

Lim, Hank; Kimura, Fukunari

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**The Internationalization of Small
and Medium Enterprises in
Regional and Global Value Chains**

Hank Lim and
Fukunari Kimura

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Hank Lim is a senior fellow at the Singapore Institute of International Affairs (SIIA). Fukunari Kimura is chief economist at the Economic Research Institute for ASEAN and East Asia (ERIA).

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Please contact the author(s) for information about this paper.

Hank Lim: hank.lim@siaonline.org

Asian Development Bank Institute
Kasumigaseki Building 8F
3-2-5 Kasumigaseki, Chiyoda-ku
Tokyo 100-6008, Japan

Tel: +81-3-3593-5500
Fax: +81-3-3593-5571
URL: www.adbi.org
E-mail: info@adbi.org

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Abstract

Production networks and the regional division of labor have been established in East Asia resulting in massive vertical intra-industry trade in parts and components within the region. This phenomenon is known as cross-border production sharing or the fragmentation of production processes into many stages across different countries. New development strategies claim that participation in international production and distribution networks is the key to accelerating economic development in the era of globalization. This process suggests that vertical input-output linkages between local firms and multinational corporations are the most powerful channels to accelerate technology transfers and spillovers.

Given the trends of globalization and economic integration in East Asia, there is significant potential for the small and medium enterprise (SME) sector to increase its contribution to the region's development through greater participation in global value chains. However, multiple market failures exist with regard to the development of SMEs and local entrepreneurship. These risks can be mitigated by proper policy measures such as strengthening technological and human resource capabilities through better networking and facilitating access to financing for SMEs. Despite many distortions and inefficiencies in implementing regional economic integration schemes in East Asia, there are many cumulative positive effects contributing to the emerging trend internationalization of SMEs in the region. This process can be significantly strengthened by creating a positive business environment through the standardization of products and services, rules and regulations, and a seamless market infrastructure in the region.

JEL Classification: D20

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1. BACKGROUND

Since the early 1990s, international production networks have developed within the Association of Southeast Nations (ASEAN) and East Asia. Extensive production networking and the regional division of labor have resulted in massive vertical intra-industry trade in parts and components within the region, effectively becoming the de facto economic integration in East Asia. Figure 1 shows the share of intra-regional trade (exports and imports) within several economic areas. The share of intra-East Asia trade, where East Asia is defined as the 10 ASEAN countries, the People's Republic of China (PRC), Japan, Hong Kong, China, and the Republic of Korea (hereafter Korea), rose remarkably from 34.9% in 1980 to 52.4% in 2003. Surprisingly, this figure is higher than that of the North American Free Trade (NAFTA) area, which stands at 44.6%, though a bit lower than 58.7% of the European Union (EU). East Asia has no doubt achieved a high level of de facto economic integration in terms of international trade transactions within the region. The integration process has not been seriously interrupted, not even by the Asian currency crisis that occurred in the late 1990s.

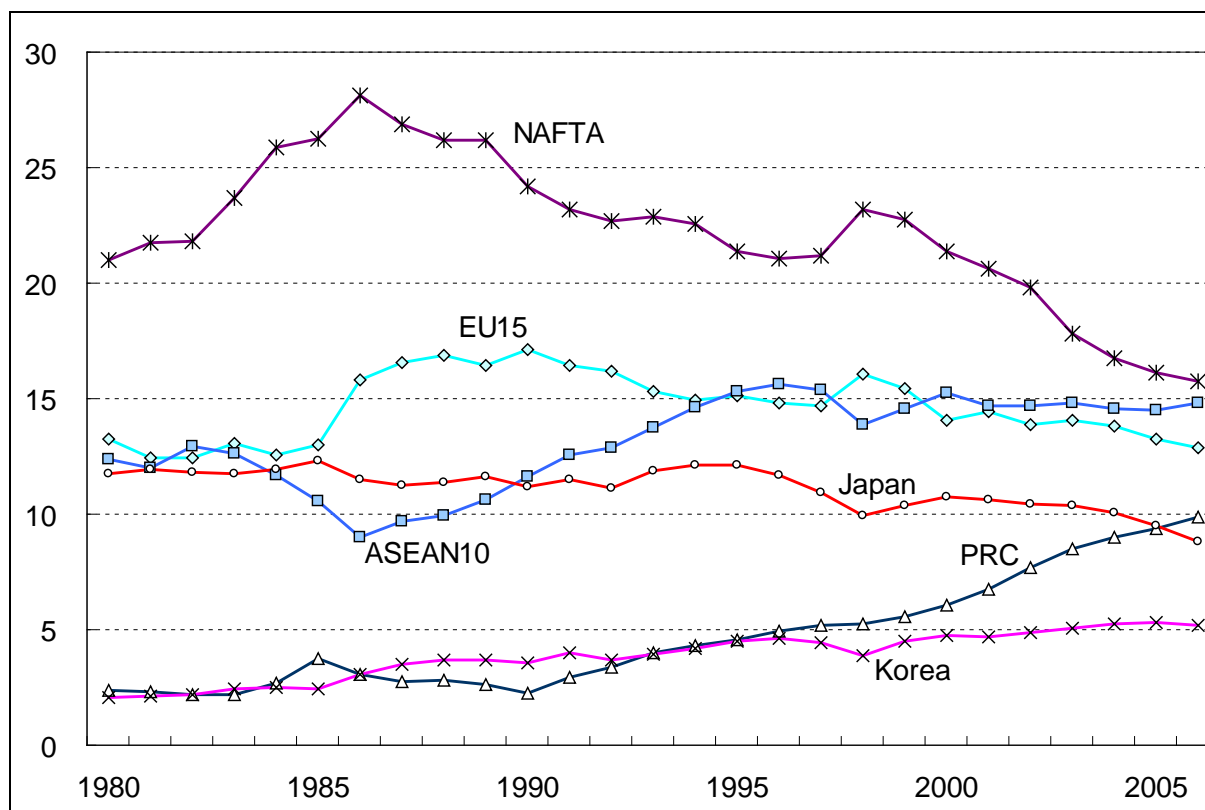
However, economic integration in East Asia does not seem to have developed in an even manner. The share of intra-regional trade of the ASEAN 10 and PRC-Japan-Korea in 2003 remains at only 22.2% and 25.8% respectively, against that of East Asia as a whole (52.4%). This suggests that economic activity requires a large space in which to expand, such as the whole of East Asia, as spatial economists argue. Figure 2 shows trade shares of East Asia by partner countries or regions. Such a trend suggests that countries at relatively low-income levels have played a significant role in the expansion of the intra-regional trade in East Asia.

The trade pattern inside East Asia has changed, from a traditional pattern in which capital goods and final products, such as consumer and intermediate goods, have been traded with each other to a pattern where parts and components are traded instead. To put it differently, intermediate goods in the same industry have been actively traded among the Asian countries, expanding intra-industry and intra-regional trade. For instance, import shares of parts and components within East Asia increased from 7.2% in 1980 to 32.2% in 2003, while those of processed goods decreased from 37.3% to 28.0% in those same years. Parts and components as shares of trade have become the largest among commodity groups (see Figure 3).

East Asia is experiencing an explosive increase in trade in intermediate goods, particularly in machinery industries, based on the international division of labor and production processes among countries at different income levels and development stages. Trade patterns, in today's global competition where economies of scale are a strong consideration, are quite different from the traditional ones based on the static concept of comparative advantage. The whole production process now involves sequential production blocks that are located across countries. Different stages of production are undertaken by different suppliers located in different countries. Products traded between firms in different countries are components instead of final products.

