

An Analysis of Trade Policy Environment and Global Production Networks: Implications on Regional Agreements

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I. INTRODUCTION

The economic performance of the East Asian region has registered the fastest growth in the last decade and this trend is projected to be sustained in the first decade of the 21st century. One of the engines of growth on this part of the world has been attributed to a great extent to the growth in exports. Indeed, trade in merchandise exports has expanded from 15 percent in the 1980s to 22 percent in the 1990s (WTO website).

With the expansion in trade, there are emerging changes in the composition of exports. One of these changes in East Asian exports is the growing importance of commodities produced and traded by production component arrangements (PCA) or also referred to as global production networks (GPN). GPN is a production arrangement where division of previously integrated goods are made into their constituent parts, components and accessories and distributed in various localities based on their cost advantages. The application of this networked production process started with consumer goods and subsequently shifted to transport equipment, semiconductors, automobiles and other products. The production component arrangement, however, is not limited to trade in goods since various services functions of transnational corporations (TNCs) have subdivided and distributed to various parts of the world to take advantage of marginal differences in costs, resources, logistics and markets (Rajan, 2003).

Although TNCs are linked with the development and expansion of global production networks, various forces including the liberalization of global trade and investment, and the rapid growth in information and communication technology (ICT) have altered the competitive environment where TNCs operate. These forces and subsequent changes, in turn, are the ones currently affecting the growth and direction of GPN in the global commerce.

The previous discourse on transnational corporations enumerates various reasons for transferring production plants overseas. Exploring offshore markets is a strategy to hurdle the protective wall of high tariffs in foreign markets, exploit the low cost of labor, and follow the life cycle of products. As an adjustment mechanism, production plants of commodities at various stages are transferred to various locations to exploit cost differentials following a flying geese pattern¹. These factors have created a pattern of international production: offshore production sites in low-cost locations linked through triangular trade among home countries, host countries and major markets (Ernst & Kim, 2001).

The forces of liberalization, deregulation and the impact of ICT, however, have changed drastically the way TNCs compete globally. Beyond market access and exploitation of spatial cost differentials, TNCs today have to confront and manage new challenges. Their operations should be flexible to deal with increasing uncertainties; shorten their product cycles to deal with the compression of speed to market; learn and acquire specialized external capabilities; and shift to market penetration strategies to explore new and unknown markets (Ernst & Kim, 2001).

While global production networks created a multiplication of production sites across national boundaries, the basis of comparative cost advantage of countries, however, has become very unstable. Since the nature of production is not rooted and integrated domestically, a change in cost can alter the locational advantage of a country and can lead to massive domestic dislocations and adjustments. This knife-edge comparative advantage necessitates a keen awareness on the short-run cost competitiveness as well as the need for constant industrial upgrading to remain competitive in the long-run (Rajan, 2003).

Given the importance being played by GPN in the growth of trade in the East Asian region, there are three main problems that this study would like to answer. 1) What is the role of the liberalization forces in

¹ Flying Geese Paradigm - a model for international division of labor in East Asia based on dynamic comparative advantage. The paradigm postulated that Asian nations will catch up with the West as a part of a regional hierarchy where the production of commoditized goods would continuously move from the more advanced countries to the less advanced ones.

promoting or enhancing the growth of global production networks or production sharing in the region? 2) What are other forces that may further enhance the growth of GPN in the region? 3) What are the implications of GPN in the emergence of regional trading agreements?

In order to answer these key questions, the following objectives will be pursued:

- i) To trace the pattern of trade within and outside the region in terms of composition, direction and growth;
- ii) To trace the role of Global Production Networks (GPN) in the pattern of trade in the region;
- iii) To review the liberalization forces in the Asian region in terms of trade, investment and business facilitation;
- iv) To review the non-liberalization forces that may have contributed in the rapid growth of GPN in the region; and
- v) To assess the possible role and contributions of regional trading agreements (RTAs) or bilateral trading agreements (BTAs) and other regional agreements in enhancing the growth of GPN.

II. CONCEPT OF GLOBAL PRODUCTION NETWORKS

The emergence of the GPN has brought on a new perspective to the pattern of world trade and investments. The rapid economic development of newly industrialized and developing economies in Southeast Asia is partly fueled by foreign direct investments (FDI) and the GPN.

Global production networks is one of the trends in today's competitive world. Firms, especially multinational corporations, create production networks in various countries and these networks not only comprise of factories that manufacture goods or products but also include research centers, among other aspects of a business. The global production networks are seen to replace the transnational corporation as the most effective form of industrial organization. This is a shift that has emerged in response to three constituent processes of globalization, namely: the ascendancy of liberalization policies; the rapid uptake of ICT; and the onset of global competition.

Moreover, it is the networks that combine concentrated dispersion of the value chain across firms and national boundaries, with a parallel process of integration of hierarchical layers of network participants. Production networks are the nexus of interconnected functions and operations through which goods and services are produced, distributed and consumed. These networks have evolved into complex organizations that are able to integrate firms into global structures and eliminated barriers that has once limited the scope and endeavors of firms. They are able to do this by the development of diverse forms of equity and non-equity relationships and through the integration of national economies.

The growing complexity of competition in the global economy has changed the determinants of firm organization and growth as well as the determinants of location (Ernst, 2001). In the cross-national organization of businesses, three interconnected transformations have occurred. The first one is that global production networks have multiplied as a major organizational involvement in global operations. These networks have helped global corporations to maintain their competitiveness by providing them with access to specialized suppliers at lower-cost locations (Ernst, 2001). Second, global production networks have acted as catalysts for international knowledge diffusion by providing new opportunities for local capability formation in lower-cost locations outside the industrial heartlands of the largest economies in the world. Third, a long-term process of "digital convergence" has opened up new opportunities for organizational learning and knowledge exchange across organizational and national boundaries. This third point magnates the first of the two transformations (Ernst, 2001).

A. Hierarchy of GPN Participants

Ernst and Kim (2001) provide an extensive discussion on participants in a global production network. The hierarchy mentioned in their work is referred to as the flagship model which essentially groups GPN participants as either a flagship or a local supplier. At the heart of the GPN is the flagship, which supervises and directs the operations of the network. It has control over the resources in the network and coordinates transactions and knowledge diffusion at each point in the network. As such, the flagship only retains

segments of the value chain where it has a strategic advantage. Otherwise, these segments are outsourced to various locations, depending on each location's advantages.

