been enacted yet (CDC 2006). Legislation for dealing with secured transactions or sharing credit information amongst banks is either inadequate or does not exist. Such missing components raise the cost of doing business and discourage entry. These, alongside an appropriate audit system, need to be established first before a responsive and reliable framework can be achieved.

3.2 Domestic Market oriented Industries

The domestic market is expanding due to the rise in living standards. Among others, increased urbanization has created new business opportunities like making bottled water, resulting in the setting up of more SMEs. In 2006, the Ministry of Industry, Mines and Energy determined that there were 31,149 small industrial establishments with fewer than 50 employees. Table 3 shows the higlights of the ministry's findings. First, half of the small enterprises were not registered. The share of licensed establishments in 2006 approximated that of 2002 at 50 per cent. There were 1,689 small textile and garment enterprises, of which over 90 per cent had no operating permits. These were mostly weaving enterprises in the cottage industry. Second, agro-industry accounted for 81.7 per cent of small industry establishments. Most of them were into rice milling. Agro-industry and cottage industries are major SMEs in Cambodia.

Table 3. Small Industrial Establishments in 2006

	Number of establishments	Labour	Licensed establishments
Food, beverages and tobacco	25,455	58,512	12,350
Rice milling	23,103	47,887	10,922
Textile and wearing apparel and leather industries	1,689	6,347	167
Paper products, printing and publishing	33	351	25
Chemicals	159	1,448	155
Non-metallic mineral products except products of petroleum and coal	797	8,932	652
Fabricated metal products, machinery and equipment	2,380	8,243	1,613
Other manufacturing industries	636	3,239	435
Total Manufacturing	31,149	87,072	15,397

Source: SMES (2007) "Technical Report: SME Statistics in Cambodia," p. 11.

Hatsukano (2006) conducted a survey of small enterprises in the food processing industry in 2005. Among nine SMEs surveyed, only two got bank financing while the remaining seven depended on their own funds or informal finance such, including funds from relatives and friends.

In 2007 the New Zealand Institute of Economic Research (NZIER 2008) conducted a survey of SMEs employing less than 100 workers. The survey covered 20 SMEs in the food processing industry. There were two major constraints to doing

business. First, 14 SMEs complained about either the cost or supply of electricity. Compounding the poor power supply was the fact that the tariff rate of electricity in Cambodia remained the highest in the region. In 2004, the average production costs of electricity per kWh in Cambodia, Laos, Thailand and Vietnam were 15.2 US cents, 2.7 cents, 3.2 cents, and 4.6 cents, respectively (Yim 2007). Second, SMEs were faced with competition from imported goods, which seven of the 20 SME owners considered difficult. It did not help that the competitiveness of Cambodian SMEs was already low due to the inferior quality of their products. The perceived superior quality of imported items made consumers prefer them to local ones.

3.3 Co ttage Industries

Silk handlooms have a long history in Cambodia and Laos. Middle persons play an important role in promoting the handloom industry. Kojin (2004) interviewed 13 weavers of silk handlooms in a village in Takaev state in December 2002 and July 2003. All weavers were women who wanted to help augment their family incomes. Based on the survey, handloom weavers had close linkages with middle persons. The latter would go to markets in Phnom Pen to buy materials like silk yarn and dye and sell the end products. Silk yarn and dye imported from Thailand and Vietnam are distributed in the market. The middle persons supplied materials on credit to weavers at an interest rate of $1 to 3 per one kilogram of silk yarn. When middle persons purchased products, they deducted the cost of material and the corresponding interest from the payment. The same middle persons gave out cash and household goods on credit without interest to weavers. Weavers used the loan for their daily needs. Informal financing from middle persons helped make their relations with weavers stable.

It is doubtful whether the middle persons can develop new outlets. Distribution of textiles should be modernized to promote the silk textile industry. But as long as these middle individuals play an important role in informal financing to help improve the household budget, formal institutes like One Village One Product National Comitee cannot readily take their place. The development of the cottage industry should be argued in the context of rural development. Thus, policies should have three purposes: (1) improvement of income of weavers, (2) marketing promotion in domestic and export

markets, and (3) financing of households. The establishment of a cooperative society is an idea that could be pursued to support weavers' households.

4. SME IN LAOS

4.1 Policy Framework

The promotion of SMEs in Laos gained legal ground with the enactment of the Decree on the promotion and development of SMEs in 2004.[3] The Small and Medium-Sized Enterprise Promotion and Development Office (SMEPDO) was established under the Ministry of Industry and Handicrafts in 2005 to serve as the secretariat to the National Small and Medium-Sized Enterprise Promotion and Development Committee.[4] However, broader policy frameworks aiming at SME development came into existence decades before 2004. The government signaled its official transition to a market-oriented economy when it adopted the "New Economic Mechanism Policy" in 1986. Privatization was one pillar of this transition alongside opening up to foreign direct investments (Keola 2006). Between 1990 and 1995, the government promulgated a series of economic laws and administrative decrees to turn private enterprises into a major engine for economic growth. While the word "SME" had not been used explicitly around that time, the Enterprise Law promulgated in 1994 made it possible, for the first time since 1975, to establish private SMEs legally in the country.