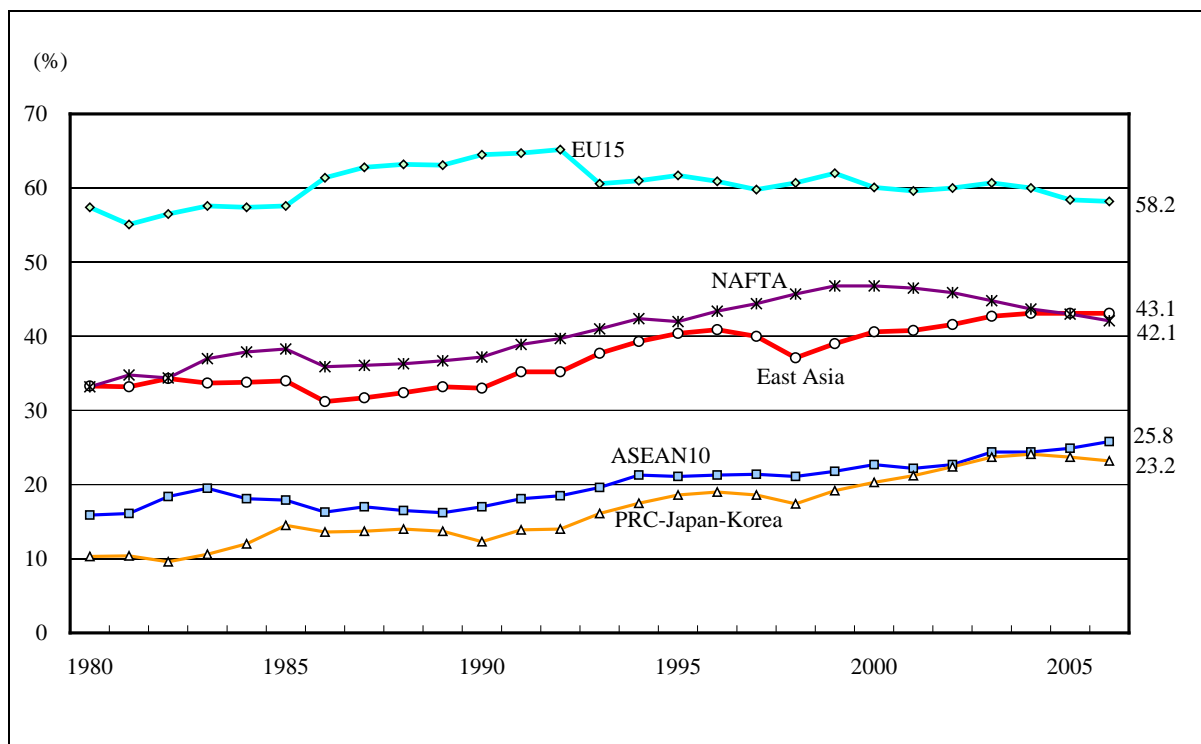
This phenomenon is known as cross-border production sharing or the fragmentation of production. Production processes are finely sliced into many stages and located in different countries in East Asia. In theory, with such vertical specialization a slight decline in trade costs would induce an increase in the trade of intermediate goods since goods may move across national borders multiple times. For example, an intermediate good is exported from country A to country B and is imported back to country A again after processing in country B. In this case, the good crosses a national border twice in country A and twice in country B. This is what actually happens in East Asia; when trade cost goes down, the competitiveness of the whole of East Asia increases greatly.

Figure 1: Intra-Regional Trade (Export and Import) Ratio (%)



Source: IMF 2004.

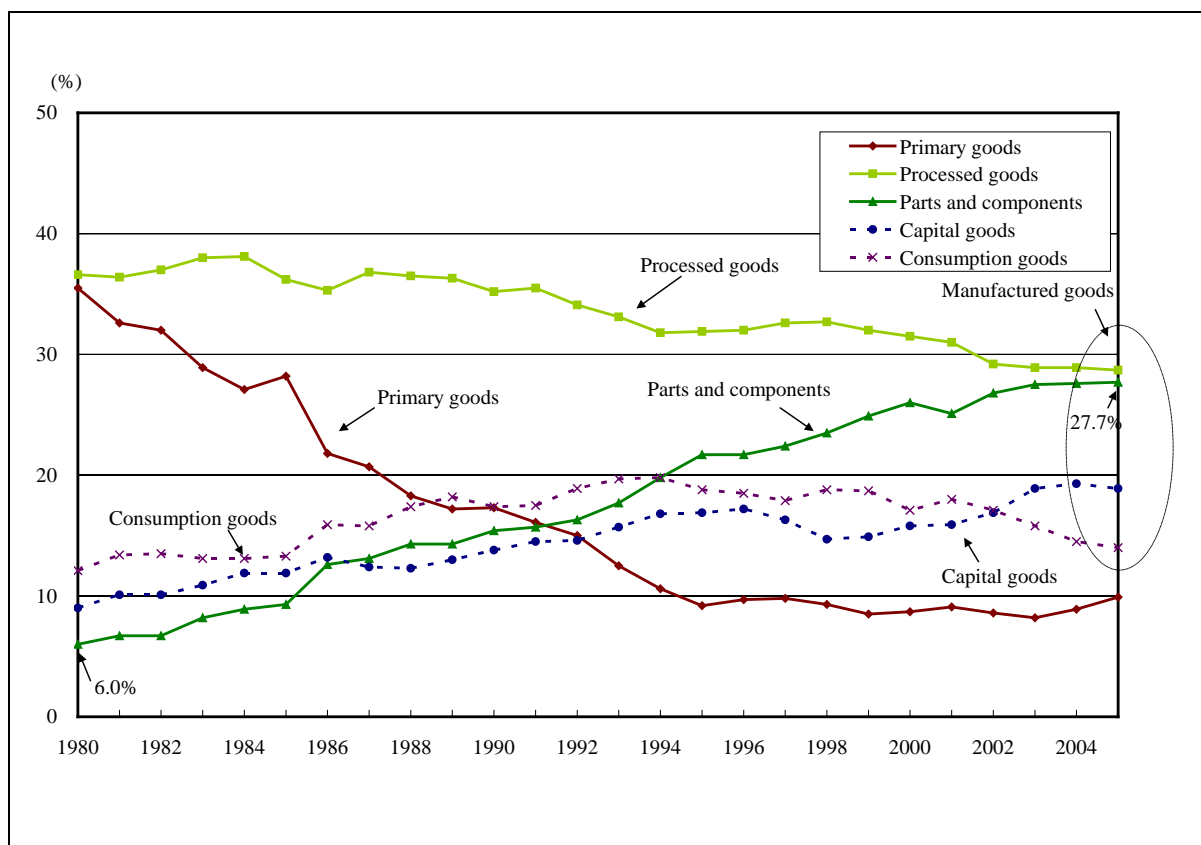
Figure 2: Trade Share of East Asia with Partner Country (%)



Note: East Asia consists of ASEAN, PRC, Japan, Hong Kong, China, Korea, and Taipei, China.

Source: IMF 2004.

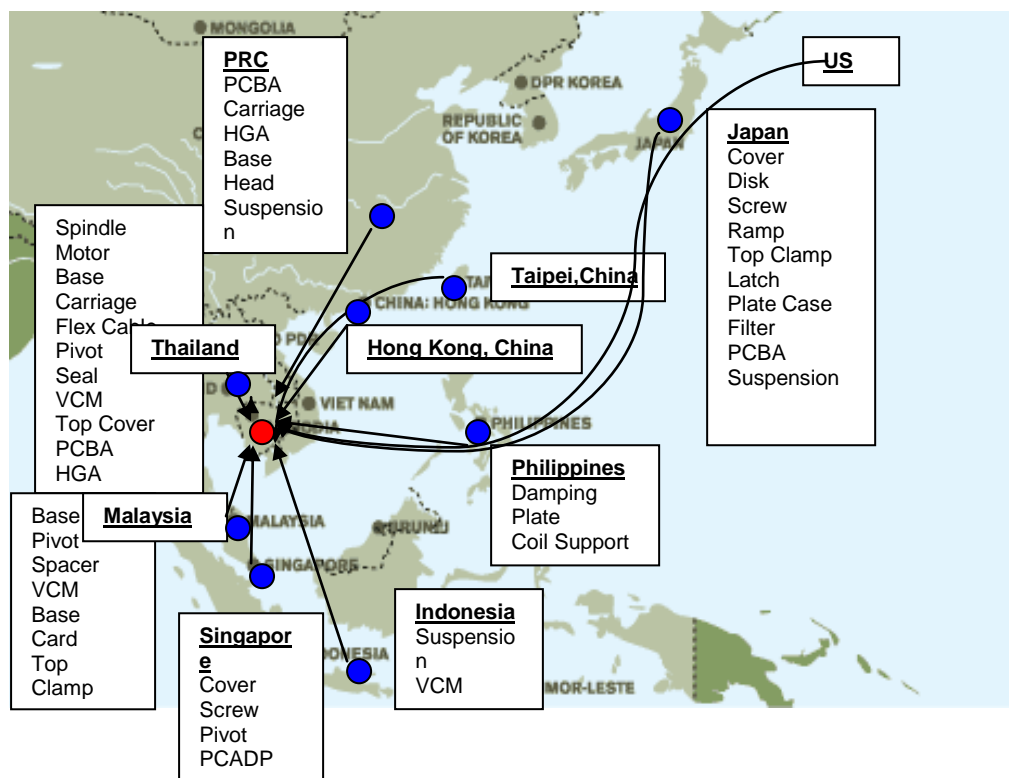
Figure 3: Trade Pattern Inside East Asia (%)



Note: The values of traded goods are measured by import value in terms of US dollars.