Ernst and Kim (2001) differentiated the two kinds of global flagships. At the top of the hierarchy is the brand leader (BL), which is linked to local suppliers by the contract manufacturer (CM). Contract manufacturers create their own supply chain networks to service the BL. Activities that are outsourced by flagships are handled by local suppliers. Similar to flagships, there are also two kinds of local suppliers mentioned in the literature.

On one end are higher-tier suppliers (also referred to as lead suppliers), which interact directly with CMs and BLs. Higher-tier suppliers have their own proprietary assets, including technology, and they are able to develop and deepen their own linkages (Ernst, 2002). It is frequently interacting with U.S.-based BLs and CMs and has the characteristics described above and its own GPN. An example given is Taiwan's Acer group.

On the other end are the lower-tier suppliers, whose main competitive advantage is low transaction costs. These suppliers usually interact with higher-tier suppliers and do not have proprietary assets. Among the participants in the network, these suppliers are the most vulnerable to shocks, and could thus be taken out of the network immediately.

B. Drivers of GPN

There are three major driving forces that shifted the contour of industrial organization from transnational corporations towards global network flagships: (1) liberalization, (2) information and communications technology, and (3) competition. These forces pressured global flagships to emerge and integrate their dispersed supply, knowledge and customer bases into global production networks (Ernst & Kim, 2001).

First, liberalization or institutional changes consist of four elements including trade liberalization, liberalization in capital flows, liberalization in FDI policies and privatization. These institutional changes have permitted the integration of the domestic markets with the global markets for goods, services, and capital through changes in domestic regulations and policies. The impact of liberalization is to decrease the cost and risks in international transactions by providing an even playing field, minimizing uncertainties and providing various choices for market access. Liberalization has made it easier for TNCs to identify locational specialization among competing countries. Additionally, liberalization measures have provided better access to external resources and capabilities that a flagship needs to complement its core competencies (i.e., outsourcing) and have reduced the constraints for a geographic dispersion of the value chain (i.e., spatial mobility) (Ernst & Kim, 2001).

Second, globalization of production has been likewise promoted significantly by the demand and supply impacts of information and communications technology (ICT). International production rather than exports is perceived to be a primary source of competitive advantage. In this manner ICT enables better linkages in the international market and in this sense, ICT reinforces globalization by increasing the demand for it, and by creating new opportunities. Improvements in ICT have allowed greater mobility of resources and capabilities across geographic boundaries as well as the selection of cost efficient locations for portions of the value chain. Although segments of production are dispersed across countries, ICT provides a network infrastructure that allows for greater coordination among all players in the GPN.

Lastly, with liberalization and rapid developments in ICT, competition in the global arena has become complex, fierce and dynamic. Because competition cuts across national boundaries, firms are forced to have some presence in all major markets and must be able to integrate activities across countries to reap the benefits of coordination. Since competition also cuts across sectors and market segments, it has become more difficult to develop and nurture niches for a long time. This complexity forces firms to be on guard and always on the lookout for advantages that they can exploit using liberalization and ICT as main conduits.

This growing complexity of competition has changed the determinants of structure, location and growth of business organizations. Although liberalization and developments in ICT have shrunk the global

market, these same forces have made even large firms to be internally inadequate in dealing with the enormous demands of global competition. Competitive success requires networking with other producers and depends critically on the capacity of selectively specialized capabilities of various locations. In addition, it requires a shift from individual to increasingly collective forms of organization, from the multidivisional functional hierarchy of transnational corporations to the networked global flagship model.

C. Other Issues

Ernst and Kim (2001) also mention the biases in GPN literature in favor of the network flagship, production, and research and development and it is for this reason that the contribution of GPN in knowledge diffusion was discussed. Other literature on GPN also highlighted the importance of governance issues. While there may be other issues related to GPNs, these two would be discussed in this section.

The function of a GPN is to enable a network flagship to tap the resources and capabilities of specialized suppliers. As argued by Ernst and Kim (2001), flagships upgrade the technological capabilities of local suppliers. Either actively or passively, network flagships influence the development of their supplier's capabilities. Knowledge transfers, when internalized by local suppliers, upgrade the GPN and makes it competitive. This is the incentive for flagships to spearhead knowledge transfer in the GPN. Although there is a risk to the network flagship that local suppliers might shift to another GPN upon reaching a certain level of competence, Ernst and Kim (2000) offer raising the switching cost as a solution.

The evolution of Samsung provides an idea of how knowledge transfer strengthens a firm in the GPN. From original equipment manufacturing (OEM), Samsung has moved to own-design manufacturing (ODM) and, eventually, to own-brand manufacturing (OBM). Linkages among firms are merely market relationships. Global production networks work with production parameters, which make their operations more efficient. Within the GPN, the flagship performs this function, directing the production process by enforcing production standards. Within the environment where the GPN operates, regulatory agencies, either by national governments or by regional agreements, could also specify production standards.

III. PATTERN OF TRADE IN EAST ASIA AND ASEAN

Before moving further to the discussion on how global production networks have affected the Asian region, it will be best to present the general picture of the pattern of trade in the region. The period of analysis will cover the last decade to assess the impact of liberalization measures and the rapid growth in information and communication technology.

Trade in Southeast Asia has expanded with the inception of the ASEAN Free Trade Agreement (AFTA) in 1993. From around USD43.6 million in 1993, intra-ASEAN exports have almost doubled to USD84.5 million in 2001 (Table 1). Intra-ASEAN imports also increased from USD38.8 million in 1993 to USD67.6 million.

Austria (2003) mentions that a criticism against these figures is the relatively small impact of AFTA on intra-ASEAN trade. Hence, AFTA may not be important to the economy of its individual members. It is pointed out, though, that relative to other regional trading groups, AFTA "...generated a higher intra-regional trade among its members than Andean, European Free Trade Association (EFTA) or even Closer Economic Relations (CER) did to their members in the 1990s." Also, intra-ASEAN and extra-ASEAN trade have grown faster than trade in NAFTA, E.U., EFTA and CER. Austria (2003) attributes this to the outward-oriented policies of ASEAN states. However, export and import growth rates in the region have declined since 1993, although it rose from 1998 to 2000. This could be attributed to greater extra-ASEAN trade.