According to the Decree on the promotion and development of SMEs, either of three following criteria would define SMEs in Laos. These are (1) number of employees, (2) total assets, or (3) annual turnover. Based on these criteria, small enterprises are those with no more than 20 employees, or with total assets no exeeding 250 million LAK (Lao Kip. 1 USD = 8000 LAK, as of December 2008), or generating an annual turnover not exeeding 400 million LAK. Medium enterprises are those bigger than small enterprise but employing up to 99 employees, or with total assets not exeeding 1.2 billion LAK, or an annual turnover of a maximum of 1 billion LAK. Since information on total assets as well as annual turnover of enterprises can be largely erratic as well as

[3] Decree on Promotion and Development of SMEs, no. 42/PMO, 20/04/2004.

[4] SMEPDC was established in accordance with the Prime Minister's Decision No. 23/PM, 8 March 2005. It is chaired by the Minister for Industry and Handicrafts and consists of 26 members, 17 of whom are from the private business sector. (SMEPDO 2009)

difficult to obtain, and for purposes of analysis, this report chooses a relatively stable number of employees as a prime criterion.

Though government's policy to promote SMEs is clear and defining them is simple enough if it is only based on number of workers, there is yet single survey in Laos that covers all SMEs by this definition. SMEs in cottage industries which are said to be the largest in terms of number have not been targeted by any nationwide survey, partly due to their unique business model. As will explained later, many small groups of people, usually within the same family or village, that produce handicrafts are generally scattered throughout the country and linked to local and foreign consumers through retail shops and middle persons. While retail shops are generally required to be registered with the Ministry of Finance for tax collection purpose, many of them are not registered with the other economic ministries directly engaging in promotion of SMEs. As such they may not be accounted for in general surveys of SMEs. Moreover, middle persons who link these craft persons to foreign market, mostly across borders in Thailand, are not likely to appear in any formal documents.

However, there have been several nationwide enterprise sample surveys since 2002. Based on the Business Establishment Survey 2004, there were 1,192 SMEs[5] in 2003 which increased to 1,478 in 2004 (Table 4). There were only 55 SMEs employing just 1,289 persons in food related industries in 2004. Laos is certainly among the countries with least developed SMEs in Southeast Asia. It is still highly depended not only on import of industrial goods but also on agricultural products from Thailand. Lao's major cities along the Mekong River still rely on Thai products ranging from rice, vegetables, eggs, noodles, salt, sugar to fish sauce and cooking oil, among others. Policy frameworks and measures in broader sense to promote SMEs were in place for years, and while progress has been made, it is obvious that much still need be done.

This section seeks to describe the current situation of SMEs in Laos based on available data and information gathered from various sources. It will also try to identify some of the obvious determinant bottlenecks that hinder faster development of SMEs in the country. This section also divides SMEs in Laos into four categories based on the framework discussed in the succeeding section.

[5] Categorization by size of employment in Business Establishment Survey is not exactly the same with categorization of SMEs by law.

Table 4: Number of Business Establishments by Main Activities

Main Activities	2003 Number of Employee			2004 Number of Employee		
	1-9	10-99	from 100	1-9	10-99	from 100
Mining	3 (129)	24 (779)	3 (282)	7 (164)	27 (841)	3 (2304)
Food, Drink and Tobaco	12 (211)	31 (850)	6 (1688)	25 (252)	30 (1037)	8 (2150)
Garment and Leather	1 (87)	15 (1094)	38 (18350)	2 (208)	18 (1041)	48 (30482)
Wood Products	6 (370)	58 (3921)	25 (3392)	24 (560)	76 (4120)	21 (4414)
Paper Products, Printing, Chemical and Rubber Products	9(118)	30 (1141)	4 (530)	12 (286)	49 (1451)	6 (1242)
Non-metal Products	13 (234)	35 (764)	5 (1740)	14 (286)	39 (1009)	5 (1338)
Metal Products and Machinaries	15 (192)	32 (1040)	7 (1479)	18 (380)	35 (1079)	10 (1914)
Furniture	23 (254)	18 (420)	1 (297)	8 (113)	10 (219)	1 (294)
Electricity and Water Supply	(70)	22 (1180)	10 (4525)	4 (116)	19 (1108)	13 (5890)
Construction	51 (2900)	286 (6108)	14 (2456)	90 (1977)	297 (5806)	9 (2234)
Sale and Reparing Service of Transport Equipments	11 (99)	13 (303)	2 (1062)	29 (330)	31 (738)	3 (1216)
Wholesale and Retail	84 (833)	91 (1647)	3 (715)	117 (1161)	110 (2185)	4 (843)
Transportation	25 (268)	35 (1031)	5 (1161)	34 (406)	53 (1122)	4 (1272)
Post and Telecommunication	3 (72)	25 (893)	3 (2039)	5 (96)	25 (1095)	4 (1998)
Real Estate	20 (263)	37 (856)	3 (1205)	36 (405)	40 (1128)	6 (1685)
Hotel, Restaurant, School and Hospital	68 (828)	96 (2105)	5 (1194)	85 (978)	109 (2744)	6 (4386)

Source: Business Establishment Survey 2004. National Statistical Center.