Source: Institute of Developing Economies (IDE) 2006.

Figure 4: Production Network in East Asia

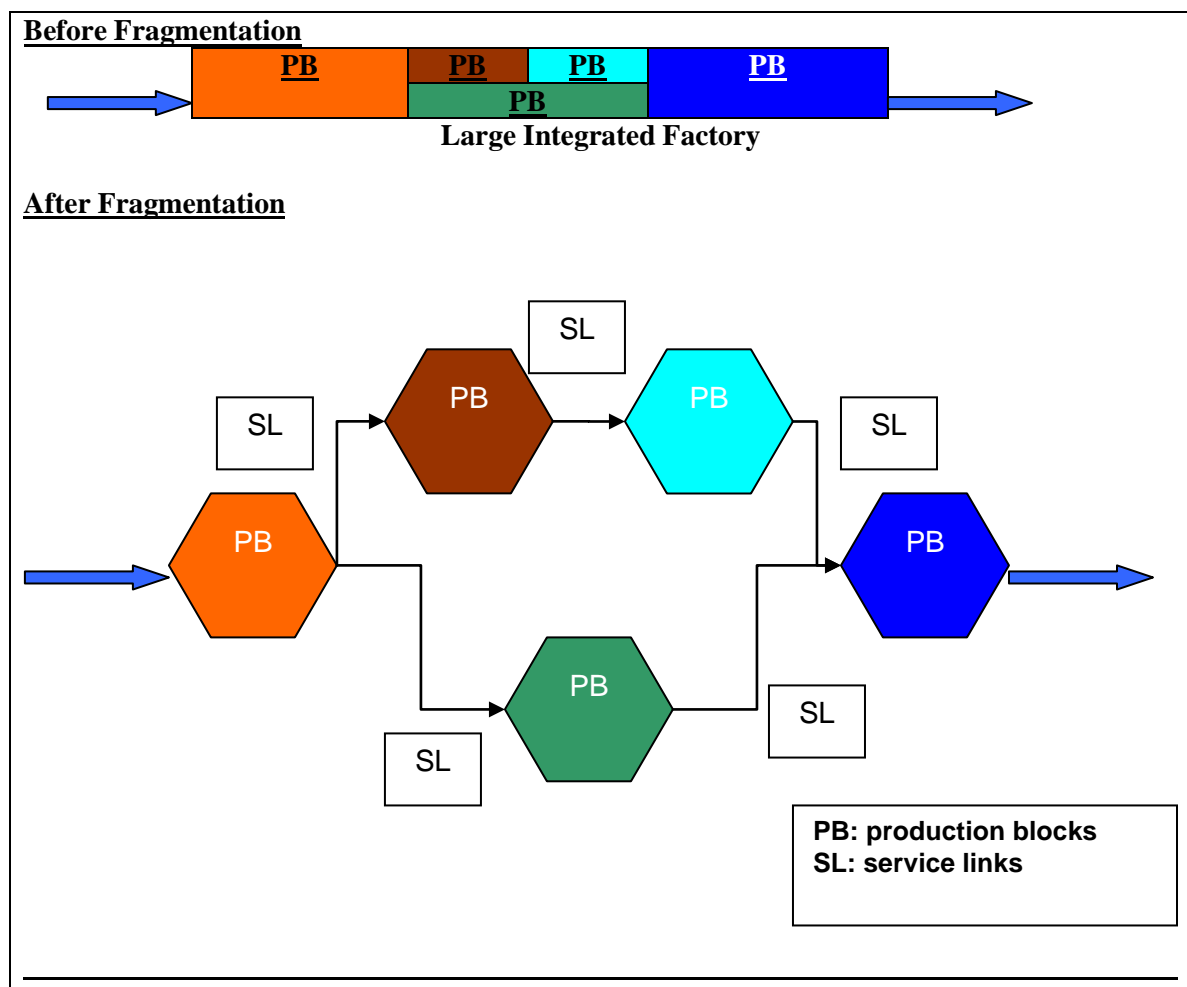


Source: Hiratsuka 2006.

2. THE MECHANICS OF INTERNATIONAL PRODUCTION NETWORKS AND THE IMPORTANCE OF SMES

Although international production and distribution networks in East Asia began to form since the beginning of the 1990s, Jones and Kierzkowski (1990) began developing the theory of fragmentation around the same time. The theory pointed out fundamental differences between the division of labor for industry and production-processes, or rather between finished products trade and intermediate goods trade, particularly within the context of the firm's decision making in cutting out production blocks and service link costs.

Figure 5: The Theory of Fragmentation



Source: Fukunari 2006

Figure 5 illustrates the original idea of fragmentation. Suppose that a large factory in the machinery industry takes care of all production processes from upstream to downstream. Such a factory is both capital and human-capital intensive and as such is likely to be located in a developed country. However, if we look at the factory in detail, we may find various production processes. Some processes are human-capital intensive and require a pool of researchers and technicians. On the other hand, some processes are highly labor-intensive and a pool of unskilled labor may suffice. Other processes may need to operate 24-hours per day in order to accelerate capital depreciation. Hence, if we can fragment production processes into several production blocks and locate them in appropriate places that possess different location advantages, we may save on the total production cost. This is fragmentation.

Fragmentation of production processes makes sense when the savings of production costs in production blocks is large and incurred service link costs for connecting remotely located production blocks are small. Firms can cut out production blocks so as to exploit differences in location advantages in remote areas. However, service link costs, including transport costs and various coordination costs, should not be too large. Transactions between production blocks tend to be relation-specific in a production process.

The international production and distribution networks in East Asia have reached a high level of sophistication in that fragmentation and agglomeration occur at the same time, developing the complicated combination of intra-firm and inter-firm transactions. To analyze the sophistication of production and distribution networks in East Asia, Kimura and Ando (2005) introduced fragmentation in terms of the firm's disintegration. They also included a

dispersion forces. The geographical theory analyzes the balance of these two opposing forces that generate a variety of location patterns of economic activities.

A key property of agglomeration forces is the circular causality of economic activities. For example, an automobile assembler would attract a number of upstream suppliers, and the resulting productivity enhancement and market expansion might lead to the entry of another assembler. Such circular causality would generate a sort of economies of scale through geographical proximity.

At the same time, the growth of economic agglomeration would enhance dispersion forces. Concentration of economic activities would increase land prices and wage rates, bring severe price competition among firms, cause traffic congestion, complicate telecommunication, and generate air pollution. Due to such congestion effects, dispersion forces would be intensified.

One of the important factors that affect the balance between agglomeration forces and dispersion forces is transport cost, which includes freight costs, tariffs, non-tariff barriers, and risk for exchange-rate variation. As transport costs decrease, agglomeration may grow. With a substantial decrease in transport cost, production activity may disperse instead.

