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The Internationalisation of SMEs in Regional and Global Value Chains

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I. Background

Since the early 1990s, international production networks have developed in ASEAN and surrounding East Asia. Production networking and regional division of labor has been pursued, resulting in massive vertical intra-industry trade in parts and components within the region. The international trade statistics clearly presents the recent advancement of de facto economic integration in East Asia. Figure 2 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 ASEAN 10, China, Japan, Hong Kong, the Republic of Korea remarkably rose from 34.9 percent in 1980 to 52.4 percent in 2003. Surprisingly, this figure is higher than that of NAFTA (44.6 percent) though a bit lower than that of the EU (58.7 percent). 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 even by the Asian currency crisis in the late 1990s. However, The current global economic crisis has seriously affected the exports of East Asian export-oriented economies because the final demand in the US and other major developed markets were sharply reduced. The regional production network would resume once there is a sustained global economic recovery, albeit at lower level compared to pre-crisis period.

However, economic integration in East Asia does not seem to develop in an even manner. The share of intra-regional trade of the ASEAN 10 and China-Japan-Korea in 2003 remains at only 22.2 percent and 25.8 percent respectively, against that of East Asia (52.4 percent), which suggests that economic activity requires a large space in which to expand, i.e., the whole East Asia, as the spatial economists argue. Moreover, Figure 1 shows trade shares of East Asia by partner countries/regions where we can see that China and the ASEAN 5 (Indonesia, Malaysia, the Philippines, Singapore and Thailand) increased their shares in East Asian trade. This suggests that countries at relatively low-income levels have played a significant role in the expansion of the intra-regional trade in East Asia.

It should be pointed out that trade pattern inside East Asia has changed, from the traditional pattern in which final products such as consumer goods, intermediate goods, and capital goods had been traded to the pattern that has traded parts and components. To put it differently, intermediate goods in the same industry have actively been traded among the Asian countries,

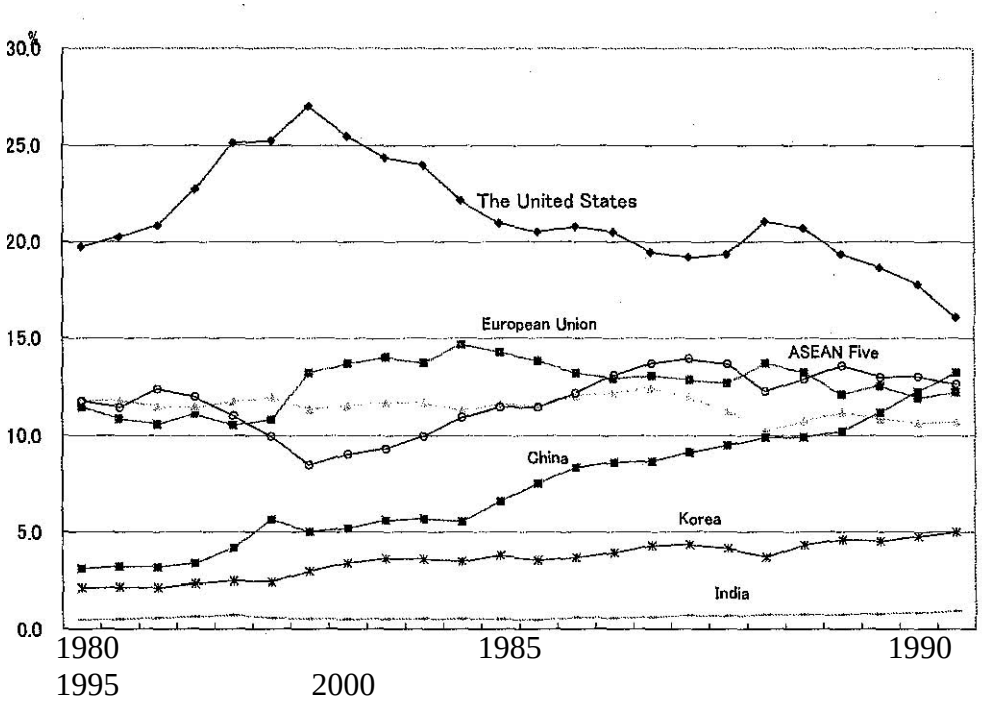
expanding intra-industry and intra-regional trade. For instance, import shares of parts and components within East Asia increased from 7.2% in 1980 to 32.2% in 2003, while those of processed goods decreased from 37.3% to 28.0% in the years. The shares of parts and components become the largest among commodity groups (see Figure 3 and 4).

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

This phenomenon is known as cross-border production sharing or fragmentation of production. Production processes are finely sliced into many stages and located in different countries in East Asia. It is theoretically confirmed that, in such vertical specialization, a slight decline in trade costs induces large trade in 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 four times. This is what actually happens in East Asia; when trade cost goes down, the competitiveness of the whole East Asia increases much.

Anderson and Wincoop (2004) estimated trade costs in developed countries, by using a gravity model. They found that the total trade cost was 170%, out of which 21% was for transportation of goods, 44% for border-related trade barriers, and 55 % for retail and wholesale distribution costs (2.7=1.21*1.44*1.55). A breakdown of the 44% border related trade barriers is 8% for policy barriers, 7% for language barriers, 14 for currency barriers, 6% for information barriers (use of different currencies), and 3% for contract enforcement and securities barriers in industrialized countries (1.44 = 1.08 x 1.07 x 1.14 x 1.06 x 1.03). The study suggests that elimination of border barriers other than tariff is also an important issue.

Figure 1 Intra-regional trade (export and import) ration (%)



Source: IMF, Direction of trade, 2004 CD-ROM

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

Note: East Asia consists of ASEAN10, China, Japan, Hong Kong, South Korea and Taiwan.
Source: IMF, Direction of Trade, 2004.