4.2 SMEs in Supporting Industries

In Laos, very few enterprises, let alone SMEs, take part in the transnational production network if the garment industry is not included. Some transnational supporting factories were set up in 1997 or about a decade after the first wave of export-oriented garment factories came about in Laos. After starting out as SMEs, or with less than 100 workers, some these supporting factories grew to become large enterprises over the years. As it would be impossible to determine whether an SMEs belong to supporting industries from publish statistics, figures and discussions in this section would be mostly based on interviewed information.

Table 5: Supporting SMEs in Laos (As of October 2008)

Factory (Es. Year)	Products	Number of Labors	Source Countries	Export Destinations
A (1992)	Motorcycle parts	70*	Thailand (Japan)	Vietnam,Cambodia (Japan)
B (1997)	Trigger coils, transformers of camera flash	72→700	Japan	Thailand (Japan)
C (2002)	Electric resistors	100→200+	Japan	Thailand (Japan)
D (2002)	Wire harness for automobile	20→226	Laos	Thailand (Japan)
E (2008)	USB	80	Japan	Thailand (Japan)

Source: Based on interviews by authors.
Notes: * Covers only factory workers.

One common characteristic of Lao SMEs in supporting industries is their interconnectedness with Japan and Thailand. The large agglomeration of Japanese supporting industries in Thailand and relatively low cultural barriers between Laos and Thailand (Hiratsuka, Keola and Suzuki 2008) may partly explain this. Firstly, all SMEs, including former ones that are listed in Table 5, participate in the transnational production network of Japanese products. Secondly, four out of five were established in Laos to support the main factory in Thailand by either Japanese investors or Thai subcontractors from Thailand. Factory D, which is wholly-owned by a Lao investor and takes part in the manufacture of wire harness for Japanese cars, was also established with full support by the main Japanese factory in Thailand. Thirdly, all but one factory import all the necessary materials and ship back semi-finished products to the main factories in Thailand. Factory A imports raw material from the main factory in Thailand, and ships processed motorcycle parts to assemblers of the same Japanese motorcycles in Vietnam and Cambodia. Factory B imports all necessary materials from Thailand by land and air, and sends back processed electronic parts to the main factory in northern Thailand by air. Factory C manufactures electronic resistors using raw materials from main factory near Bangkok Thailand where it also ships processed products back to. Factory D imports electric wires from a second-tier automotive parts supplier in Thailand and sends back processed wire harness to the same company. Factory E goes through the same process but for USB and other computer realted components.

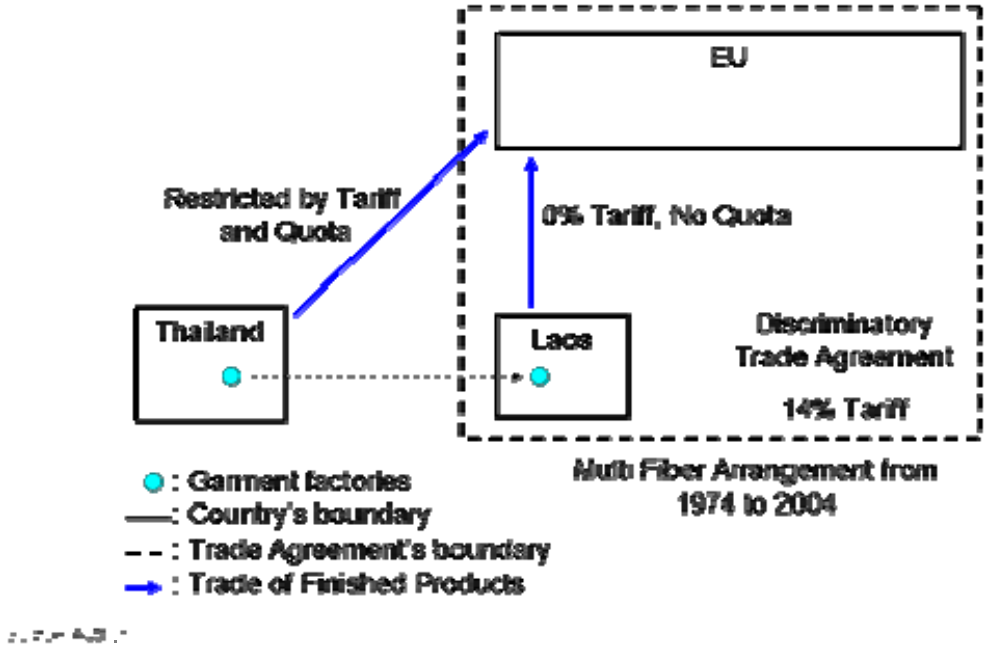
Though SMEs in supporting industries are few, they have demonstrated some positive trends with promising prospects. For instance, the number of workers in many

of these factories has grown significantly over the years. Factories A to D started as medium enterprises, with less than 100 workers, and then expanded to become large enterprises a few years later. Furthermore, the products made by transnational production networks which Lao factories either participate in or support are mostly connected to very large global market. For instance, trigger coils and transformers produced by the whole group of factory B[6] account for 60 to 70 per cent of markets for the same products worldwide. Motorcycles and automobiles into which parts produced or processed by Factory A and D would be used are also first-tier internationally well-known brands.