In terms of the major export and import products, machinery and electrical appliances have both been the major export and import products within the region (Table 2 and 3). It is important to note that the share of this product category to total exports of the region is significantly larger. Other major products exported include mineral products, textiles and apparel, plastics, chemicals, wood and wood articles, prepared foodstuff, base metal and metal articles, optical, precision and musical instruments, and vehicles. It should be noted, though, that almost the same products form ASEAN's top imports, with the exception of wood and wood articles. Pulp and paper is one of the top imports of the region. With almost the same

products heavily imported and exported, it could be argued that these products, once imported, could be further processed and re-exported. In terms of the direction of trade, the United States, the European Union, and Japan are the leading trading partners of the ASEAN. Since its formation, the ASEAN has already pursued trading agreements with other states and regional trading blocs. Other major trading partners include China, South Korea, India, Canada, and CER.

The highest share of ASEAN exports come from intra-ASEAN exports. Outside the region, the United States is the major trading partner (Table 4). The last decade has also seen the emergence of the European Union as a major trading partner. Within the recent years, much of ASEAN imports are sourced from within the region and from the European Union. Imports from Japan have declined since 1998, along with imports from the United States.

For the analysis of the composition of trade, this paper focuses on three major products traded: machinery and electrical appliances, textile and apparel, and vehicles. During 1993, around 29 percent of ASEAN's exports of machinery and electrical appliances went to the United States. By 2001, this share decreased to 19 percent. The share of exports to the European Union remained constant while the share of exports to Japan increased from 8 percent to 10 percent. By 2001, ASEAN has been exporting much of its machinery and electrical appliances to its other major trading partners.

The trend in imports of machinery and electrical appliances is almost the similar to the trend in exports. In 1993, Japan was the major source of machinery and electrical appliances, with a share of 32 percent; this has decreased to 20 percent by 2001. The shares of imports from the United States and the European Union have both declined by one percent over the same period and again, the share of other major trading partners has significantly increased from 35 percent in 1993 to 49 percent in 2001. This trend in machinery and electrical appliances hints at the delocalization of production of this major product, and has caused the decline in the share of major trading partners.

Trade in textile and apparel shows a different trend. In 1993, the United States (at 27 percent) and the European Union (at 23 percent) were the largest markets of ASEAN textile and apparel. By 2001, exports to the United States increased to 40 percent. On the other hand, much of ASEAN's imports of textile and apparel came from its other trading partners, accounting for 77 percent in 1993 and 81 percent in 2001. Over the same period, Japan's share has declined from 11 percent to 6 percent. This trend points to a greater diversity in the sources of textile and apparel.

Trends in the export and import of vehicles have indicated that in 1993, the United States and the European Union have been the major export market for vehicles (at 13 percent each). By 2001, the share of the United States has decreased to 8 percent while that of the European Union has increased by 14 percent. Japan's share in vehicle exports also has increased by eve percent.

Table 1: Export Volume in ASEAN, 1993-2001
(in thousand USD)

Country	Export								
	1993	1994	1995	1996	1997	1998	1999	2000	2001
Indonesia	36,822,983.9	38,846,157.0	45,417,983.8	53,844,524.3	51,274,309.9	48,847,638.9	48,665,452.1	62,124,015.7	56,317,617.8
Malaysia	46,316,528.2	55,465,141.0	67,147,824.6	74,246,664.6	77,457,644.2	77,098,632.3	84,287,912.9	98,154,484.3	88,031,608.2
Philippines	11,374,805.1	13,450,186.8	17,394,193.1	19,533,005.5	25,227,702.8	29,496,353.1	35,036,892.5	38,078,250.2	32,150,202.0
Singapore	74,001,094.0	91,889,549.2	104,618,693.0	117,349,376.5	128,174,286.6	109,802,924.1	114,625,141.6	138,352,460.2	121,686,815.7
Thailand	37,634,503.7	45,328,373.4	59,347,008.1	55,894,698.7	57,822,032.2	49,481,577.4	56,110,879.5	69,254,044.7	65,117,826.7
Intra-ASEAN	43,681,092.5	58,571,479.8	70,178,880.8	80,973,727.4	85,351,823.9	69,312,905.1	74,935,680.9	95,267,541.8	84,487,902.3

Source: ASEAN Trade Data, <http://www.aseansec.org/trade>

Table 2: Top Ten Exports in ASEAN, 1993-2001
(in thousand USD)

Product Section	Export								
	1993	1994	1995	1996	1997	1998	1999	2000	2001
Machinery and Electrical Appliances	78,898,105	106,912,684	130,884,341	149,723,540	163,657,642	158,491,566	179,888,056	219,512,898	187,177,055
Mineral Products	25,378,030	25,461,895	29,299,482	35,585,262	35,011,055	25,791,727	29,611,701	42,601,786	40,978,895
Textiles and Apparel	18,461,955	19,147,763	20,459,499	20,448,578	18,673,521	17,176,634	19,598,070	23,357,675	22,093,079
Plastics	9,214,564	10,198,475	15,255,313	14,662,360	13,813,872	12,197,387	12,684,218	16,077,473	14,834,156
Chemicals	6,281,479	7,158,464	9,306,711	10,261,027	11,701,110	11,358,101	13,840,431	15,622,724	15,563,894
Wood and Wood articles	11,461,442	10,698,095	10,555,842	11,432,143	10,173,257	6,857,536	8,324,152	8,742,054	7,640,385
Prepared Foodstuffs	7,617,911	8,490,305	9,407,061	10,666,159	10,467,460	8,832,143	8,908,977	9,286,938	9,539,503
Base metal and Metal articles	6,202,194	7,039,664	10,440,748	9,682,013	10,076,594	8,927,976	9,162,134	10,821,617	9,867,237
Optical, precision and musical instruments	4,023,999	4,960,172	5,515,644	6,768,323	7,783,755	6,588,652	6,632,840	8,327,585	8,756,837
Vehicles	4,617,966	6,279,471	5,923,155	6,730,248	7,253,013	7,052,991	6,431,648	7,172,612	7,281,451