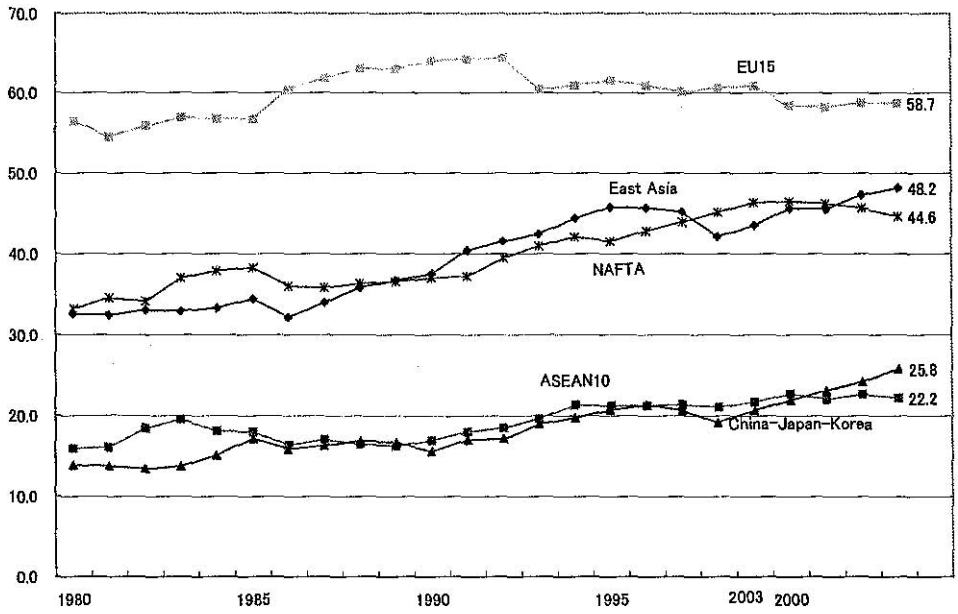
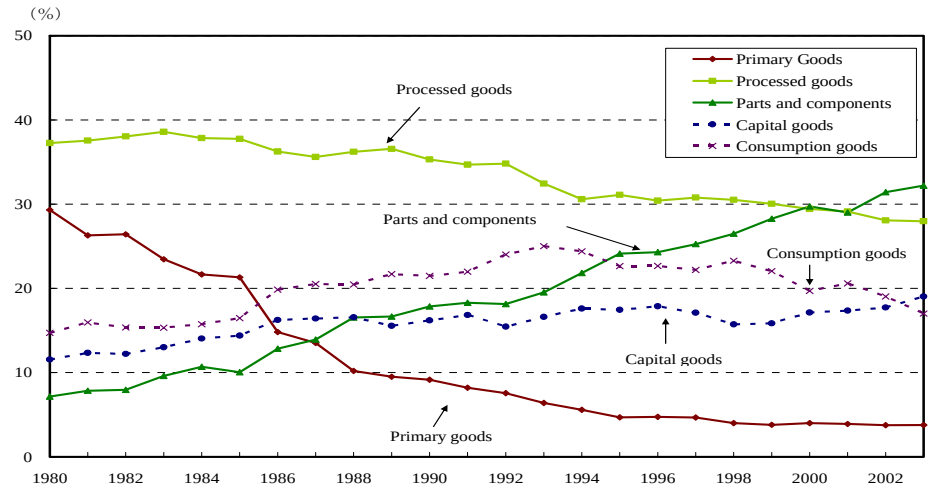
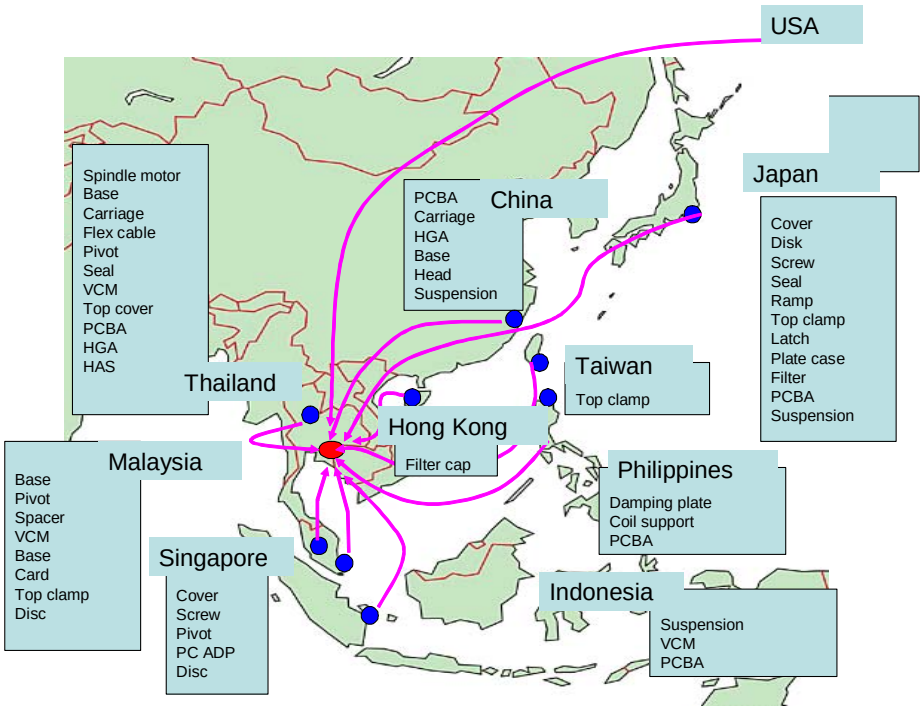


Figure 3: Trade Pattern inside East Asia (%)



Source: Comtrade.