There are three elements that make fragmentation possible. First, there must be production cost saving in fragmented production blocks—the firm must take advantage of differences in location advantages between the original location and a new location. Second, the cost of service links that connect remotely located production blocks, like the costs of transportation, must not be too high. Third, the cost of network set-ups must be small. When the additional cost for setting up a new plant is relatively small, the production process fragments easily. The feasibility of fragmentation, therefore, depends heavily on the nature of technologies in the industry and economic environment. New economic geography and the fragmentation theory provide insights to important factors that determine the location of economic activities in the globalizing era.

International production and distribution networks in ASEAN and East Asia are, relatively speaking, the most advanced and sophisticated in the world. East Asia has no doubt developed a favorable policy environment that is suitable for globalizing corporate activities. However, such a policy environment has been realized through accumulated profit-motivation actions by the private sector rather than being developed with well-designed strategic moves.

New economic geography and the fragmentation theory provide rich implications for policy environments in the globalizing era. New economic geography suggests a promulgation of policies that affect agglomeration forces and dispersion forces. The fragmentation theory suggests policies affecting production cost saving, service link cost, and network-set-up cost. Combined with careful consideration of policy needs that differ by development stages, it is possible to develop desirable policy packages in order to utilize globalizing forces.

3. THE LINK WITH TECHNOLOGY TRANSFERS AND SPILLOVERS

International production and distribution networks provide various opportunities for multinational enterprises (MNEs) and local firms in developing countries to compete and cooperate with each other. Such interactions between MNEs and local firms are much more varied and intense than in a world with relatively simple North-South industrial divisions of labor. This implies that the nature of technology transfers and spillovers has evolved in the enhanced economic dynamism.

In comparison with the relocation of whole operations to least developed countries (LDCs), a MNE has a greater degree of freedom in how to cut out production blocks, which in turn

yields greater flexibility in the location pattern. This means that a MNE can relocate some activities to LDCs with much smaller-commitments than in the case of relocating all activities. The consequence is that some production processes actually move to LDCs with technology advantages. From the viewpoint of hosting LDCs, such transfers require less policy than in the case of the relocation of the entire industry in the form of import-substituting foreign direct investment (FDI).

The physical movement of technology and managerial know-how to LDCs would provide more opportunities for local firms and entrepreneurs to enjoy technology transfers or spillovers. However, there is a potential difficulty that comes with these slices of value chains. Particularly at the early stage of development, fragmented production blocks do not typically engage in transactions with neighboring firms, which limits the linkage channel of technology transfers and spillovers to a particular firm. In addition, technology absorptive capacity is one of the crucial determinants for what sort of production processes will be located in LDCs, whether vertical linkage is developed, and whether technological spillovers occur. LDCs at the initial stage of industrialization typically suffer from low technology absorptive capacity.

Once LDCs reach the stage of industrial agglomeration, the perspective of technology transfers and spillovers is drastically improved. In industrial agglomeration, vertical division of labor by means of inter-firm transactions is actively conducted. Initially, such transactions tend to be among upstream and downstream MNEs. However, under severe competitive pressure, MNEs start seeking local firms to transfer technologies to local firms and entrepreneurs in order to obtain a supply of parts and components at satisfactory prices, quality, and delivery timing. Technology absorptive capacity of local firms and entrepreneurs again becomes an important determinant of the extent of technology transfers and spillovers. A key difference from traditional import substitution with heavy trade protection is the competitive pressure from international markets, which forces efficiency in MNE operations.

The spatial structure of production networks provides an important geographical consideration regarding technology transfers and spillovers. At least in the case of machinery industries with major just-in-time systems, inter-firm transactions almost always occur in geographical proximity. When a novice local firm enters international production networks, it most often occurs as a first layer transaction. This coincides with the geographical extent to which human resources can travel daily. Cross-border inter-firm transactions by local firms, such as transactions at the second or third layer of production, are rare except in cases where the firm has already established a strong reputation. Layer of production refers to different stages or phases of production.

In industries other than machinery, some adjustments are necessary. In the garment industry, for example, the speed and frequency of transactions are typically slower than in the machinery industry, and thus longer distance transactions between MNEs and local firms may be possible. In the software industry, the geographical distance in transactions may be less important, although credibility remains important. In both cases, technological links with MNEs are crucial to the quality of work.

3.1 New Development Strategies and Technology Transfers and Spillovers

The formation of international production and distribution networks in East Asia induces a fundamental revision of development strategies for LDCs. New development strategies claim that participation in international production and distribution networks is the key to accelerating economic development in an era of globalization.

The development of international production and distribution networks in East Asia also presents a new perspective on technology transfers and spillovers. Hosting FDI generates both positive and negative effects on local firms and entrepreneurs. Negative effects stem

from enhanced competition in local markets for products and labor, and technological dominance by MNEs may adversely affect the performance of local firms. On the other hand, positive effects include easier access to technology and managerial know-how for local firms and entrepreneurs. Technology transfers or spillovers may occur in the form of imitation or reverse technology, spin-off of engineers, and most notably vertical links to upstream and downstream MNEs.

A traditional development strategy known as import-substituting FDI seeks to establish vertical links between local firms and MNEs, and leverages those links to explore the possibility of technologically upgrading local firms and entrepreneurs. Such attempts often fail because the size of the local market is small and compensating incentives for MNEs such as import restrictions degrade the competitive environment. Under discretionary incentive schemes, MNEs typically have a weak incentive to make technology transfers to local firms and entrepreneurs.

Another development strategy that utilizes export-oriented FDI and does not provide a notable increase in technology transfers and spillovers insofar as the activities of MNEs are geographically segregated in narrow export processing zones (EPZs). MNEs in EPZs are exposed to international competition and pursue maximum efficiency. In this situation, the value-added slices that MNEs bring in are often very thin and limited to purely labor-intensive activities, and the enclave nature of EPZs becomes a serious obstacle to technology transfers and spillovers.

The concept of four layers of transactions has a profound implication in the context of East Asia. Developing countries at the early phase of economic development try to participate in international production networks by hosting production blocks pushed out of congested industrial agglomeration in the neighborhood. During this phase, transactions by invited production blocks occur mostly in the second layer. However, developing countries that have reached a higher phase of economic development should try to formulate efficient industrial agglomeration. In this phase, transactions in the first layer become important. Alternatively, in the context of developing economies outside East Asia, long distance transactions such as those in the third layer become important. The types of expected transactions require different policies, and have different demands for hard and soft infrastructure.

International production and distribution networks, particularly at the stage of development observed in the East Asia today, present a possibility for technology transfers and spillovers. East Asia proves that the sophistication of production fragmentation can achieve the level of industrial agglomeration in which active technology spillovers may occur. In an internationally competitive environment, some MNEs are quite willing to transfer technologies. This is a new way of pursuing technology transfers and spillovers.

One problem is that not all countries can immediately attain such a stage of development. In order to participate in international production and distribution networks, a country must host the first wave of production blocks invested by MNEs. At this stage, the operation tends to be thin in value-added processes, perhaps even thinner than in the case of traditional EPZ operations, and local vertical links are not yet established. This means that significant technology transfers or spillovers may not be expected for a while if the technology absorptive capacity of the industry is not well developed. Policymakers in LDCs must be patient in hosting FDI until a critical mass is built up, rather than hastily introducing performance requirements for technology transfers. Once the seed of industrial agglomeration has been planted, local firms and entrepreneurs will have ample opportunities for penetrating production networks, which will eventually accelerate technology transfers and spillovers.

Although these arguments require further theoretical elaboration and empirical support, they seem to be largely consistent with the literature on technology spillovers, such as Lim (2007). The literature in particular suggests that vertical input-output linkages between local

firms and MNEs are the most powerful channel to accelerate technology transfers and spillovers.

4. THE INTERNATIONALIZATION OF SMES IN REGIONAL AND GLOBAL VALUE CHAINS

Current State of SMEs in Southeast Asia

Before exploring what policies can facilitate the internationalization of SMEs in Southeast Asia, it is useful to first examine the sector's characteristics to get a sense of the present and potential capabilities, as well as the constraints that are present. This, however, is a tricky task given the following factors: 1) a lack of timely and comprehensive information about SMEs due to a structural weakness in statistical service in many developing countries, 2) the wide differences in economic structures and levels of development in the region, and 3) differences in countries' definitions of SMEs.