Source: ASEAN Trade Data, <http://www.aseansec.org/trade>

Table 3: Top Ten Imports in ASEAN, 1993-2001
(in thousand USD)

Product Section	Import								
	1993	1994	1995	1996	1997	1998	1999	2000	2001
Machinery and Electrical Appliances	94,964,999	120,633,900	145,002,868	160,125,709	169,434,558	132,270,245	137,894,592	172,413,581	151,173,815
Mineral Products	20,277,683	20,341,236	22,735,359	28,919,547	31,056,009	19,567,416	25,025,107	40,048,911	37,552,470
Textiles and Apparel	19,835,579	22,035,242	28,200,330	28,690,638	28,419,428	18,721,751	20,242,904	22,105,459	20,532,920
Plastics	15,978,029	18,875,671	22,106,236	22,965,384	22,727,098	17,262,732	19,925,236	23,378,744	22,246,054
Chemicals	17,158,412	20,845,600	26,732,788	26,638,246	25,083,392	14,200,737	13,930,843	14,477,210	17,038,620
Wood and Wood articles	10,049,784	10,614,972	11,530,045	11,968,082	11,158,119	8,748,837	9,499,482	11,677,298	11,103,916
Prepared Foodstuffs	8,338,941	10,534,924	11,475,909	11,738,712	11,821,418	8,665,964	10,084,477	12,550,783	10,944,161
Base metal and Metal articles	6,580,940	7,647,094	8,744,832	9,666,660	11,168,560	7,790,904	8,453,624	10,629,797	8,981,457
Optical, precision and musical instruments	4,872,180	5,771,847	6,178,849	9,502,165	7,968,779	5,734,173	6,120,812	6,554,815	7,140,997
Vehicles	3,888,196	5,094,584	6,021,316	5,537,610	5,260,110	3,936,040	4,513,612	5,705,696	4,834,346

Source: ASEAN Trade Data, <http://www.aseansec.org/trade>

Table 4: Exports to Major Trading Partners, ASEAN, 1993-2001
(in thousand USD)

Country	Export								
	1993	1994	1995	1996	1997	1998	1999	2000	2001
Indonesia	36,822,983.9	38,846,157.0	45,417,983.8	53,844,524.3	51,274,309.9	48,847,638.9	48,665,452.1	62,124,015.7	56,317,617.8
Malaysia	46,316,528.2	55,465,141.0	67,147,824.6	74,246,664.6	77,457,644.2	77,098,632.3	84,287,912.9	98,154,484.3	88,031,608.2
Philippines	11,374,805.1	13,450,186.8	17,394,193.1	19,533,005.5	25,227,702.8	29,496,353.1	35,036,892.5	38,078,250.2	32,150,202.0
Singapore	74,001,094.0	91,889,549.2	104,618,693	117,349,376.5	128,174,286.6	109,802,924.1	114,625,141.6	138,352,460.2	121,686,815.7
Thailand	37,634,503.7	45,328,373.4	59,347,008	55,894,698.7	57,822,032.2	49,481,577.4	56,110,879.5	69,254,044.7	65,117,826.7
Intra-ASEAN	43,681,092.5	58,571,479.8	170,178,880.8	80,973,727.4	85,351,823.9	69,312,905.1	74,935,680.9	95,267,541.8	84,487,902.3

Source: ASEAN Trade Data,
<http://www.aseansec.org/trade>

Japan has been the major source of vehicles to the ASEAN region in 1993 (43 percent). This share, however, has eroded to 33 percent by 2001 as the United States has increased its share in vehicle imports from 25 percent to 31 percent over the same period. The European Union's vehicle exports to ASEAN have been reduced by three percent.

One more important development to note is the rapid growth in the East Asian region. Since its recovery from the crisis in 1997, it has once again become the most dynamic region. China is one of the countries that have registered exceptional growth performance. It was noted by Kawai (2004) that China had achieved remarkable growth, development and economic transition even before joining the WTO. China's accession into the WTO further deepened its integration with the world economy through liberalization of trade in goods and services as well as in FDI and this is one of the reasons why China is experiencing rapid growth. The following paragraphs will delve into the various effects of global production networks not only on trade but in other macroeconomic aspects of several countries.

IV. GLOBAL PRODUCTION NETWORKS IN ASIA

A. Country Experiences in GPN

Literature on GPN in Asia is mostly limited to East Asia. This portion reviews developments in East Asian economies while drawing some important insights on GPNs and their role in development.

Saxenian (2002) provides a discussion of how transnational communities helped integrate Taiwan in a global production network. As she notes, prior to the 1980s, cheap labor in Taiwan attracted investments from U.S. businesses. At the same time, more and more Taiwanese residents were sent to the U.S. to take post-graduate studies. This brain drain was reversed by the late 1980s through active government recruitment and the rapid economic development in Taiwan.

Most of the Taiwan-born, U.S.-educated migrants who were originally located in Silicon Valley has moved to Taiwan's Hsinchu Science Park. With a technology cluster around the area, these "astronauts" were encouraged to relocate to the Science Park. Having professional contacts in Silicon Valley, not to mention a firm grasp of the English language, these astronauts were able to establish ties between Hsinchu Science Park and Silicon Valley. Familiarity with both cultures allowed these astronauts to efficiently coordinate the activities in this network. Carrying technical expertise from the U.S. and new markets from Taiwan, they provided good opportunities for both areas.

This eventually pushed Taiwan to the OEM and ODM segments of electronics production. It is important to note that this reverse brain drain resulted from Taiwanese economic policies that made opportunities greater (or at least equal) than those in the United States. These policies included investments in "...a well-developed skill base and technical infrastructure; an attractive physical environment for entrepreneurs, a growing venture capital industry; and close professional ties to Silicon Valley" (Saxenian, 2002).

Like Taiwan, a similar initial brain drain occurred in India. However, Saxenian points to the relative slow pace of building ties between Silicon Valley and India. When it took off, though, Indian software suppliers have OEM relationship with Silicon Valley. The further development of India's software industry was attributed to Silicon Valley's influence in government policy, which allowed export-oriented software firms to have tax and duties exemptions as well as access to high-speed satellite links and reliable electricity.