Figure 4: Production network in East Asia



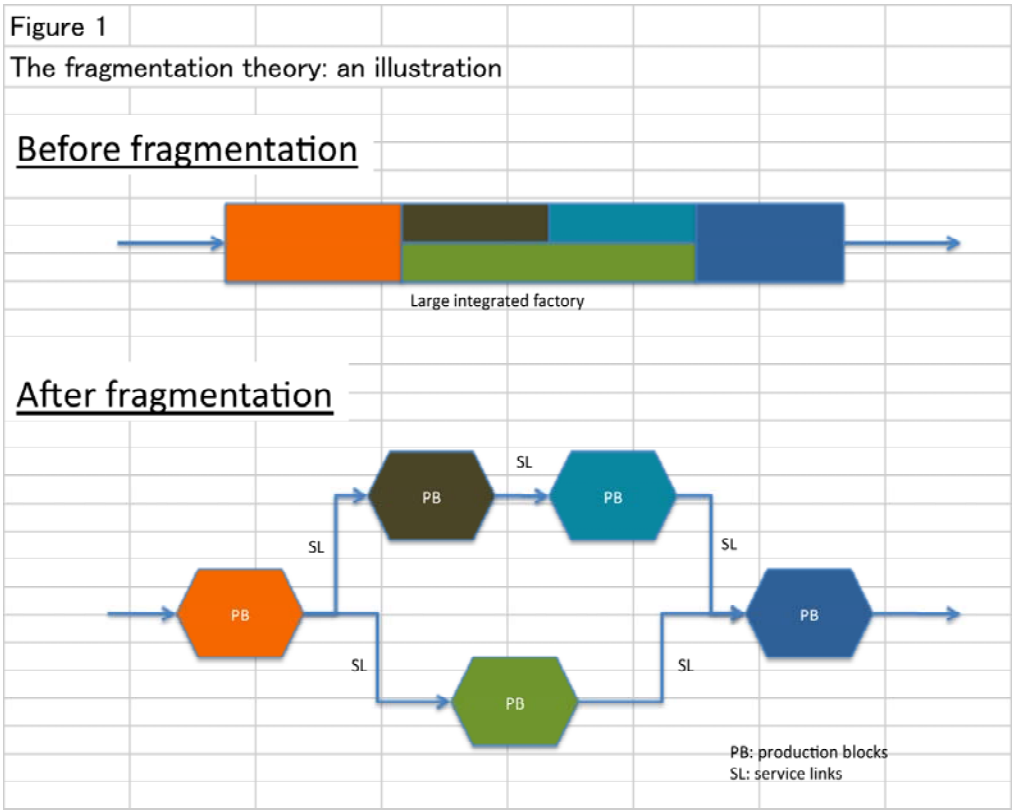
Source: Hiratsuka (2006). ERIA

2. The mechanics of international production networks and the importance of SMEs

Although international production/distribution networks in East Asia began to be formulated from the beginning of the 1990s, Jones and Kierzkowski (1990) made an early start in developing the theory of fragmentation. The theory pointed out fundamental differences between industry-wise division of labor and production-process-wise division of labor or between finished products trade and intermediate goods trade, particularly in the flexibility of firm's decision making in cutting out production blocks and the existence of service link costs.

Figure 1 illustrates the original idea of fragmentation. Suppose that a large factory in machinery industry initially exist, which takes care of all production processes from upstream to downstream. Such a factory is capital and human capital intensive as a whole and thus is likely to be located in a developed country. However, if we look at the factory in details, we may find various production processes. Some processes are human-capital intensive and require close watch of researchers and technicians. On the other hand, some are highly labor-intensive, and a mass of unskilled labor may do. Or, some processes need 24-hour operations in order to accelerate capital depreciation. Hence, if we can fragment production processes into several production blocks and locate them in appropriate places with different location advantages, we may save the total production cost. This is fragmentation.

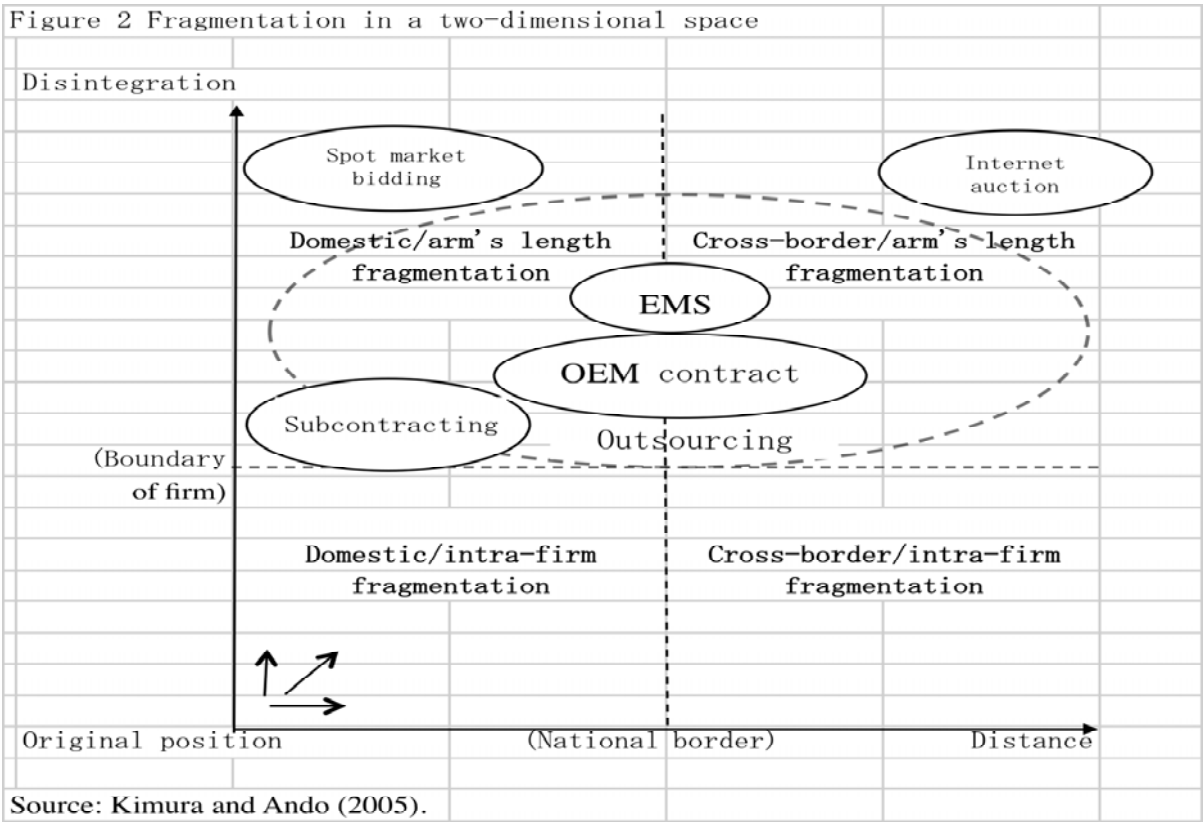
Figure 1
The fragmentation theory: an illustration



Fragmentation of production processes makes sense when (i) the saving of production costs *per se* in production blocks is large and (ii) 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. On the other hand, service link costs including not only transport costs but also various coordination costs should not be too large. Transactions between production blocks tend to be relation-specific rather than those in spot markets.

The international production/distribution networks in East Asia have reached high sophistication in that fragmentation and agglomeration occur at the same time and the complicated combination of intra-firm and arm's length transactions are developed. To analyze the sophistication of production/distribution networks in East Asia, Kimura and Ando (2005) introduce fragmentation in the dimension of disintegration, in addition to fragmentation in the geographical distance, where a firm decides whether to keep some economic activities inside the firm or to outsource them to unrelated firms (see Figure 2). This two-dimensional framework well explains the sophisticated nature of fragmentation in East Asia where both intra-firm and arm's-length (inter-firm) fragmentation of production processes is developed.

Figure 2 Fragmentation in a two-dimensional space



Source: Kimura and Ando (2005).