Roles and Characteristics

With its massive size, the SME sector forms the backbone of Southeast Asia's economy. It accounts for a majority (more than 90%) of the number of all private-sector firms (Asasen, Asasen, and Chuangcham 2003) and employs a considerable proportion of the domestic workforce in each country (40–90%). Thus, it is not surprising that Southeast Asia's SMEs play a significant economic role, albeit to varying extents (see Table 2). They make a substantial contribution to employment (about 40–90%) and exports (more than 25%), and play different dynamic roles that drive economic growth and industrial development (Wengel and Rodriguez 2006). For example, SMEs in Singapore provide a flexible skilled production base that attracts MNEs; while in Viet Nam SMEs and rural enterprises were instrumental in the transition process from a planned to market economy.

Southeast Asia's SMEs pervade virtually all socio-economic activities and services across urban and rural-urban areas. But there is much variation in their sectoral composition. While SMEs have an overwhelming presence in the Malaysian service sector, they are strongly represented in agriculture in Indonesia, food, beverage, and tobacco in Cambodia, and wholesale and retail trade in the Philippines (Table 2).

Given the trends of rising globalization and economic integration in the Asian region, there is significant potential for the SME sector to increase its contribution to the region's development through greater participation in global value chains (GVCs). There are, however, some characteristics that are generally shared among SMEs in Southeast Asia that limit their ability to do so.

Entrepreneurism

There is a shortage of a sustainable entrepreneurial drive in the sector. This can be attributed to a weak culture of innovation, and in the high growth Asian economies an over-reliance on technologies brought in by MNCs. Entrepreneurship capabilities are crucial for SMEs to maximize their inherent comparative advantages gained from operating on a small scale, such as the flexibility to adapt to changing market demands.

Level of Expertise

The SME sector's development is also constrained by a lack of skill and expertise in organization and management, which are important for enterprises' efficiency, flexibility, and competitiveness (Asasen, Asasen, and Chuangcham 2003). The need for competent, contemporary management is compounded by the fact that drastic economic and technological developments have created new, modern ways of production and service delivery.

Related to this issue is information communication technology (ICT) capability. Although there have been no comprehensive studies done on the extent of adoption of ICT in the SME sector in Southeast Asia, preliminary data suggest that a huge number of SMEs in Southeast Asia have yet to establish an online presence and networking facilities (Asasen, Asasen, and Chuangcham 2003). This can be partly attributed to a lack of awareness and know-how and limited access to ICT infrastructure, hardware, and software.

Networking

There has been minimal clustering and network forming among SMEs, activities that, as many scholars agree, can help small firms overcome some of the barriers they commonly face, such as difficult access to information, markets, and inputs (Giuliani, Pietrobelli, and Raboletti 2005). This may be due to an inward-looking mentality that is typical among the family enterprises that account for a large proportion of the sector. To illustrate, more than 90% of SMEs in Cambodia are single proprietorship businesses, owned by an individual or family (Baily 2007). In Malaysia, micro-establishments represent 79.4% of SMEs (Normah 2006). Linkages also require fundamental shifts in business strategies that SMEs may not be able to achieve because of a lack of resources and knowledge.

Access to Finance

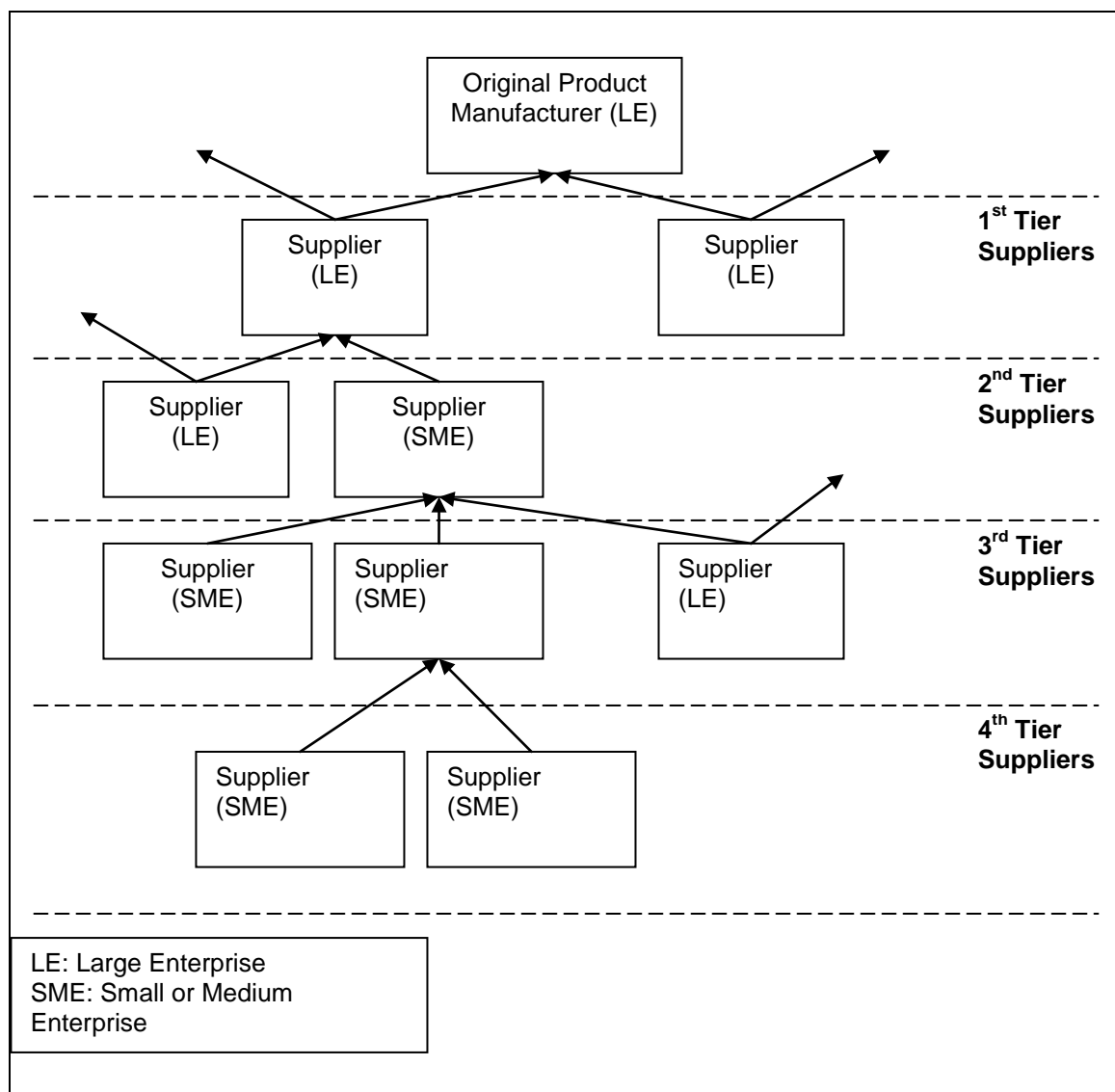
SMEs in most Southeast Asian economies have been having difficulty gaining access to finance for a long time. This can be attributed to imperfections in the financial markets and a lack of critical primary and secondary markets such as those for SME equity and bond financing. The formal banking sector remains the dominant source of credit for local businesses in the region. Worsening the problem, the current economic crisis has increased risk aversion and decreased liquidity. In response, governments have made substantial efforts to allocate formal-sector resources to support SMEs through measures such as subsidies and safeguarding banks. However, success has been spotty. Thus, SMEs are still struggling to secure long-term bank loans, working capital and bridge financing.

4.1 The Process of SME Integration into Global Value Chains

This section examines the three main frameworks that researchers have used to understand how firms internationalize and the consequent implications on government policy for SMEs. This will help shed light on the relevant motivating factors for these trends. Although the frameworks define internationalization as the process in which firms increase their involvements in overseas operations, the focus here is on SMEs and their participation in GVCs.