4.3 SMEs in Export Oriented Industries

Garment factories dominated SMEs in export-oriented industries in Laos. The first wave of garment factories relocated or established in Laos almost immediately after it re-opened itself to foreign direct investments in 1988. Export-oriented garments factories comprise the largest number among factory-based enterprises in Laos. Their

Figure 3: Preferential Trade Arrangements between EU and Laos



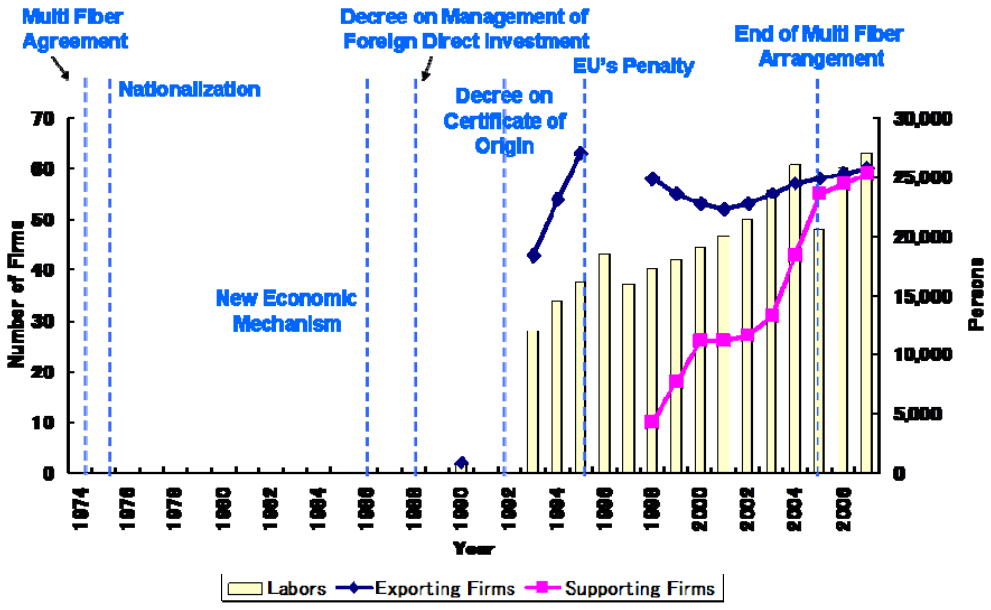
[6] As of late 2008, this group currently has factories in China, Thailand and Laos, employing approximately 3000, 1000 and 700, respectively

share of labor force is also the largest and accounts for more than 60 per cent of the total employments in the manufacturing sector.

Puga and Venebles (1997) showed that discriminatory or preferential trade arrangements can force firms to relocate to countries within preferential arrangements. In Laos's case, it is obvious that most of these garment factories relocated to Laos in order to enjoy preferential trade arrangements given to the country, mainly by the EU. Figure 3 depicts the business model of these factories. The merit of relocating garment factories to Laos was evident, because in general it would be very difficult for any private enterprise to cut costs by a magnitude as big as 14 per cent of the shipment's prices. Garment factories in Thailand can achieve this relatively easily by crossing borders to neighbouring Laos.

Many garment factories were established in Laos through direct investment in the early 1990s (Figre 4). The developments that led to this are as follows: Garment factories emerged in developing countries such as Thailand in the 1970s to supply cheaper apparel. The Multi-Fiber Arrangement was for industrialized nations a tool to protect domestic producers from, or soften the impact on them, of much cheaper imported clothes from developing nations. The exceptions from the MFA, however,

Figure 4: Development of Garment Industry in Laos



Source: Author. Number of Firms and Labors are based on Boutsyvongsak (1998) and Phoummaly (2007).

were least developed nations such as Laos. Some of the garment factories in Thailand then chose to relocate to neighbouring Laos to overcome these discriminatory trade arrangements.

Laos imports materials needed to be manufactured into finished garments from countries that are relatively closer to home and exports finished products to relatively far developed nations. The main destinations of garment products from Laos have been limited to the EU and other European countries—the only major global markets that for decades have virtually accorded Laos preferential trade status. Exports to the US, which granted Laos Normal Trade Relations (NTR) status in 2005, was equivalent to only 2.5 per cent of what goes to the EU member states and other European countries. Such proportion was considered too low, given the size of the US market. This, however, must be viewed from a vantage point that Laos had not received preferential treatments from the US until February 2005, when it ceased being one of the few states under economic sanctions by the US. Still, preferential treatments under NTR are significantly less compared to those under the Most Favored Nations (MFN) status. To this day, Laos's efforts to get the MFN status from the US have not yielded fruit.