By introducing the idea of intimacy between geographical proximity and arm's-length transactions, the framework can explain the simultaneous development of the firm-level fragmentation of production processes and the industry-level formation of agglomeration. Arm's length transactions are accompanied with extra transaction costs, compared with intra-firm transactions, which are here interpreted as service link costs in the disintegration-type fragmentation. Such costs may be particularly high when a firm does not perfectly trust its counterpart. Short distance helps such transactions by cutting down the cost of identifying and monitoring business partners as well as the cost of trouble-shooting. Such forces in turn formulate industrial agglomeration in East Asia. At such a sophisticated stage of development of the formation of production networks, SMEs play a crucial role. SMEs are essential components of production networks with arm's length fragmentation in various forms including subcontracting arrangements and OEM contracts. SMEs are also essential components of industrial agglomeration. In this context, not only multinational SMEs but also local SMEs can be important participants in vertical arm's length division of labor.

In ASEAN and surrounding East Asia, international trade in parts and components has explosively been expanded, and the international division of labor in terms of production processes has developed to an unprecedented degree. At the same time, economic agglomeration or industrial clusters have grown in several notable places where dense vertical supply chains are formulated. The fragmentation of production processes and the formation of economic agglomeration, however, are rather new phenomena starting from the late 1980s or the early 1990s. To understand the mechanism of agglomeration and fragmentation, the new economic geography and the fragmentation theory, are extremely useful.

New economic geography explains the formation of economic agglomeration in geographical space. The spatial structure of economic activities is considered to be the outcome of a process involving two opposing types of forces, that is, agglomeration forces and dispersion forces. The theoretical formulation analyzes the balance of these two opposing forces that generate a variety of location patterns of economic activities.

A key property of agglomeration forces resides circular causality of economic activities. For example, an automobile assembler would attract a number of upstream suppliers, and then the resulted productivity enhancement and market expansion might in turn attract another assembler. Such circular causality would generate a sort of economies of scale in a geographical sense.

On the other hand, the growth of economic agglomeration would enhance dispersion forces at the same time. Concentration of economic activities would increase land prices and wage rates, bring severe price competition among firms, and cause traffic congestion, uneasy telecommunication, and air polIution. Due to such congestion effects, dispersion forces would be intensified.

One of the important factors that delicately affect the balance between agglomeration forces and dispersion forces is broadly defined transport cost, which includes freight costs, tariffs, non-tariff barriers, and risk for exchange-rate variation. As transport cost decreases, agglomeration may grow. With a further decrease in transport cost, production activity may rather disperse. New economic geography analyses factors, some of them are policy variables that determine industry location among countries or cities in different size.

The fragmentation theory focuses on the location of production processes. Production processes are fragmented into multiple slices and located, say, in different countries in East Asia. Suppose that a firm in electronics industry originally has a huge factory in a developed country that takes care of the whole production processes from upstream to downstream. If the firm can separate production processes and locate them in appropriate places, the total production cost may be saved.

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 position and a new position. Second, the cost of service links that connects remotely located production blocks, i.e., costs of transportation, telecommunication, and various types of coordination, must not be too high. Third, the cost of network set-ups is small. When additional cost for setting a new plant is relatively small, the production process fragments easily. The feasibility of fragmentation, therefore, heavily depends on the nature of technologies in the industry and economic environment. New economic geography and the fragmentation theory provide insights on important factors that determine the location of economic activities in the globalizing era.

International production/distribution networks in ASEAN and surrounding East Asia are relatively the most advanced and sophisticated in the world. As a background, East Asia has no

doubt developed a favorable policy environment suitable for globalizing corporate activities. However, such policy environment has been realized through accumulated profit-motivation actions by the private sector, rather than being developed with well designed strategic moves. Analytical evaluation of policy environments that enable countries to take advantage of globalizing forces for economic development is necessary and important.

New economic geography and the fragmentation theory provide rich implication for policy environments in the globalizing era. New economic geography suggests policies affecting the agglomeration forces and the dispersion forces. The fragmentation theory lists up policies affecting production cost saving, service link cost, and network-set-up cost. Combining with careful consideration on policy needs possibly different by development stages, it is possible to develop desirable policy packages in order to utilizing globalizing forces.

3. The link with technology transfer and spillovers

International production/distribution networks provide various opportunities for 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 a relatively simple industry-wise North-South division of labor. This in turn implies that the nature of technology transfers and spillovers has certainly evolved in the enhanced economic dynamism.

What would be the implication of production fragmentation for technology transfers and spillovers? In comparison with the relocation of whole operations to LDCs, an MNE has a degree of freedom in how to cut out production blocks, which generates much larger flexibility in the location pattern. This means that an MNS can relocate some activities to LDCs with much smaller co commitments than in the case of the relocation of entire activities. The consequence is that some production processes in industries, the relocation of which has not even been considered in the past, actually move to LDCs with technology. From the viewpoint of hosting LDCs, weaker policy intervention such as the improvement of special economic zones and logistics services would be necessary to induce such FDI than in the case of the relocation of the entire industry in the form of import-substituting FDI.

The physical movement of technology and managerial know how to LDCs would provide more opportunities for local firms or entrepreneurs to enjoy technology transfers or spillovers.

However, a possible difficulty comes from this 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/spillovers. 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 formulating industrial agglomeration, the perspective of technology transfers and spillovers is drastically improved. In industrial agglomeration, vertical division of labor by means of arm's length transactions is actively conducted. Initially, such transactions tend to be among upstream and downstream MNEs. However, under severs competitive pressure, MNEs start seeking local firms to transfer technologies to local firms/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 the traditional import substitution with heavy trade protection is competitive pressure from international markets, which provide efficiency in the operation of MNEs.

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, arm's length transactions almost always occur in geographical proximity. When a novice local firm enters international production networks, this most often occurs as a first layer transaction. This geographical extension is also equal in size to industrial agglomeration. It coincides with the geographical extent in which human resources can travel daily. Cross-border arm's length transactions by local firms, i.e., transactions in the second or third layer, are rare except in cases where the firm already established a strong reputation.

In industries other than machinery, some adjustments are necessary. In the garment industry, for example, the speed and frequency of transactions are typically slower that 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/Spillovers

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

The concept of four layers of transactions has a profound policy 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. On the other hand, 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. Required policies as well as demand for hard and soft infrastructure are certainly different, depending on what types of transactions are expected.

The development of international production/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 of products and labor where technological dominance by MNEs may adversely affect the performance of local firms. On the other hand, positive effects derive from 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/downstream MNEs.