GVCs are evolving tiered structures. The main role is played by a lead firm that manufactures the final product. This firm is supported by a small number of preferred first tier suppliers, which are also supported by other suppliers, and so on, forming a tiered structure (Figure 7). It is generally easier to enter a network as a lower-tier supplier. But this position tends to be unstable as other suppliers can easily replace the original supplier by offering better comparative advantages such as lower costs (Abonyi 2005). Therefore the challenge for SMEs is not only to try to enter GVCs, but to move up the tiers by increasing the value content of their activities.

Figure 7: Original Product Manufacturer and Supplier Structure



Source: Abonyi 2005.

Admittedly, the frameworks presented below are theoretical and distinct. However, all of them have found some empirical evidence in past studies (see, for example, Lloyd-Reason et al. 2005; Etemad and Wright 2003), suggesting that harmonizing the different approaches instead of viewing them as contradictory can help guide analyses of SME internationalization. Indeed, the theories seem to be interrelated. They all state that knowledge of foreign markets is a fundamental driver of overseas expansion, although they attribute the acquisition of it to different sources.

4.2 The Stage Approach

According to the stage model, internationalization can be seen as an incremental process where different stages follow each other in a logical order (Luostarinen 1994). The assumption is that a firm’s knowledge about foreign markets and commitment to expanding overseas will consequently affect its business decisions and activities. As a firm’s international involvement increases, so does its overseas knowledge and commitment, thus starting an expansionary cycle. The process has been described as “a gradual acquisition, integration and use of knowledge about foreign markets and operations and a successively increasing commitment to foreign markets” (Johanson and Vahine 1977: 36).

Governments can therefore play a critical “triggering” role by enacting policies to boost SMEs’ knowledge of overseas markets and their commitment to expanding abroad. This can be done by providing information services and raising awareness about the benefits of internationalization, for instance. Once enterprises have branched out beyond national boundaries, the process is likely to gain momentum on its own. It then becomes more important for the government to play the role of facilitator, for instance by helping reduce entry barriers and lowering the cost of international expansion.

With rapid technological advancement and globalization, there has emerged evidence that the internationalization process is accelerating—a phenomenon the stage approach is inadequate in explaining. Though small, there have even been an increasing number of ventures that are global at start-up (Oviatt and McDougall 1997). This phenomenon is better explained by the following two models.

4.3 The Network Approach

Proponents of the network approach view internationalization as a natural development resulting from the process of establishing, improving, maintaining, and dissolving relationships with individuals and firms (Johansson and Mattson 1988). A firm’s network of both local and overseas relationships is seen as a crucial form of capital as it can create trust, raise access to information, and increase the firm’s ability to mobilize resources. As firms internationalize, the number and strength of relationships in their network increases, bringing more benefits and helping them integrate further into GVCs.

In line with this theory, studies have found that SMEs rely heavily on their networks for many activities when internationalizing, particularly in obtaining market knowledge and looking for opportunities (Mohibul and Fernandez 2008). Thus, a firm that wants to internationalize must first understand the market in which it operates—the environmental conditions and business relationships (Madsen and Servais 1997)—before finding ways to strengthen and utilize its network.

Facilitating the formation of relationships and linkages within local firms and between local and foreign firms should therefore be an essential component of policies helping SMEs internationalize. The government can, for example, assist SMEs in identifying foreign business partners.

4.4 International Entrepreneurship Theory

International entrepreneurship theory (IET) states that the basis for a firm’s internationalization is international entrepreneurship, which is defined as the discovery, enactment, evaluation, and exploitation of opportunities across national borders to create future goods and services (Oviatt and McDougall 2005). Discovery refers to finding opportunities. Enactment entails seizing opportunities and acquiring a competitive advantage, and evaluation is used to assess the actions taken.

This framework is especially relevant in the current age of technology, where SMEs can make use of cheap and easy ways of getting information and communicating with other countries to help them expand their activities abroad. The approach is also useful in understanding international new ventures, which from inception strive to build competitive advantage from the use of their resources and the sale of outputs in various countries (Oviatt and McDougall 1994) and therefore defy the traditional stage theories of internationalization.

Research on IET suggests that the entrepreneurial qualities of SME leaders are key to a firm’s internationalization, particularly in the early phases (Etemad and Wright 2003). However, as the business expands further, it gains more knowledge and expertise, and so the characteristics of the enterprise begin to exert more influence. Government policies aimed at helping SMEs internationalize should thus include the promotion of

entrepreneurism, as well as encouraging and helping SMEs explore the usages and opportunities of technology.

4.5 Fostering Local Firms and Entrepreneurs

How to foster local firms and local entrepreneurs in the competitive environment is a big concern for developing countries. In the past, direct or indirect protection for local firms was taken for granted as part of the infant industry protection argument. But now in the globalization era, local firms must compete with gigantic MNEs in the open market from the beginning. Determining what sort of industrial policies or SME policies would be justifiable is one of the most controversial topics among development economists.

SMEs play pivotal roles in the functioning of international production networks and economic agglomeration. There are certainly ways to foster local firms or SMEs by utilizing globalizing forces.

There is evidence that local firms are participating in production and distribution networks, particularly in machinery industries. An empirical study of Thailand, based on an industrial survey, obtained interesting research findings. First, between MNEs and SMEs there have been positive spillovers and linkage effects in the machinery industry, but not in other industries so far. Second, the impact of trade liberalization differs from industry to industry. Trade liberalization has increased productivity in the machinery industry and labor-intensive industries. Third local firms in machinery industry in particular have received the largest benefits from trade liberalization.

Another example of the link between MNEs and local firms can be found in Penang, Malaysia. In Penang, many indigenous enterprises have developed through linkages with foreign electronics companies. Indigenous enterprises are participating in producing not only parts and components but also industrial equipment. Foreign assemblers operating in Thailand are also gradually outsourcing to indigenous suppliers. Most of the indigenous enterprises that have linked with MNEs are SMEs. Some of them have succeeded in the global market place, serving customers in Asia and Pacific region and worldwide.

Economic integration has provided business opportunities not just in production and distribution networks, but also in capturing enlarged markets. For example, a Malaysian electrical appliance firm is expanding OEM production outsourced from MNEs and in the process of increasing production of OEM, the firm is able to expand to integrated ASEAN market. It is notable in agricultural products, including food and beverage, that ASEAN enterprises have shown a big presence. A Philippine food and beverage industry firm has expanded its business to overseas in Australia, PRC, Indonesia, and Viet Nam. A leading Thai agro-based company expanded its business into Cambodia, PRC, India, Indonesia, Malaysia, Myanmar, Singapore, Viet Nam, and other countries.

Such indigenous enterprises have succeeded in establishing linkages with MNEs and thus have expanded their businesses in the integrated global market.

Prior to the Asian financial crisis in 1997, rapid and dynamic economic growth in East Asia was facilitated through market-driven forces. Various regional economic cooperation initiatives and schemes were introduced, including an agreement on the ASEAN Free Trade Area (AFTA) in 1992 that came into full operation by the end of 2003. However, in the past the impact of ASEAN-initiated regional cooperation was negligible because ASEAN economies were basically competing in the same product range and their main export markets were to non-ASEAN countries. Recently, however, there is clear evidence to indicate that the impact of AFTA has encouraged production networking in Thailand, Viet Nam, and other ASEAN economies on some intermediate and consumer goods. Some economists claimed that de facto economic integration has proceeded in East Asia, even in the absence of effective implementation of AFTA and other regional bilateral trade and investment agreements. The nature and characteristics of de facto economic integration are

important for policy discussion to understand how far integration has been realized and what sort of integration has been achieved so far. Understanding such fundamental issues would be helpful for policymakers to design regional and bilateral free trade agreements (FTAs) in order to facilitate and accelerate the development of regional production networks. The development of vertical production networks has certainly been supported by trade liberalization efforts. On the other hand, the trade regime in East Asia is still far from a single production base and a single market. Substantial barriers in service trade still remain in East Asia. The development of vertical production networks, as well as remaining trade barriers, affects the nature of the on-going process of de jure economic integration in East Asia.