There are a few differences with the reverse brain drain experienced in Taiwan. First, the profitability of Indian software companies has made them complacent in addressing higher value-added segments in the market. Second, India does not have the "astronauts" of Taiwan who established firm contacts in the two regions. In the ASEAN region, Ford Motor Company has a successful global production network which they named as the "ASEAN strategy." Using the provision of the AFTA and the Common Effective Preferential Tariff (CEPT), the company was able to build complementary products at their facilities in Thailand and the Philippines. They specialize in producing cars in the Philippines and trucks in their Thailand plant.

Malaysia, on the other hand, is harnessing its competitive advantage to make it more attractive for foreign direct investors in terms of minimal costs, good infrastructure, highly skilled workforce, stable socio-political environment, and the attractive tax incentives. With their number of industrial zones, it has attracted numerous firms in electronics, computer peripherals and semiconductors like Acer, Alcatel, Canon, Fujikura, Hewlett Packard, Intel, Motorola, Sony, and many others.

China is likewise becoming the leading destination of FDI and an integral part of the GPN of these numerous foreign companies. Several MNCs have set-up not only research and development centers but also production and manufacturing sites in the country. Trade liberalization and deregulation, the rapid development of ICT and the creation of global production networks have altered the competitive landscape of China. Many multinational corporations have executed plans to make China the base for marketing production, purchasing raw materials, developing new products, production pricing and human resources development. Currently, China has emerged as the leader in manufacturing electronic products and hundreds of companies have invested in the production of electronic products whether low or high technology products. Numerous large multinational corporations have established production sites for their chips, motherboards and other products. Companies like Intel, Microsoft, Nokia and other big players have significant presence in China. Investments in China also include garments and apparels. Indeed, companies like Reebok, Nike, Adidas and non-sport names have their production sites in China.

In the Philippines, rapid growth of the telecommunications industry is attributed to a certain extent to the domination of the call centers. These are networks of national and international connections regarding customer consultations and logistical support. It is usually composed of technical or product support, customer care or service, billing collections, reservation services, fund raising, survey, direct mail follow-ups, product testing, customer acquisition and customer activation. Language proficiency, inexpensive labor, cultural characteristics, mature telecommunication infrastructure and the strong western orientation of the Filipinos have made the Philippines one of the popular destinations of call centers in the world. Another industry affected in the Philippines is the semiconductor industry. The Philippines has become a production site for the assembly and product-testing portions of the production stages of semiconductors. The raw materials are imported and then once assembled and tested are exported to end-users and flagship countries.

Japan has benefited much from global production networks in the region. It should be noted that for some time, Japanese corporations practiced a closed production network in Asia. According to one of the studies of Ernst (1997), a closed Japanese production network means that the decision-making and high value-added activities were highly centralized. Japanese affiliates in Asia during this time had considerable little decision autonomy not only for employment, work practices and salary, but also on how to organize production, support services and procurement. Because of this, Japanese electronics have fallen back relative to their American counterparts since they have failed to establish an equally efficient regional supply base in Asia. However, it was pointed out by Ernst (1997) that the difference between closed Japanese and open American production networks in Asia existed for only a short period that is approximately from 1986 until 1992. The years before and after the aforementioned period showed that Japanese production networks in Asia were relatively open and locally embedded. Moreover, the author also stresses that Japanese firms have learned from the disadvantages of having a closed, Japan-centered production network in Asia. It was manifested in the last few years that they have seriously moved to establish a regional supply base in Asia. This helped in improving their access to the region's capabilities and contested growth markets (Ernst, 1997).

B. GPN in the Electronics Industry

Ernst (2000) provides a lengthy discussion of the development of GPNs in the electronics industry. He mentions that the presence of Asian suppliers in the electronics industry dates back to the 1960s. It was only recently that global players have shifted production to Asia. Prior to this, most of their production plants were in Latin America and in Europe. Two factors effected the shift to Asian countries: (1) Boom periods allowed flagships to expand operations to Asia and (2) intense competition led flagships to seek low-cost locations (Ernst, 2002).

The extent of participation of Asian countries in the GPN for electronics varies widely with the

presence of both higher-tier and lower-tier suppliers in the region. No wonder machinery and electronics appliances comprise the bulk of trade volume in the region. Within ASEAN, Malaysia and Singapore house factories and/or plants of global firms. The electronics industry faces several constraints (Ernst, 2000). Being technology-based, suppliers are faced with extremely short product cycles and speed to market thus becomes an important consideration as assets depreciate fast. Another concern is the complex supply chain in the industry. Components assembled across geographic boundaries have to be procured right on time. Lastly, the industry has to deal with disruptive changes in demand and technology.

One case of a production network in this industry is explored by Ernst (2004), with the case of Japan's electronics industry. The last decade has seen the erosion of Japan's leadership in consumer electronics, losing out to their U.S. competitors. Lately, Japan is also facing competition from six emerging exporters of electronics in the region: China, Korea, Taiwan, Singapore, Malaysia and India. These new competitors have their respective niches in several segments of the electronics industry. The rise of China as a low-cost export base and as a large market for electronics products is a serious threat to Japan. Japan has shifted its focus to East Asia both as a low-cost production site and as a market for its products. Ernst (2004) mentions that to regain its competitive form, Japan might have to forge strategic alliances with other Asian players (a sort of "hybridization"). In this sense, it has to further deepen its network in the region.

C. GPN in the Automotive Industry

Demand for cars has significantly decreased during the last few decades. Car sales have grown at less than one percent annually and this trend is expected to persist. While the market is considerably saturated, firms also face competition from other players. Car sales, however, have been increasing in emerging markets and this is bolstered in part by increasing population. With an industry competing based on features (such as safety and other technological innovations), introduction of an innovation is a major strategy in the industry. Vehicles have also become increasingly dependent on the electronics industry (Veloso & Kumar, 2002).

With an industry that is both competitive and becoming increasingly technology-dependent, original equipment manufacturers (OEMs) have become less involved in the manufacture and assembly of vehicles. One reason is their desire to reduce their asset intensities. Suppliers, therefore, face new roles: raw material supplier, standardizer, component specialist, and integrator. Suppliers are now stepping up in the value chain, producing components with greater sophistication (Veloso & Kumar, 2002).