A traditional development strategy utilizing import-substituting FDI intends to establish vertical links between local firms and MNEs and explore the possibility of technological upgrading of 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 does not provide a notable outcome 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. However, value-added slices that MNEs bring in are often very thin and limited to purely labor-intensive activities, and the enclave nature EPZs becomes a serious obstacle to technology transfers and spillovers.

International production/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 formation 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 internationally production/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, 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 is not well developed. Policymakers in LDCs must be patient until they are hosting a critical mass of FDI, 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 into 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. 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 internationalisation of SMEs in the region, 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. This, however, is a tricky task given: 1) a lack of timely and comprehensive information about SMEs due to a structural weakness in statistical service in many developing countries; and 2) the wide differences in economic structure and level of development in the region. To further complicate things, countries' definitions of SMEs vary (see Table 1). The characteristics identified below should thus be taken as a very general picture.

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 per cent) of the number of all private-sector firms (Asasen et al., 2003), and employs a considerable proportion of the domestic workforce in each country (40 to 90 per cent). It is hence 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 per cent) and exports (more than one-quarter), and play different dynamic roles that drive economic growth and industrial development (Wengel & Rodriguez, 2006). For example, in Singapore SMEs provide a flexible skilled production base that attracts multi-national corporations (MNCs); 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 peri-urban areas. But there is much variation in their sectoral composition. While SMEs have an overwhelming presence in the service sector in Malaysia, they are strong instead 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 globalisation and economic integration in East Asia, there is significant potential for the SME sector to raise 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 innovation culture, and for high-growth 'tiger' economies, to their over-reliance on technologies brought in by MNCs. Entrepreneurship capabilities are crucial for SMEs to maximise their inherent comparative advantages gained from operating on a small scale, such as the flexibility to adapt to changing market demands, helping them sustain high levels of export competitiveness.

Level of Expertise

The SME sector's development is also constrained by a lack of skill and expertise in organisation and management, which are important for enterprises' efficiency, flexibility and competitiveness (Asasen et al., 2003, p. 53). 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 study done on the extent of adoption of ICT in the SME sector in Southeast Asia, preliminary data suggests that a huge number of SMEs in Southeast Asia have yet to establish an online presence and networking facilities (Asasen et al., 2003, p. 66; PricewaterhouseCoopers, 1999, p. 7). This can be partly attributed to a lack of awareness and know-how, and limited access to ICT infrastructure, hardware and software.

Networking

There have been minimal clustering and network forming among SMEs, which 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 et al., 2004). This may firstly be due to the inward-looking mentality especially typical among family enterprises, which account for a large proportion of the sector. To illustrate, more than 90 per cent of SMEs in Cambodia are single proprietorship businesses, owned by an individual or family (Baily, 2007); in Malaysia, micro-establishments represent 79.4 per cent of SMEs (Normah, 2006).

Secondly, linkages 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

Lastly, SMEs in most Southeast Asian economies have long been having difficulty gaining access to finance. 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. The development of domestic and regional corporate credit information database and credit guarantee system would contribute significantly to trade financing and other financing and investment problems generally facing SMEs. The key to this solution is a joint public and the private sector collaboration to provide reliable financial database and credit facilitation/guarantee to enable banks and financial institutions to provide an easy access and a variety of financing options and instruments to SMEs.

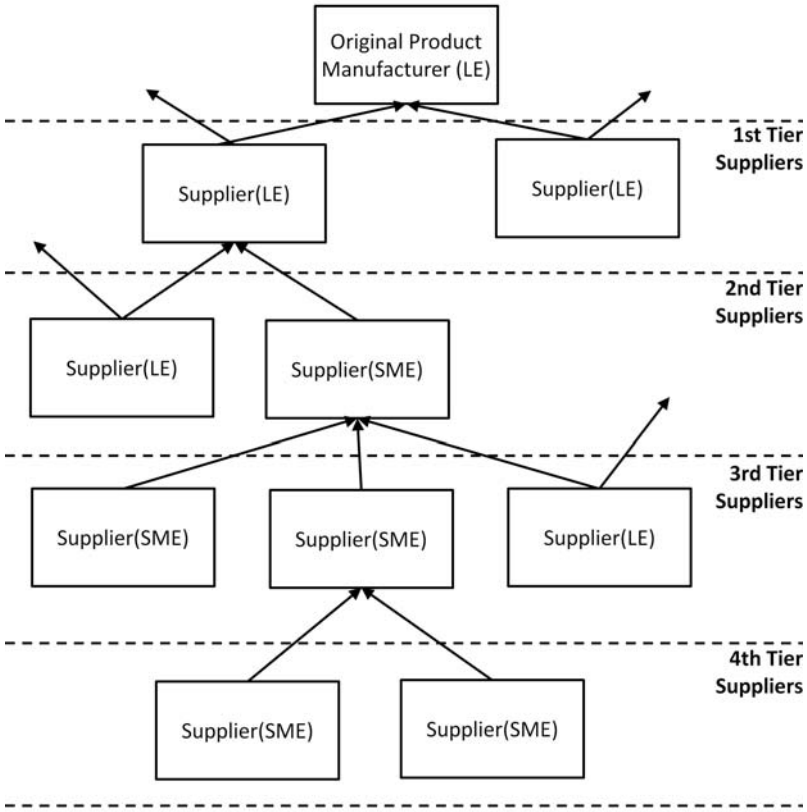
4.1 The Process of SME Integration into Global Value Chains

This section examines the three main frameworks that researchers have used to understand how firms internationalise, and the consequent implications on government policy for SMEs. It is hoped that this will move the discussion forward by shedding light on the relevant motivating factors. Although the frameworks define internationalisation broadly as the process in which firms increase their involvements in overseas operations, the focus here is on SMEs and their participation in GVCs (global value chains)

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 1). It is generally easier to enter a network as a lower-tier supplier. But this position tends to be unstable as it can be easily replaced by other suppliers that offer better comparative

advantages such as lower costs (Abonyi, 2005). The challenge for SMEs is therefore not only to try to enter GVCs but move up the tiers by increasing the value content of their activities.

Figure 1: How SMEs fit into Global Value Chains



LE: Large enterprise
SME: Small or medium enterprise
Source: Abonyi, 2005

Admittedly, the frameworks presented below are theoretical and distinct. However, all of them have found some support by empirical evidence in past studies (see, for example, Lloyd-Reason et al., 2005; and Etemad & Wright, 2003), suggesting that harmonising the different approaches instead of viewing them as contradictory can help guide analyses of SME internalisation. 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, internationalisation 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; and as its international

involvement increases, so does its overseas knowledge and commitment; thus forming a 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 & Vahine, 1977, p.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 for instance through providing information services and raising awareness about the benefits of internationalisation. Once enterprises have branched out beyond national boundaries, the process is likely to gain a momentum of 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

4.3 The Network Approach

With rapid technological advancement and globalisation, there has emerged evidence that the internationalisation 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 & McDougall, 1997). This phenomenon is better explained by the following two models.