It is vitally important to understand the extent of the influence of the GVC and de jure regional trade agreements (RTAs) on regional production networking. Global business corporations have extended their production, material, and resource sourcing and markets beyond their domestic economies. Because of the pressure of integration, competition, and Just-in-Time (JIT) production system, which is based on timely delivery of spare parts and component to minimize the inventory costs, East Asia is now fully connected into a GVC system in which it produces the world production output. The importance of production networking, clustering (agglomeration), and fragmentation must be factored in de facto regional FTAs. There are some studies related to the importance of this issue. A future study should examine specific trade and investment areas and sectors.

4.6 The Impact of Sub-regional and Bilateral FTAs on Production Networking

Economic integration in terms of production networking or value chains has not benefited much from formal RTAs. The basic weaknesses of the ASEAN Free Trade Area (AFTA), ASEAN Economic Community (AEC), ASEAN Investment Area (AIA), and ASEAN Framework Agreement on Services (AFAS) are that there are too many exceptions on key sectors of ASEAN economies. Furthermore, the standardization and harmonization of rules and regulations has been inadequate. Transportation, infrastructure, and institutions to implement those trade and investment agreements are also absent or inadequate.

Production network and regional economic integration are accelerating in Southeast and Northeast Asia within the framework of GVCs and expanding production networks in East Asia. These trends are being driven by competition, the rise of the PRC and India, the political stability of the region relative to other regions, and the availability of productive labor forces and resources, all buttressed by individual countries' macroeconomic regimes and liberal trade and investment regimes that promote economic development.

Despite many distortions and inefficiencies in implementing ASEAN regional cooperation schemes, there are many cumulative positive effects on the rapidly emerging production networking and agglomeration of industry in East Asia. The clustering of the automobile and parts industry in Thailand, the clustering of the electronic industry in Malaysia, and the knowledge-based industry cluster in Singapore are cases in point. Indirectly, positive and business-friendly policies and institutional environments in Southeast Asian countries have contributed to the emergence of industrial clustering, agglomeration, and production. Further and enhanced efforts to accelerate and integrate existing agreements in goods, services, and investment are vitally important for ASEAN economies to meet the challenges and opportunities related to the rise of the PRC, India, and the accelerating trend of GVC development. In the case of Cambodia, Lao People's Democratic Republic (Lao PDR), Myanmar and Viet Nam (CLMV), these countries require development assistance in addition to ASEAN regional economic integration. Without adequate development assistance, trade and investment liberalization would not be sufficient for these countries, perhaps with the exception of Viet Nam, to benefit from the emerging production networking and industrial clustering in Southeast Asia.

Economic integration through regional and bilateral FTAs can enhance regional production networking if policymakers can minimize the distortions related to regional and bilateral FTAs in East Asia. Since 2000, bilateral FTAs and sub-region FTAs have proliferated throughout East Asia. These bilateral FTAs are based on reciprocal preferential tariff schemes. Both parties choose their own sensitive list. This implies that, for example, the ASEAN-PRC FTA (ACFTA) is counted as 10 separate bilateral FTAs between PRC and the 10 ASEAN countries. The degree of market access faced by an ASEAN exporter varies according to the ASEAN destination markets. This means that there are 45 bilateral preferential trade relationships within 10 ASEAN countries. In the same way, the ASEAN-Japan FTA, ASEAN-Korea FTA, and ASEAN-India FTA are each 10 separate bilateral FTAs. ASEAN-CER (Closer Economic Relation of Australia and New Zealand) constitutes 20 bilateral FTAs. In total, 105 ASEAN FTAs are enforced and/or under negotiation. Any ASEAN exporter faces different preferential treatments based on destinations. Baldwin (2006) has called the overlapping FTA problem the East Asian "noodle bowl syndrome". Potentially, 16 countries would produce 120 bilateral FTAs in the region.

Different FTA strategies by individual countries may create severe overlapping FTA problems. Because of the different FTA strategies taken by each country, there is much heterogeneity in exclusion lists, tariff rates, rules of origin (RoO), dispute settlement mechanisms, mutual recognition, competition policy, and other norms and regulation among existing multilateral FTAs in Asia. The overlapping FTAs can complicate tariff rates and RoO for the same products, according to the destination. It is commonly agreed that the costs arising from the RoO are expected to increase substantially when there are overlapped FTAs and RTAs.

Other than a lack of FTA, there are other crucial impediments to East Asia's bilateralism. First of all, with the exception of a few countries, East Asia has failed to form high level FTAs in terms of trade liberalization. Typically, reduction in agricultural trade barriers is important for narrowing development gaps, however, agricultural products tend to be excluded from most Asian preferential tariff treatments.

Moreover, the bilateral FTAs in East Asia have addressed trade liberalization in goods, but liberalization in service trade has not progressed much.

As a result, economic integration in East Asia still remains "shallow". Benefits from integration are limited since there are many border-related barriers other than tariffs.

The policy environment for trade facilitation in East Asia varies considerably by country. For example, custom clearance time is quite different among countries. Custom procedures are still complicated and lack transparency in many East Asian countries. This means that the policy space to facilitate trade, or reduce trade costs, is very large. If trade facilitation measures such as simplification and harmonization of customs procedure, paperless trading, and mutual recognition are improved, they will reduce trade costs and expand production networks by a considerable extent.

The enhancement of logistic infrastructure system, including that of the institutional system, is an issue to be challenged by East Asian policymakers in order to realize deep integration, since it serves to facilitate trade and location of production. A study on cross-border trade facilitation for ASEAN countries by the Japan External Trade Organization (JETRO) (2006) finds that goods between Bangkok and Hanoi, for example, have been transported mainly by sea, which does not fit the JIT production operation prevailing in other parts of East Asia. The JETRO study suggests that if logistic infrastructure systems, such as road networks, transportation terminal facilities, and legal institutions, are developed and established, then the volume of trucking transportation would increase. In a different context, land transportation clusters and volume would increase between Singapore, Malaysia, and Thailand if the three countries would agree to standardize their long-haul trucking system to facilitate cross-border trade and the JIT production network among the three most developed ASEAN economies.

5. EMERGING BUSINESS OPPORTUNITIES FOR SMES IN THE REGION

MNCs have expanded their production, material, and resource sourcing and markets beyond their domestic economies. Because of the pressures of integration, competition, and JIT production systems, the region is fully connected into a GVC system that churns out output for the global marketplace. As a result, globalization provides new opportunities for developing economies to enter international trade through production sharing and outsourcing. Since the early 1990s, international production networks have developed in ASEAN and East Asia, and gradually spread to India, Australia, and New Zealand, driven by market forces and facilitated by regional, sub-regional, and bilateral FTAs.

Signs of congestion in economic agglomeration in East Asia are beginning to appear, and dispersion forces have started to influence industrial location. There has been a substantial increase in production costs due to agglomeration and the resulting difficulties in securing labor, land, and other factors of production. In particular, labor-intensive and land-intensive production processes tend to shift location. Therefore, regional economic integration has set off dynamic growth impulses through global and regional production networking. In turn, this process has been facilitated by industrial agglomeration and fragmentation in sequential order. Differences in wage levels and land prices between more developed and less developed economies in the region create economic opportunities for narrowing the development gap and effect the spillover effect of growth to other neighboring economies. Their geographical proximity to growth centers would be a drawing point to less developed region but drastic reductions in the set up cost and the service link cost as well as improving policy environments would be required.

5.1 Latest trends in SME Businesses in Asia and Pacific Region

Globalization and regional integration processes are increasing in terms of speed and space. Countries that are able to take advantage of these two underlying fundamental forces have been growing faster and more sustainably. At the same time, economic openness and domestic trade and investment liberalization have dramatically increased competition in the domestic, regional, and global marketplace. Larger and efficient companies are normally able to leverage these new opportunities and challenges in domestic markets as well as across external markets. This challenging new economic environment tends to put SMEs at a disadvantage compared to large and medium-sized enterprises. However, there is empirical evidence to indicate that SMEs continue to develop and prosper in some countries. For example, SMEs in Japan, Korea, Taipei, China, Hong Kong, China, and Singapore are doing well and expanding. SME growth is not restricted to these countries but also increasingly in Thailand (automobile and electronic), Malaysia (electronic), Philippines (electronic, ICT), India (ICT, services), Australia, and New Zealand (ICT, services).