Japan's Generalised System of Preferences has also proved beneficial for Laos, judging from increased cumulative number of applications and the establishment of garment factories since 2006. While Japan granted preferential tariff rates to garments products from the least developed countries for years, garment manufacturers had to contend with a two-step manufacturing process that proved difficult for least developed country such as Laos, where hardly any supporting industries existed. In fact, Japanese garment makers did not show much interest in either Laos or Cambodia until Japanese authorities could ascertain that a one-step process was sufficient for finished garment products to gain 0 per cent access status.

4.4 SMEs in Domestic Market-Oriented Industries

Factories exporting 100% of its products are literally called "closed circuit factory" in Laos, and almost all dozen foreign invested garment factories in the country fall into this categories. About the same number of supporting garment factories which do not export directly exist, but should rather categoriezed as export oriented because most of their products are indirectly exported. There are some that supply to both local and

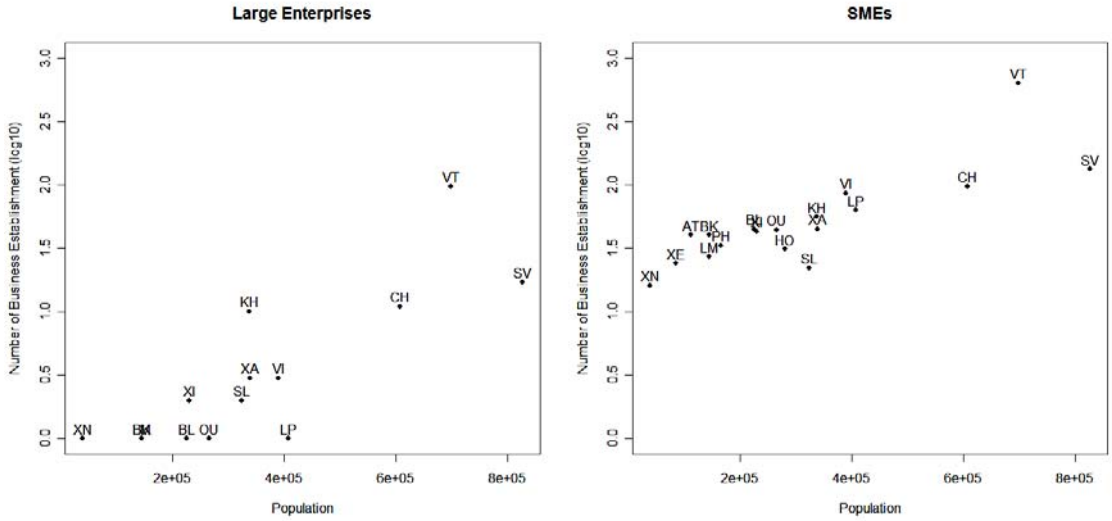
foreing markets, such as those in mining, wood processing industries. The rest are thus domestic oriented ones. These included small workshops that supply drinking water, ice, meat, noodles, assembled motorcycles, and electronic and transport equipments repairing services to local customers.

The domestic oriented business establishments are mostly SMEs. As is clear from Table 4, in 2004, only 8 out of 63 in food related industries, 9 out of 396 in construction industry and 4 out of 231 in wholesale and retail industries, the obvious domestic oriented, were large enterprises. The same hold for sales and reparing services of transport equipments, transportation, hotel and restaurant services which have local markets as the main ones. The numbers of employments were also extremely small. Only about 3,500 were employed by all enterprises, including large ones, in food related industies. There were less than 2500 persons providing transportation service in country with nearly 6 million local residents.

This is obviously different from export oriented garment industry where 48 out of 68 were large enterprises. 20 SMEs and 68 large enterprises in garment industry employed 31,731 persons, more than 3 three times bigger than 10,017 persons employed in construction, or second largest industry by size of employment. Hotel, restaurant and education; Wood related industry as well wood related industry had employed from between 7,000 and 9,000 while the rests employed less than 5,000.

In Laos, there is obvious tendency showing that the bigger the population, the larger the number of SMEs as well as large enterprises in the province (Figure 5). Every province has SMEs, with bigger provinces having more and Vientiane Capital having most. Some of small provinces do not however have large enterprise. Large enterprises concentrate in Vientiane Capital (VT), Savannkhet province (SV), Champasak province (CH) and Khammouan province (KH) or four of five largest provinces which are also comprise most of non mountainous areas in the country. While these four provinces are bordering Thailand or having population concentrated in areas nearby to border with Thailand, the rest that have some large enterprises such as Xayyabouly province (XA), Vientiane province (VI), Xiengkhouan province (XI) are either nearby areas to border with Thailand or Vietnam.