Proponents of the network approach view internationalisation as a natural development resulting from the process of establishing, improving, maintaining and dissolving relationships with individuals and firms (Johansson & 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 ability to mobilise resources. As firms internationalise, the number and strength of relationships in their network increases, bringing more of such 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 internationalising, particularly in obtaining market knowledge and looking for opportunities (Mohibul & Fernandez, 2008). Thus, a firm that wants to internationalise must first understand the market in which it operates – the environmental conditions and business relationships (Madsen & Servais, 1997), before finding ways to strengthen and utilise 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 internationalise. The government can, for example, assist SMEs in identifying foreign business partners.

4.4 International Entrepreneurship Theory (IET)

IET states that the basis for a firm's internationalisation is international entrepreneurship – defined as the discovery, enactment, evaluation, and exploitation of opportunities across national borders to create future goods and services (McDougall & Oviatt, 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 (INVs), which from inception strive to build competitive advantage from the use of their resources and the sale of outputs in various countries (McDougall & Oviatt, 1994), and therefore defy the traditional stage theories of internationalisation.

Research on IET suggests that the entrepreneurial qualities of SME leaders are key to a firm's internationalisation, particularly in the early phases (Etemad & Wright, 2003). However, as the business expands further, it gains more knowledge and expertise; the characteristics of the enterprise then tend to exert more influence. Government policies aimed at helping SMEs internationalise 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/Entrepreneurs

How to foster local firms and local entrepreneurs in the competitive environment is a big concern of developing countries. In the past, direct or indirect protection for local firms was rather taken for granted in 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. What sort of industrial policies or SME policies would be justifiable is one ofthe most controversial topics among development economists.

Small and medium enterprises (SMEs) indeed play pivotal roles in the functioning of international production networks and economic agglomeration. There are certainly the ways to foster local firms or SMEs by rather utilizing globalizing forces. Multiple market failures however exist in the development of local firms and entrepreneurship, and they would be mitigated by proper policy arrangements.

There are evidences that local firms are participating in production/distribution networks, particularly in machinery industries. An empirical study of Thailand, based on industrial survey, obtained interesting research findings. First, between MNEs and SMEs, there have been positive spillovers and linkage effects in 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 machinery industry and labor intensive industries.. Third, in particular, local firms in machinery industry have received the largest benefits from trade liberalization[i].

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 equipments. We also observe that foreign assemblers operating in Thailand are gradually outsourcing to indigenous suppliers. Most of indigenous enterprises have linked with MNEs are SMEs. Some of them have succeeded in global market places, serving for customers in Asia-Pacific and the worldwide.

Economic integration has provided business opportunities not only participating in production/distribution networks but also capturing enlarged markets. A Malaysian electrical appliance firm is expanding OEM production outsourced from MNEs, as well as increasing direct sales by original brand to the ASEAN integrated market. It is notable in agricultural products including food and beverage that ASEAN enterprises have shown big presence. A Philippine giant food and beverage industry has expanded its business to overseas in Australia, China, Indonesia, and Vietnam. A leading Thai agro-based company expanded its business in Cambodia, China, India, Indonesia, Malaysia, Myanmar, Singapore, Vietnam and other countries.

Such indigenous enterprises have succeeded in establishing linkages with MNEs and expand its business in integrated 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 and agreement on ASEAN Free Trade Area (AFTA) in 1992 that came into full operation by end of2003. However, the impact of ASEAN-initiated regional cooperation was negligible because ASEAN economies were basically competing on the same product range and their main export markets were to non-ASEAN countries. However, recently, there is a clear evidence to indicate that the impact of AFTA has encouraged production networking in Thailand, Vietnam 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 crucially important for policy discussion to understand on how far integration has been realized and what sort of integration has been achieved so far. Understanding such fundamental issues would be helpful for policy-makers to design regional and bilateral FTAs in order to facilitate and accelerate further of regional production network. 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 remains in East Asia. The development of vertical production networks as well as remaining trade barriers affects the nature of on-going process of de jure economic integration in East Asia.

It is vitally important to understand the extent of the influence of the global value chain (GVC) and de jure regional trade agreements 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 JIT production system, East Asia is now fully connected into a global value chain system in which it produces the world production output. The importance of production networking, clustering (agglomeration) and fragmentation must be factored in de jure regional FTAs. There are some studies related to the importance of this important issue. What is needed is to focus the linkage and relevance of de jure regional trade and investment

arrangements with the accelerating process of production networking. A study should examine specific trade and investment areas and sectors, which require further government support and facilitations arising from trade and investment agreements.

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 regional trade agreements. The basic weaknesses of ASEAN Free Trade Area AFTA, ASEAN Economic Community (AEC), ASEAN Investment Area (AlA) and ASEAN Framework Agreement on Services (AFAS) are they are too many exceptions on key sectors of ASEAN economies, standardization and harmonization of rules and regulations are inadequate (including the existence of non-tariff barriers).
Transportation, infrastructure and institutions to implement those trade and investment agreements are absent or inadequate. With the adoption of ASEAN Economic Community blueprint in 2008 and other recent ASEAN initiatives to accelerate economic integration, there have been significant positive development on trade and investment liberalization behind borders.

Production network and regional economic integration are accelerating in Southeast and Northeast Asia within the framework of global value chain and expanding production network in East Asia. They are driven basically by market-driven forces of competition and the rise of China and India and the political stability in the region relative to other regions, and the availability of productive labour force and resources buttressed by individual country's macroeconomic regime and liberal trade and investment regimes which promote economic development.

Despite many distortions and inefficiency 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 automobile industry and parts if Thailand, the clustering of electronic industry in Malaysia and knowledge-based industry cluster in Singapore are cases in point. Indirectly, positive and business-friendly policy and institutional environments in Southeast Asian countries have undoubtedly contributed to the emergence of industrial clustering and agglomeration and production network particularly in parts, components and intermediate inputs in some sectors and in

some selected Southeast Asian countries. 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 China, India and the accelerating process of global value chain development trend. In the case of CLMV, these countries require development assistance in addition of ASEAN regional economic integration. Without adequate development assistance, trade and investment liberalization alone would not be sufficient for these countries, perhaps with the exception of Vietnam to benefit from the emerging production networking and industrial clustering in Southeast as their infrastructures and institutions are yet to be developed.