V. LIBERALIZATION POLICIES IN EAST ASIA

Various liberalization policies have been adopted and implemented by East Asian economies in order to promote trade and make them more attractive investment destinations to companies outside the region. Moreover, these liberalization measures have been some of the key responses as well as impetus to the growth of global production networks in the region.

Liberalization, as a key driver of global production networks, provides opportunities for locational specialization, outsourcing, and spatial mobility. Trade liberalization facilitates resource mobility across geographic borders. Countries seeking to capture or to develop niches in global production networks could attract network flagships through policies creating liberal trade regimes, which effectively lower costs. Fully opening up to trade is a cumbersome, not to mention, a politically sensitive issue. To this end, regional trading agreements (RTAs) address the issue by slowly integrating economic regions. This has been the emerging trend in liberalization. Whether RTAs facilitate the move to further integration or prevent such integration from happening is a matter of debate. Canlas (2001) provides a good discussion of this and mentions that RTAs should take measures to proceed to a higher level of integration; that is, by establishing closer linkages with other regional groups.

This issue is critical for global production networks since there are benefits to be realized when part of or closely linked with a regional trading bloc. Preferential trading agreements (PTAs) significantly lower the costs of production, which could create comparative advantages in certain segments of the production process. Integration in the ASEAN market was realized with the establishment of the ASEAN Free Trade Area in 1993. In achieving its goals of greater integration, the CEPT Scheme was adopted. This integration

in the ASEAN market made global production networks more beneficial to countries in the region.

A. Tariff policies in East Asia

It is noteworthy to mention that Asia's emerging market economies will remain a very bright spot in the global picture. East Asia, in particular, is the fastest growing region in the world today. It is expected to register strong growth, fueled primarily by a healthier global environment, improving domestic conditions, and the continued strength of the regional economy particularly that of the Chinese economy.

There have been dramatic changes in tariff policies, especially in China, as a response to the changing global trading market. The last twenty years in China have been very different as compared to the years before 1978. These changes have brought about expansion in its market share in the world. When China joined the WTO in the late 2001, two rounds of reduction in tariffs were implemented. The overall tariff level decreased from 15 to 12 percent and the average tariff level for industrial goods likewise decreased. The elimination of tariffs on the products covered by the Information Technology Agreement (ITA) such as semiconductors and semiconductor manufacturing equipment, computers and computer parts, software, telecommunications equipment and computer-based analytical instruments is currently being completed. On the other hand, the tariffs for U.S. agricultural products had decreased from an average of 31 percent to 14 percent. All these reductions in tariff in China have given importers a more predictable trading environment.

Another economy worth mentioning is Taiwan whose economy aims to further open its doors to globalization and liberalization. It has been very active in participating in international trade and economic organizations, building bilateral economic and trade relationships as well as regional cooperation. Given all these developments, Taiwan's strategy is to reduce domestic and foreign measures that restrict trade and over the years, it has substantially reduced tariff barriers. Its membership into the WTO in 2002 further reduced tariff rates to an average of 5 percent. However, like many other countries, some sectors still have high tariff rates such as the automobile and agricultural sector. Currently, tariffs on passenger vehicles vary over 60 percent and the average tariff on automobiles is almost 44 percent; this protection poses a great hindrance to imports. In the years to come, it is expected, however, that tariff rates in this sector will further decline. The agricultural sector, as well, experiences quite prohibitive tariffs particularly on fruits and vegetables. It could be noted, however, that WTO accession brought tariffs down from an average of 22 percent to 14 percent. Its membership has further opened the Taiwan market to commodities that were formerly banned or subject to strict import controls, such as rice, chicken meat, and pork.

As for the rest of the East Asia countries, particularly the ASEAN members, average tariffs among the original ASEAN members (ASEAN-6) have steadily declined during the last decade and are now below five percent. Singapore is virtually a free trade area (zero average tariff), followed by Brunei with a 1.04 percent average tariff. Thailand still has the highest tariff in the region at an average of 4.63 percent. This rate, however, is considerably lower than the average of 19.85 percent in 1993. The Philippines has the second highest average tariff rate at 3.82 percent. Among the new ASEAN members, Cambodia has the highest average tariff at 7.94 percent while Myanmar, at 4.61, has the lowest.

At the product section level, all tariff rates are well within the zero percent to five percent range. Wood and wood articles (4.58 percent), footwear (3.96 percent) and textiles and apparel (3.92 percent) have the highest average tariff. The lowest tariffs are recorded among mineral products (1.81 percent), antiques (1.92 percent) and vegetable products (2.10 percent). However, not all product lines are included in the CEPT scheme. Countries may exclude products from the CEPT under cases such as: (1) temporary exclusions; (2) sensitive agricultural products; and (3) general exceptions.

Temporary exclusions "... refer to products for which tariffs will ultimately be lowered to 0-5 percent, but which are being protected temporarily by a delay in tariff reductions (ASEAN website)." Malaysia availed of this protocol in 2000 to protect its automobile industry while sensitive agricultural products have until 2010 to be integrated in the CEPT scheme. Tariff reduction was supposed to have begun in 2000 and is expected to end in 2005, depending on the country and the product.

General exceptions include "...products which a country deems necessary for the protection of national security, public morals, the protection of human, animal or plant life and health, and protection of

articles of artistic, historic, or archaeological value “ (ASEAN website).

A further indication of increasing trade liberalization would be the number (or percentage) of products in the inclusion lists. Over a ten-year period (1993-2003), product lines of the ASEAN-6 included in the CEPT scheme have increased from 88.1 percent to 98.4 percent. This is expected to further increase in the next five years. The main goal of the CEPT was to reduce tariffs between zero percent to five percent. The scheme was implemented on 1 January 1993 with a given timeframe of 15 years. However, as Austria and Avila (2001) note, AFTA has taken great efforts to accelerate tariff reduction in the region. Its goal was achieved by 2002, with newer members granted delays in implementation.

The picture presented so far is that of reduced tariff barriers among most East Asian countries over the past few years. Membership into multilateral trade agreements have sped up the modifications in tariff structure. This allows for faster and greater access to Asian markets, thus making global production networks more attractive to investors.