Figure 5: Population Scales and Number of Business Establishments



Source: Population and Housing Census 2005 and Bussiness Establishments Survey 2004. National Statistical Center.

Note: AT:Attapeu, BK:Bokeo, BL:Bolikhamxay, CH:Champasak, HO:Houaphanh, KH:Khammouan, LM:Louangnamtha, LP: Louangphabang, OU:Oudomxay, PH:Phongsaly, SL:Salavan, SV:Savannakhet, VI:Vientiane, VT: Vientiane Capital, XA: Xayyabouly, XE: Xekong, XI: Xiengkhouang, XN: Xaysomboun.

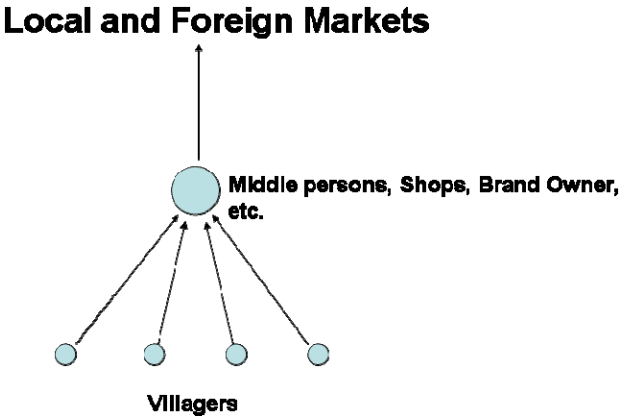
Tentative conclusion that may be drawn here is demand factor seem to play determinant role in development of SMEs. While local or nearby demand seems to determine whether SMEs came into existence, accesing to foreign larger and generally more distant markets may determine whether or not they would grow to be large enterprises.

5.5 SMEs in Cottage Industries

The cottage industry undoubtedly makes up the biggest number of SMEs in Laos. They mainly manufacture items that are not being imported as well as those with price compatitiveness. These include traditional handwoven clothes, which are still widely used as well as traditional farming equipments.

Figure 6 shows the business model for cottage industries in Laos. Generally, many villagers sell their handicrafts to middle persons and retail shops, particularly brand owners, who will then re-sell them directly, or refashion them into other products for distibution, to local, regional, or international markets.

Figure 6: Business Model of SMEs in Lao Cottage Industries



Source: Based on interviews by the author.

Villagers selling handmade handicrafts are not likely to be registered as enterprise owners, since their products are mostly for home or family consumption. This makes it difficult to determine their precise number. In 2000 the Japan International Cooperation Agency (JICA) conducted inventory surveys of district-level local handicraft makers who could qualify for the "One District, One Product (ODOP) project.

The ODOP movement was introduced in Laos on November 14, 2002 through a dramatic presentation of the "One Village, One Product" (OVOP) movement by Morihiko Hiramatsu, the founding father of the movement and former governor of Oita Prefecture in Japan before a huge audience of Lao government officials. The movement came to be known as ODOP when it was adopted as the formal name for this movement in Laos in the Macroeconomic Policy Support II**,** a cooperation project between JICA and the Lao government.

JICA conducted an inventory survey in Phonghong district in Vientiane Province under MAPS II in early 2004. Phonhon District is about 70 km north of the capital and consists of 80 villages with a total population of 54,542. The survey, carried out by an ODOP working group under MAPS II, identified rattan chairs, rice boxes, dining tables, fishing gear, tablecloths, jar alcohol, bags, among others, as potential ODOP products. In 2006 a study was conducted to gather more information in five provinces along the East West Economic Corridor (namely, Savannakhet, Saravane, Champasak, Sekong and Attapeu) as part of the preparations for a planned pilot project .

Tourism had been added and nearly 300 potential ODOP had been identified in 31 districts in five Southern provinces (Souvannavong 2007).

Table 6: Inventory Survey of Potential ODOP (2006)

Province	No. of District	No. of Village	Agriculture	Food	Forestry	Handycraft	Tourism	Culture
Savannakhet	15	96	21	17	3	33	7	1
Saravan	8	50	15	3	6	14	17	5
Champasak	9	64	6	11	3	27	9	5
Sekong	4	30	19	5	3	14	8	7
Attapeu	5	25	8	4	2	14	4	8

Source: Souvannavong, Mixai Techno Engineering & Consulting Co. (2007).

As have been said, one of the biggest problems confronting SMEs in cottage industries is the lack of information despite their large size and assumed impact on national economy. While it may be unrealistic to expect most of them to grow or even continue to exist in the process of industrialization or modernization of the country, it would be a big loss if those with potential to grow disappeared due to lack of coordinated support, as some handmade handicrafts depicting modern designs have actually found their way into international markets. ODOP will help, but a broader scheme to identify and promote those with potential is certainly needed.