Economic integration through regional and bilateral FTAs can enhance regional production networking if policy makers can minimize some important distortions related to regional and bilateral FTAs in East Asia. Since 2000, bilateral FTAs and sub-region FTAs have proliferated in East Asia. What is the nature of the proliferation FTAs in East Asia? Those bilateral FTAs are based on reciprocal preferential tariff schemes. Both parties choose its own sensitive lists. This implies that, for example, the ASEAN-China FTA (ACFTA) is counted as 10 separates bilateral FTAs between China and 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 (l0x 9/2=45). In the same way, ASEAN-Japan FTA, ASEAN-Korea FTA, ASEAN-India FTA is 10 separate bilateral FTA each. ASEAN-CER (Australia and New Zealand) is 20 bilateral FTAs. Totally, 105 ASEAN FTAs are enforced and/or being under negotiation. Any ASEAN exporter faces different preferential treatments based on destinations. Baldwin (2006) has called the overlapping FTA problem as East Asian "noodle bowl syndrome". Potentially, 16 East Asia Summit countries would produce 120 bilateral FTAs (16 x 15/2) in the region.

Different FTA strategies by individual country may create severe overlapping FTA problems with a variety kind of FTAs. Because of the different FT~ strategies taken by each country, there are much heterogeneity in exclusion lists, tariff rates, rules of origin, dispute settlement mechanism, mutual recognition, competition policy, and other norms and regulation among existing multilateral FTAs in Asia. The overlapping FTAs would complicate tariff rates and RoO to the same products, according to the destinations. It is commonly agree that the costs arising from the RoO are expected to increase substantially when countries are overlapped by

multiple FTAs/RTAs.

Other than the lack of FTA management arising from different FTA strategy and overlapping issues, there are some crucial impediments in the East Asia's bilateralism. First of all, except for a few countries, East Asia has failed in forming high level FTAs in terms of trade liberalization. Reduction in agricultural trade barriers is important for narrowing development gaps. Agricultural products, however, tend to be excluded from preferential tariff treatments.

Moreover, the bilateral FTAs in East Asia, have addressed trade liberalization in goods, while liberalization in service trade has not progressed much in East Asia's FTA bilateralism.

In short, economic integration in East Asia still remains "shallow". Benefits from such integration are limited since there are much border-related barriers other than tariffs.. The study by Anderson and Wincoop suggests that tariff reduction can reduce border barriers partly. Considering that East Asia's border trade barriers other than tariff are greater than those of developed countries, this region can considerably benefit to reduce border barriers.

Trade patterns are very different from the past as global competition emphasizes economies of scale. Production process involves sequential stages of production that locates across countries. Different stages of production are divided among different suppliers that are located in different countries. Products traded between firms in different countries are intermediate goods instead of final products, and final products are sold to outside the region in which international division of labour in production process happens either intra-firm or inter-firm. This phenomenon is known as production fragmentation, slicing up the value chain, vertical specialization and production network. Production process sliced into many stages and location in different countries has developed significantly and at accelerating rate in East Asia. Theoretically, it has been confirmed that in such vertical specialization, a slight decline in trade costs induces large trade in intermediate goods since goods across border many times.

Policy environment for trade facilitation in East Asia vary considerably by country. For example, custom clearance time is quite different among countries. Custom procedures are still complicated and lack in transparency in many countries in East Asia. This means that policy space is to facilitate trade, or reduce trade costs, is very large. If trade facilitation

measures such as simplification and harmonization of customs procedure, paperless trading, mutual recognition are improved, it will reduce trade costs and expand production network to a considerable extent. This issue has been addressed with the implementation of ASEAN Single Window and National Single Window schemes that are being progressively implemented by ASEAN countries.

Enhancement of logistic infrastructure system, including institutional system, is an issue (to be challenged by policy makers in East Asia for realizing deep integration since it serves to facilitate trade and location of production. The study on cross border trade facilitation for ASEAN countries by JETRO (2006) finds that goods between Bangkok and Hanoi, for example, have been transported mainly by sea which does not fit the 'just-in-time" production operation prevailing in other parts of East Asia. JETRO study suggests that if logistic infrastructure system, such as road networks, transportation terminal facilities and legal institution is developed and established, then trucking transportation would increase. In a different context, land transportation cluster 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 'just-in-time" production network among the three most developed ASEAN economies.

5. Emerging Business Opportunities for SMEs in The Region

Multinational corporations have expanded their production, material and resources sourcing and markets beyond their domestic economies. Because of the pressure of integration, competition and Just-in-Time (JIT) production system, the region is fully connected into a Global Value Chain system in which it churns out output for the global marketplace. As a result, globalisation 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, East Asia and gradually spreading to India, Australia and New Zealand driven by market forces and facilitated by regional, sub-regional and bilateral FTAs.

There is in fact a sign of congestion in economic agglomeration in East Asia, and the dispersion forces start working to influence industrial location. There has been substantial increase in production costs in agglomeration due to difficulties in securing labour, land and

other factors of production. In particular, labour-intensive and land-intensive production processes tend to shift. The fragmentation phenomenon suggests that differences in location advantages such as factor prices motivate fragmentation of production process. 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 of the region create economic opportunities for narrowing development gap and the spill over effect of growth to other neighbouring economies. Their geographical proximity to growth center would be a drawing point to less developed region but drastic reduction in the set up cost and the service link cost and improving policy environments would be required.

5.1 Latest trends in SME Businesses in Asia and the Pacific

Globalisation and regional integration process are moving increasingly with respect to speed and space. Countries that are able to take advantage of these two underlying fundamental forces have been growing faster and more sustainable. At the same time, economic openness and domestic trade and investment liberalization have dramatically increased competition in domestic, regional and global marketplace. Larger and efficient companies are normally more able to leverage of this new opportunities and challenges in domestic markets as well across borderless external market. This challenging new economic environment tends to put SMEs at disadvantaged compared to large and medium-sized enterprises. However, there are empirical evidences to indicate that SMEs continue to develop and prosper in some countries. For example, SMEs in Japan, South Korea, Taiwan, Hong Kong and Singapore are doing well and expanding. This is not only restricted to these countries but increasingly in Thailand (automobile and electronic), Malaysia (electronic), Philippines (electronic, ICT), India (ICT, services), Australia and New Zealand (ICT, services).