B. Non-tariff Measures in Southeast Asia

Another avenue of liberalizing the markets is the reduction in non-tariff barriers (NTBs). Non-tariff barriers include import licenses, quota control, restricted import list, and others. These are less visible as compared to tariff barriers but very instrumental in regulating the inflow and outflow of trade. Most East Asian countries have reduced their non-tariff barriers in order to make their markets more attractive to investment. China, which used to be a closed economy, is making efforts to reduce the state monopoly of foreign trade and further liberalized its trading system. Specifically, China reduced the number of products requiring import licenses from 26 to 12 only. With regard to import quotas, China makes quota available at agreed levels that increase 15 percent each year. The Chinese government is expected to properly allocate the quotas to importers based on detailed rules which are outlined in China's accession agreement (China Strategic).

There are efforts in various multilateral trade organizations, not only in China, to reduce and eventually eradicate non-tariff barriers. The APEC, for instance, is implementing wide-range regulatory and administrative reforms. As a result, there is improved market access, increased efficiency and productivity, and reduced hindrances to competition and innovation. Taking for instance the case of some APEC economies that improved their customs and quarantine procedures, most of them took advantage of ICT to increase efficiency and to speed up the delivery of service. The reforms in customs procedures and quarantine procedures in effect reduced non-tariff barriers and made transactions faster and less costly.

All in all, East Asian economies have used information technology to reduce non-tariff barriers such as customs and quarantine procedures. They have been successful in reducing transactions cost, time and effort in the transfer of goods across boundaries. Moreover, documentation of these transactions is made more transparent both to the host country and the importing country.

The same situation also holds true for the ASEAN region. There is the removal of non-tariff barriers (NTBs) at customs points by adopting the ASEAN Harmonized Tariff Nomenclature and the WTO Valuation Agreement, both of which are designed to simplify and harmonize customs procedures and tariff nomenclatures among all ASEAN members. The ASEAN has adopted a common system of classifying non-tariff measures (NTMs) for the implementation of the CEPT Scheme. This classification system is directly quoted from the ASEAN Secretariat website.

- i) Para-tariff Measures. Measures that increase the cost of imports in a manner similar to tariff measures by a fixed percentage or by a fixed amount, calculated respectively on the basis of the value and the quantity. Para-tariff measure can be distinguished as customs surcharges/import surcharges, additional charges and decreed customs valuation.
- ii) Price Control Measures. Measures that affect the cost of imports in a variable amount calculated on the basis of the existing difference between two prices of same product compared for control purposes. Administrative price fixing of import prices, voluntary export price restraint and variable charges measure are considered as basic tools for price control measures;

- iii) Finance Measures. Regulate the access to and cost of foreign exchange for imports and define the terms of payment. They may increase the import cost in a fashion similar to tariff measures. Advance payment requirements, advance import deposits, cash margin requirement, advance payment of customs duties, refundable deposits for sensitive product categories, regulations concerning terms of payment for imports and transfer delays, etc.
- iv) Monopolistic Measures. Include single channel for imports and compulsory national services. Monopolistic measures create a monopolistic situation by giving exclusive rights to one or a limited group of economic operators for the season of social, fiscal and economic
- v) Technical Measures. Refer to technical regulations, product characteristics requirements, marketing requirements, labeling requirements, packaging requirements, testing, inspection and quarantine requirements, pre-shipment inspection and special customs formalities

Under the CEPT Scheme, non-tariff barriers should be eliminated within a five-year period after the product has enjoyed CEPT concessions. Progress in the dismantling of these NTBs includes the following:

- i) Framework Agreement on Mutual Recognition Arrangements (MRAs). These are measures allowing member countries to recognize one another's product standards or regulations. Specific MRAs on telecommunication equipment, pharmaceutical products and cosmetics are currently being developed.
- ii) Reduced trade barriers in service sectors. ASEAN has currently brought down trade barriers among member states in the following services sectors: air transport, business services, construction, financial services, maritime transport, telecommunication and tourism. Another round of negotiations is expected to occur to expand the coverage of this measure.
- iii) Greater financial cooperation. The ASEAN Surveillance Process has been set up to monitor macroeconomic trends in member countries to identify adverse developments early. Regular meetings allow member countries to coordinate policies, especially when responding to a crisis. The ASEAN was expected to have adopted and have implemented sound international financial practices and standards by 2003 and has also taken steps to further harmonize data collection and reporting systems on various statistics.

To date, the status of planned reduction in non-tariff barriers shows that there are still countries that have not yet totally eliminated their NTBs. Some countries such as Vietnam, Lao PDR, Myanmar and Cambodia were given an extension to implement the tariff reduction of 0-5 percent. Evidently, some countries are not yet fully ready to reduce and eliminate non-tariff barriers mainly because they still want to protect their domestic market.

C. Policies on Business Facilitation

Business facilitation is a term associated with global production networks and is becoming very popular in international trade. Through lower worldwide tariffs, improvements in technology and information management, and increased international competition, the private sector has been empowered to demand trade facilitation from governments. Business facilitation is often defined as the simplification or harmonization of international procedures. It intends to open markets by reducing the cost of cross-border trade, improving access to trade information and aligning policy and business strategies to liberalize trade and assist growth in all sectors.

As for the ASEAN region, business facilitation is being pursued to make trading more conducive and efficient. The vision of the ASEAN is to create a stable, prosperous and highly competitive economic region, in which there is a free flow of goods, services, investments, capital, equitable economic development, reduced poverty and socio-economic disparities. In order to promote the regional programs, the ASEAN emphasizes on building, networking, providing technical assistance and technology transfer. Economic regional integration is being pursued through the development of Trans-ASEAN transportation network that consists of major inter-state highway and railway networks, principal ports and sea lanes for maritime traffic, inland waterway transport and major civil aviation links. Moreover, the ASEAN is promoting the

interoperability and interconnectivity of the national telecommunications equipment and services.

To complement the acceleration of trade liberalization, intra-ASEAN trade facilitation measures focusing on transport are being adopted. These include the following: (i) Framework Agreement on MRA, (ii) Framework Agreement on the Facilitation of Goods in Transit, which allows goods to be moved by road or rail across ASEAN countries with minimum customs inspections, vehicle specifications and regulations for drivers, and the (iii) Framework Agreement on the Facilitation of Inter-State transport complementing the Framework Agreement on the Facilitation of Goods in Transit.