5. POLICY RECOMMENDATIONS

In general, the establishment of legal frameworks and improvement of infrastructure enhanced the business environment for the private sector, including SMEs. Following are more specific policy recommendations for four SME groups:

5.1 SME Polices for Supporting Industries

Vietnam's experience in the motor cycle industry shows that the expansion of demand and competition will encourage the entry of local SMEs. Policies cannot influene demand but can facilitate the importation of components and capital goods and exports of products. Thus, it is important to develop the local SMEs to accumulate the necessary skills and knowhow. There are two possibilities for new entry. First, domestic-oriented SMEs like replacement parts manufacturers can join supporting industries. Second, employees in existing factories of MNEs can set up their own enterprises to supply them with components. In both cases, there are bottlenecks in low technology, unskilled management and unskilled workers. Here are some policy recommendations that can to solve these bottlenecks.

- Facilitation of imports of components and capital goods through reduced import duties
- Strengthening SME finance to support entry
- Training for management staff in training centres
- Training for workers either in training centres or on the job

5.2 SME Policies for Export-oriented Industries

In addition to apparel and footwear, other industries are increasing their exports to CLV (Cambodia, Laos, and Vietnam). To sustain their efforts, they need support in marketing and information gathering. To promote exports, governments needs to enforce policies that will foster the following:

- Inviting more foreign buyers of SME products
- Dispatch SME owners to participate in trade exhibitions in foreign countries

5.3 SME Policies for Domestic Market-Oriented Industries

Most SMEs in CLMV (Cambodia, Laos, Myanmar, Vietnam) belong to domestic market-oriented industries and cottage industries. They are commonly unregistered and are therefore operating illegally. This is the most serious problem confronting them. Granting these SMEs tax concessions could be an incentive to registration. Japan is a case in point. After the after the Second World War, SMEs were found to have inadequate bookkeeping, brought on by fears of over taxation. To resolve this situation, Japan began the Blue Returns system in 1949, allowing certain tax merits if a tax return was made with a "certain formula of quick bookkeeping," according to Japan's Small and Medium Enterprise Agency. This improved the financial accounting and financing systems of SMEs (SMEA 2009).

- Allowing certain tax merits if a tax return is made with a "certain formula of quick bookkeeping"

SMEs in Laos must contend with limited demand, which is in part an offshoot of fragmented domestic markes. It does not help that major cities are located near the border, making SMEs more difficult to access them. Policies required to allow Laos to shift from the limited domestic market to the much larger foreign ones are recommended.

- Trade facilitation in border areas

5.4 SME Policies for Cottage Industries

Most cottage industries depend on middle persons to procure materials and sell their products. The latter also play an important role in informal financing. Distribution of cottage industries should be modernized to the develop market. Public institutions can replace middle persons only in marketing promotion in domestic and export markets. Thus, microfinance and cooperatives should support household crafts manufacturers. Here are potential measures:

- Encourage microfinance and the establishment of cooperative society.
- Modernize the distribution of cottage industries by replacing middle persons with public institutes.

REFERENCES

Agency for SME Development, Ministry of Planning and Investment (ASMED). 2006. *Small and Medium Enterprise Development 5 Year Plan 2006-2010* (Final Draft). Hanoi: ASMED.

Asanuma, B. 1989. Manufacturer-Supplier Relationships in Japan and the Concept of Relation-Specific Skill. In *Journal of the Japanese and International Economics*, 3:1.

Council for the Development of Cambodia, Government of Cambodia (CDC). 2006. *Kanbojia Toushi Gaidobook* (Guidebook of Investment for Cambodia). Pnom Pen: CDC.

Goto, K. 2003. *Seni Hosei Sangyo: Ryutsu Mihattatsu no Kensho (Textile and Apparel Industry: Examination of Undevelopment of Distribution.* In *Vetonamu `no Kogyouka Senryaku: Gurobaru-ka Jidai no Tojyokoku Sangyo Shien* (Industrialization Strategy of Vietnam: Assistance for Industries in Developing Countries during the Period of Globalization), edited by K. Ohno and N. Kawabata. Tokyo: Nihonhyoronsha.

_____. 2005. Hochimin-shi no Naijyu muke Apareru Sangyo no Seisan to Ryutsu Kozo (Structure of Production and Distribution of Domestic Market -oriented Apparel Industry in Ho Chi Min City. In *Ajia Keizai*, 46(10): 2.

Fujita, M. 2008. Betonamu no Purasuchikku Seikei Sangyo niokeru Kouzou Henka to Kigyo Seicho (Structural Change and Enterprise Development in the Plastic Moulding Industry in Vietnam). In *Iko-ki Betonamu no Sangyo Hen'yo: Jiba Kigyo ni yoru Hatten no Shoso* (The Transformation of Vietonam's Industry during the Period of Transition). Chiba: IDE-JETRO.

_____. 2008. Value Chain Dynamics and Growth of Local Enterprises: The Case of Motorcycle Industry in Vietnam. Discussion Paper No. 161. Chiba: IDE-JETRO.