The fact is large enterprises (LEs) and small and medium enterprises (SMEs) are the two important engines and wheels of development in developing Asia Pacific region. While multinational enterprises and domestic large enterprises 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 MNCs and domestic Les, industrial growth in developing countries will not be able to realize sustainable increase in domestic value-added, employment, productivity and industrial linkages. In the globalizing era of borderless marketplace, buttressed by regionalization and liberalization, SMEs provide an important source of domestic employment creation, resilience against more volatile external economic fluctuations and mechanism for local capacity building.

SMEs indeed play pivotal role in the functioning of international and regional production networks. There are certainly the 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 multinational companies. Successful cases in Singapore and other countries have invariably proved that the governments play a vital role in ensuring competitive market structure, in providing relevant and effective technical upgrading, marketing information and management, consortium financing and clustering (economies of scale) to SMEs.

There are evidences that local firms and SMEs are participating in production and distribution networks, particularly in the electronics, machinery, ICT, automobile and service industry. An empirical study in Thailand, based on industrial survey indicated that there have been positive spillovers and linkage effects in machinery industry producing parts and components to the growing automobile cluster industry. Another link between MNCs and local firms can be found in Penang, Malaysia. Many SMEs have developed linkages with foreign electronic companies. Local SMEs are participating in producing not only parts and components but also industrial equipments.

Economic integration has provided business opportunities in not only participating in production and distribution networks but also in capturing expanded domestic and external markets. For example, a Malaysian electrical appliance firms is expanding OEM (Original Equipment Manufacturer) production outsourced from MNCs, as well as increasing direct sales by original brand to the ASEAN integrated market. It is notable in agricultural products including food and beverage that ASEAN enterprises have shown increasing market presence. Such local firms and SMEs have succeeded in establishing linkages with MNCs and expand their business in integrated market

While trade and investment liberalization and globalisation are detrimental to the domestic growth of SMEs, there are counter policy measures that can be implemented to synergise the

negative effect of globalisation and regionalisation through a more dynamic, rapid and sustainable regional economic development. The development of SMEs in the region is vitally important as success in this effort will go long way in reducing regional and domestic income gaps and in creating a balance of income and employment and securing a more sustainable human and social security. To achieve this, there is a need to improve SMEs' international competitiveness through SME promotion policies, finance and tax system. SMEs can be sharpened in their ability to compete through improvement of competitiveness due to R & D, 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 the 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, training to develop 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 offer increasing opportunities for SMEs to leverage on regional economic integration. Another important emerging business opportunities for SMEs are the advent of internet business and the widespread use of electronic and computer business design. Because of electronic and computer revolution in business management and practices, many SMEs in Singapore, Hong Kong are expanding their business operation from homes and other more flexible arrangements. Such flexibility in doing business and infinite business opportunities offered through the borderless cyberspace world of business. Such new mode of doing business reduces business and transaction costs enormously.

SMEs are also expanding very rapidly in the service sectors of tourism, specialised marketing to newly emerging markets beyond domestic market as the process of regional economic integration accelerates. Regional integration is further facilitated through reduction in tariff, non-tariff barriers, harmonization of standards and customs procedures, goods and services, capital input and skilled professional can move conveniently and competitively across the integrated and single market and production base.

As regional integration is broadened and deepened towards a single market and production base, competition and market size increase at the same time. This is a positive effect of regional integration if efficiency and productivity of domestic enterprises are improved.

Without a corresponding increase of efficiency of local firms and SMEs, regional integration cannot be sustained as there will be more domestic opposition and economic and social instability in the affected country that experiencing increased unemployment. This is the crux of regional economic integration sustainability that it must not only increase efficiency but also provides positive and acceptable benefits to every constituent member of free trade area or economic community.

With the process of regional cooperation and economic integration, economies tend to experience higher economic growth. However, this higher rate of GDP (gross national income) growth may not be accompanied by 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 would not be proportionally linked (dysfunction). 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 a manifold elements required to improve the competitiveness of SMEs. Countries at different stage of economic development require different focus and core policy instruments aimed at improving their SMEs capability development. Experience drawn from successful SME development in South Korea, Taiwan, and Singapore indicates that technology and industry upgrading are the core measures that must be continually implemented in order to be competitive, in addition to clustering and improved marketing capability.

These countries set up central institution to monitor and diffuse new technologies and provided technological services that SMEs could not provide 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 schemes 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 R & D. These services are not given free but at affordable fees due to economies of scale and clustering effects. All 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, ASEAN Economic Community (AEC) has Initiative for ASEAN Integration (IAI) to narrow development gap between the more developed ASEAN-6 and CLMV (Cambodia, Laos, Myanmar and Vietnam). Equally, ASEAN-China FTA, ASEAN-Japan FTA, ASEAN-Korea FTA, have preferential treatment and development assistance extended to less developed economies. Asia-Pacific Economic Cooperation (APEC) has 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 stage 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.

Summary and Conclusion

Production fragmentation and networking has been an important feature of regional production networking, especially in intermediate inputs and industrial components of computer peripheral, electrical and electronic components, machinery and automobile parts. The role of SMEs in production fragmentation has been expanding and their potentials to grow within the framework of regional and global value chains are promising. In this context, 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 analysis on the basis of country-specific, sector-specific as well as economic, political, social and cultural elements in a dynamic context. However, there are some basic elements that can be used as basic policy guidelines for developing SMEs.

Successful cases of SMEs development in Japan, South Korea, Taiwan, Hong Kong, Singapore, Thailand, Malaysia, India and many other countries have adopted long-term comprehensive coordinated and consistent policy. Often, empirical evidence shows that correct policy measures for SMEs in developing countries are not coordinated among relevant ministries, agencies and organizations that in the long run those policies are not even consistent. Therefore, government and responsible agencies must develop “best practices” on business environment, training and upgrading, financing, marketing and management, sub-contracting and networking and monitoring mechanism to ensure that SME policies are efficiently and effectively carried out, Successful case studies invariably indicate that an effective collaboration between government, trade associations, education and training institutions is important to reduce cost for human resource development and capacity building Likewise, disseminate information through the effective use of available information and communication technology (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 a 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.

Globalisation and regional integration critically require a healthy and sustainable existence and development of SME 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, especially affecting adversely to SMEs. To create a favourable borderless business environment, a condusive business environment through a provision of standardization of products and services, rules and regulations and a seamless market infrastructure are urgently needed. More than trade and liberalization at the borders, trade facilitation, capacity building and harmonization of rules and regulations behind borders are more relevant and urgent at this stage of regional integration.

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