The fact is that large enterprises (LEs) and SMEs are the two important drivers of development in the developing Asia and Pacific region. While MNEs and domestic LEs have been playing an important role in accelerating the industrialization process, SMEs provide the crucial industrial linkages to set off a chain reaction of broad-based and sustainable development. Without SMEs as subcontractors and suppliers of intermediate inputs to MNEs and domestic LEs, industrial growth in developing countries would not be able to realize sustainable increase in domestic value-added, employment, productivity, and industrial linkages. In the globalizing era of the borderless marketplace, buttressed by regionalization and liberalization, SMEs provide an important source of domestic employment creation and resilience against more volatile external economic fluctuations, and serve as a mechanism for local capacity building.

SMEs play a pivotal role in the functioning of international and regional production networks. There are certainly ways to foster local firms and SMEs by utilizing globalizing market forces and regional economic integration; the issue is how to provide a critical linkage between SMEs and the large local companies and MNCs. Successful cases in Singapore and other countries have proven that governments play a vital role in ensuring a competitive market structure, providing relevant and effective technical upgrading, marketing information and management, consortium financing, and clustering (economies of scale) to SMEs.

While trade and investment liberalization and globalization are detrimental to the domestic growth of SMEs, there are counter-policy measures that can be implemented to synergize the negative effects of globalization and regionalization to result in a more dynamic, rapid, and sustainable regional economic development. The development of SMEs in the region is important as success in this effort will go a long way toward reducing regional and domestic income gaps, creating a balance of income and employment, and securing sustainable human and social security. To achieve this, there is a need to improve SMEs' international competitiveness through SME promotion policies, financing, and the tax system. SMEs can be sharpened in their ability to compete through improvement of competitiveness due to research and development, improvement of quality control, and skill. To upgrade the production process and capture a larger share of value-added, the government should promote the development of local parts and supplier industries. This seems an effective avenue to increase the domestic content of MNCs operating in the country. The development of domestic suppliers would require a package of technical assistance, including the provision of training to develop the skills of local suppliers together with access and availability of finance along with increased linkages between SMEs and large enterprises.

As regional production networking becomes more important as a source of economic growth, outsourcing and subcontracting will offer increasing opportunities for SMEs to capitalize on regional economic integration. Alternative and important emerging business opportunities for SMEs are the advent of Internet businesses and the widespread use of electronic and computer business design. Because of the electronic and computer revolution in business management and practices, many SMEs in Singapore and Hong Kong, China are expanding their business operation from homes and other flexible arrangements. Such flexibility in doing business comes about due to the infinite business opportunities offered through the borderless cyberspace world. This new mode of doing business reduces business and transaction costs enormously.

SMEs are also expanding very rapidly in the service sector of tourism and specialized marketing to newly emerging markets beyond the domestic market as the process of regional economic integration. Regional integration is further facilitated through reduction in tariff and non-tariff barriers and the harmonization of standards and customs procedures. In addition, free movement of capital and skilled professionals would facilitate the formation of an integrated single market and production base.

As regional integration is broadened and deepened toward a single market and production base, competition and market size increase at the same time. This is a positive effect of regional integration. Without a corresponding increase in the efficiency of local firms and SMEs, regional integration cannot be sustained as there will be more domestic opposition due to increased economic and social instability and unemployment. This is the crux of regional economic integration that underpins its sustainability, that it must not only increase efficiency but also provide positive and acceptable benefits to every constituent member within the free trade area or economic community.

With the processes of regional cooperation and economic integration, economies tend to experience higher economic growth. However, the higher rate of gross domestic product (GDP) growth may not be accompanied by a higher rate of employment. With globalisation and regional integration, there is a tendency that the rate of increase of output (GDP) and

the rate of increase of employment to not be proportionally linked. In other words, a country may have a much higher rate of increase in output than the rate of increase in employment. In addition, regional integration may tend to increase income disparity among members of the preferential trading area, if some countervailing measures are not properly instituted. In this respect, the development of viable and sustainable SMEs provides an effective measure to counter the negative effects of globalisation and regional economic integration.

Therefore, improving the competitiveness and capability of SMEs is vital for the sustainability of regional economic integration. There are manifold elements required to improve the competitiveness of SMEs. Countries at different stages of economic development require different core policy instruments aimed at improving their SMEs' capability development. Experience drawn from successful SME development in Korea, Taipei, China, and Singapore indicates that technology and industry upgrading are the core measures that must be continually implemented in order to stay competitive, in addition to clustering and improved marketing capability.

These countries set up central institutions to monitor and diffuse new technologies and provided technological services that SMEs could not provide for themselves. These included material testing, inspection and certification of quality, instrument calibration, establishment of repositories of technical information, patent registration, research and design and technical training. The Singapore Institute of Standards and Industrial Research has an incubator scheme that allows SMEs and innovators to make use of the Institute's space, equipment and technical advice, and provides common facilities for local firms to do research and development. These services are not given free, but are offered at affordable rates due to economies of scale and clustering effects. These three countries also provided training and management consultancy facilities for SMEs along with subsidized credit, tax incentives, and financial guarantees to capital market imperfections. As for technology upgrading, cost sharing was adopted to ensure that companies take the programs seriously.

Trade facilitation and technical assistance are normally attached with regional and bilateral FTAs. For example, the ASEAN Economic Community (AEC) has the Initiative for ASEAN Integration (IAI) to narrow the development gap between the more developed six ASEAN countries and CLMV countries. Equally, the ASEAN-PRC FTA, ASEAN-Japan FTA, ASEAN-Korea FTA, have preferential treatment and development assistance extended to less developed economies. Asia-Pacific Economic Cooperation (APEC) has an economic and technical (Eco-Tech) program as an integral part of the process of trade and investment liberalisation in the Asia-Pacific region. Regional cooperation and integration among countries with differing stages of economic development must be accompanied with development assistance, technological transfer and enhancing capability schemes in order to be effective and sustainable. International division of labour and specialization has become an important feature of international and regional trade and investment patterns and the development of technological capability of SMEs is an integral policy of liberalising trade and investment regime. Regional economic integration opens up opportunities and challenges for policy makers to provide industrial and technological upgrading to SMEs.

6. SUMMARY AND CONCLUSION

The importance of SMEs in the age of globalization, production networking, and regional economic integration is well documented and firmly established in the literature. The central question is why some countries have successfully transformed and established viable, competitive, and sustainable SMEs development while the majority of other developing countries have failed. The answer is complex and requiring of country-specific, sectoral level analysis as well as the examination of economic, political, social, and cultural elements in a dynamic context. However, some elements can be used as basic policy guidelines for developing SMEs.

Successful cases of SMEs development in Japan, Korea, Taipei, China, Hong Kong, China, Singapore, Thailand, Malaysia, India, and many other countries have adopted long-term comprehensive, coordinated and consistent policies. Often, empirical evidence shows that correct policy measures for SMEs in developing countries are not coordinated among relevant ministries, agencies, and organizations, which in the long run results in inconsistent policies. Therefore, governments and responsible agencies must develop “best practices” on the ideal business environment, training and upgrading, financing, marketing and management, sub-contracting, and networking and monitoring mechanisms to ensure that SME policies are efficiently and effectively carried out. Successful case studies invariably indicate that effective collaboration between government, trade associations, education, and training institutions is important in reducing cost for human resource development and capacity building.

Likewise, the dissemination of information through the effective use of available ICT should be maximally used. In this context, the establishment of national and regional corporate credit information and database and credit guarantee system in the region should be given high priority. The establishment of such database and credit information would contribute significantly to the problem of trade financing and other financing aspects of SMEs.

Globalization and regional integration require the healthy and sustainable existence of SMEs and their development in the region. The proliferation of bilateral and sub-regional FTAs has created duplication and overlapping of RoOs and other trade and investment rules and regulations that would increase the transaction cost of doing business in the region, affecting SMEs adversely. It is necessary to create a conducive business environment through the provision of standardization of products and services, rules and regulations and a seamless market infrastructure in the region.

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