Idei, F. 2006. Betonamu Nousonkogyoka Seisaku no Tenkai (The Development of Policy towards Rural Industrialization in Vietnam. In *Iko-ki Betonamu no Sangyo Hen'yo: Jiba Kigyo ni yoru Hatten no Shoso* (The Transformation of Vietonam's Industry during the Period of Transition). Chiba: IDE-JETRO.

Ishizuka, F. and M. Fujita. 2006. Betonamu no Sangyo Shinko to Chiho Zaisei no Yakuwari (The Promotion of Industry and the Role of Local Government in Vietnam: The Case of Dong Ky Wooden Furniture Village in Bac Minh Province). In *Iko-ki Betonamu no Sangyo Hen'yo: Jiba Kigyo ni yoru Hatten no Shoso* (The Transformation of Vietonam's Industry during the Period of Transition. Chiba: IDE-JETRO.

Hatsukano, N. 2006. Kanbojia no Kogyoka: Jiyuka no Kachuniaru Seizougyo to Sono Ninaite (Industrialization in Cambodia: The Manufacturing Industry and Its Actors. In *Kohatsu ASEAN Shokoku no Kogyouka: CLMV Shokoku no Keiken to Tenbo* (Industrialization in CLMV Countries: The Experience and prospects of Late-Comer ASEAN Countries). Chiba: IDE-JETRO.

Hiratsuka, D., S. Keola and M. Suzuki. 2008. Industrialization through Vertical Production Networks: Can Laos Participate? In East Asia's Economic Integration, edited by D. Hiratsuka and F. Kimura. London: Palgrave Macmillan.

Japan External Trade Organization (JETRO). 2009. Export statistics [online] http://www.jetro.go.jp/world/asia/vn/stat_03/ [Accessed 28th January 2009].

Kimura, F. 2001. Subcontracting and the Performance of Small and Medium Enterprises in Japan. Stock no. 37192. Washington, D.C.: World Bank Institute.

Kojin, E. 2004. Kanbojia Nousonbu Kinuorimonogyo no Shijyo Linkage (Market-linkage Operations in a Cambodian Silk-Weaving Village: A Case Study of the Weaver-Middleman Relationship in Northern Takaev). In *Kanbojia Shin-jidai* (Cambodia in a New Era). Chiba: IDE-JETRO.

_____. 2006. Betonamu Dento Kogei Sanchi ni okeru Seisan Kozo no Henyo (Structural Changes in Production in the Traditional Craft Villages of Vietnam: The Case of the Traditional Ceramic Village of Bat Trang). In *Iko-ki Betonamu no Sangyo Hen'yo: Jiba Kigyo ni yoru Hatten no Shoso* (The Transformation of Vietonam's Industry during the Period of Transition). Chiba: IDE-JETRO.

Ministry of Agriculture and Rural Development. 2009. Newsleeter June 2005 [online] http://xttmnew.agroviet.gov.vn/en/newsletter/2005/June.asp.[Accessed 28th January 2009]

New Zealand Institute of Economic Research. 2008. Early Development of Cambodian Small and Medium Sized Enterprises. ERIA Related Joint Research Project Series 2007, No.28. Chiba: IDE-JETRO.

Nomura Research Institute (NRI). 2008. SME Finance Signals Future Growth. In *Vietnam Financial Review* [online] http://www.nri.co.jp/souhatsu/research/2008/ pdf/ act200806 _ 08.pdf. [Accessed 28th January 2009]

Ohno, K. 2003. Kokusai Tougo ni nozomu Betonamu (Vietnam Challenging International Integration). *Vetonamu `no Kogyouka Senryaku: Gurobaru-ka Jidai no Tojyokoku Sangyo Shien* (Industrialization Strategy of Vietnam: Assistance for Industries in Developing Countries during the Period of Globalization), edited by K. Ohno and N. Kawabata. Tokyo: Nihonhyoronsha.

Puga, D. and A.J. Venables. 1997. Preferential trading arrangements and industrial location. *Journal of International Economics* 43(3-4):347-368.

Small and Medium Enterprise Agency, Government of Japan. 2009. Japan's SME Policies in Relation to the Country's Economic Development [online] http://www.chusho.meti.go.jp/ sme_english/outline/01/01_01.html [Accessed 25th February 2009]

Small and Medium Sized Enterprise Promotion and Development Office, Government of Lao PDR). 2009. [online] http://www.smepdo.org. [Accessed 27th February 2009]

Secretariat and SME Statistics Technical Working Group, Government of Cambodia. 2007. Technical Report: SME Statistics in Cambodia.

SME Secretariat, Government of Cambodia. 2005. Small and Medium Enterprise Development Framework.

Vietnam Development Forum (VDF). 2006. Supporting Industries in Vietnam from the Perspective of Japanese Manufacturing Enterprises. VDF Report No. 2.

Yim, N. 2007. Power Sector in Cambodia: An Understanding of Deficient and High Cost Electricity. *Economic Review* 14(1):8. Economic Institute of Cambodia [online] http://www.eicambodia.org/downloads/files/ER_Vol4_No1 _powersector_ incambodia.pdf [Accessed 18th February 2009]