Aside from the ASEAN region, the APEC economies have already implemented wide-ranging regulatory and administrative reforms that resulted to improved market access, increase efficiency and productivity. Trade and business facilitation was made easier through these. According to APEC (2001), there are significant benefits from the regulatory and administrative reforms that were implemented. It was noted that trade facilitation will increase real gross domestic product by 0.25 percent by the year 2010. Moreover, the beneficiaries are not only a selected sector but all participants and this includes government, business and consumers.

Another report prepared by the APEC (2002), which extends the earlier report on breaking down barriers, provides more case studies on trade facilitation. The case studies were classified into two types of reforms, 'at the border' and 'behind the border.' The reforms concerned with at-the-border involve improving the efficiency of customs procedures through the use of information technology. The other type of reform, on the other hand, focuses on physical and market infrastructure. As it was noted earlier, trade facilitation is an essential complement to trade liberalization and good governance activities. This is the reason why many Asian economies have implemented changes in the way they transact with the international market. These changes are necessary to ensure that the benefits from open market trading are maximized, upheld and shared by all.

Some examples of reforms made 'at the border' include the following. First is Singapore's TradeNet, a strategic national information system. This reform in the customs procedure has reduced the filing and delivery process of products, thus reducing the cost and time of the importers of complying with regulatory and customs requirements. Another reform is Thailand's Electronic Data Interchange (EDI) system that allows for customs documentation to be transferred via an online system. Before the implementation, it took two to three weeks to complete the process, now it only takes less than a day. The Philippines also benefits from reforms that it started to implement using information technology. The introduction of the Super Green Lane (SGL) in the country, a special customs clearance facility, speeded up the delivery of goods and lowered costs. As it is manifested in the reforms implemented by the above-mentioned countries, many benefits have been realized and are currently experienced. Indeed, 'at the border' reforms have reduced the transactions costs, increased efficiency and productivity, and to a certain extent have reduced red tape.

The second kind of reform is the 'behind the border' which pertains to physical and market infrastructure. Physical and market infrastructures such as utilities, roads and financial services is essential to trade. Poor infrastructure translates to the unproductiveness and inefficiencies in the economy. That is why Asian economies are pushing for reforms in this area. An example is the insurance reform in China. Twenty years ago, China almost had no insurance sector. However, the country's opening up to the international market made way for the liberalization of the insurance sector. The steady liberalization of the insurance sector in China allowed domestic and foreign competition to flourish that resulted to a dramatic increase in the size of the insurance industry. This implies more choices for the consumers as well as better quality of service provided.

These reforms in the East Asian countries mentioned are manifestations of a reduction in barriers in the service sector. The utilization of information technology and the improvement in market infrastructure is a clear indication that economies today are now willing to reduce barriers in order to provide faster, efficient and cheap services. In the long run, this will strengthen the region's locational advantage in global production networks. An example was when China liberalized its insurance sector. This resulted to the country being more attractive to domestic and foreign investors, which contributed to strengthening the region's economic advantage.

D. Foreign Direct Investments in the Region

The importance of FDI as a major source of finance for economic development is manifested in the vast amount of resource flows to the ASEAN and East Asian region. To date, even ASEAN countries in the top 20 developing countries are recipients of such long-term global capital flows from the year 1997 until 1998. Between the years 1993 and 1998, the region received on the average 17.4 percent of the USD 760 billion in cumulative global net FDI flows to developing countries. Over the same period, the ASEAN received an annual average of USD 7.8 billion in the period between 1986 and 1991. This is translated to an increase in FDI flow in the ASEAN by about 14 percent annually from 1996 to 1998, while FDI stock in the region expanded tenfold from USD 23.8 billion in 1980 to USD 233.8 billion in 1998 (ASEAN website).

Notwithstanding the region's accomplishment in attracting large FDI flows, the countries in the region continue to take on collective as well as individual measures to further liberalize their investment regimes and to provide competitive and attractive investment environments. It can also be mentioned that further policy measures have been introduced to attract greater FDI flows as a means of helping the countries recover from the economic crisis that hovered over the region in 1997 until 1998.

The ten member countries in the ASEAN Free Trade Area (AFTA) employ similar fiscal incentives, domestic market access, foreign equity ownership, right of use of industrial land, customs clearance, and employment for foreign personnel. A liberal approach towards integration in investments among the member countries is manifested in the ASEAN Investment Area (AIA).

This agreement called for the establishment of a regional arrangement to enhance the attractiveness of the region for direct investment flows (ASEAN website). The objective of the AIA is to establish a competitive investment region in order to attract greater and sustainable levels of FDI and to realize substantially increasing flows of FDI from the ASEAN and non-ASEAN sources by making the region an attractive, competitive, open and liberal investment area. Members must progressively eliminate or reduce investment regulations and conditions that pose as barriers to investment flows. The AIA can be divided into three programs: (1) cooperation and facilitation; (2) promotion and awareness; and (3) liberalization.

In the case of the East Asian region, it has proven to be one of the main destinations for FDI. This is supported by a study made by Yeung et al. (2001) that states that there is a significant increase in the region's share of the world's outward FDI total. It was reported that it grew from less than 5 percent in 1980 to more than 13 percent before the 1990s ended. The growth and development in economies such as that of China, Korea and Japan were the catalysts of the foreign direct investment.

Apparently, China is the leading country in the region that unwittingly attracts many FDIs. Ever since the country initiated its 'open-door' policy in 1978, its economy has slowly paved the way for trade liberalization and globalization that facilitated the inflow of FDIs into their country and it is now the second largest destination of FDIs. A study made by Chantasawat et al. (2004) presents the emergence of the People's Republic of China (PRC) as the largest recipient of FDIs and how this affects other developing countries. Does PRC pose as a threat or an asset to the East Asian region? If one were to evaluate the growth and development of China, its growth could have positive spill-over effects on other countries' direct investment by creating more opportunities for the global production networks. Moreover, this increases the need for more raw materials and resources. However, due to its low labor costs which translate to lower costs of production, China may attract multinational companies away from other developing countries. The results of the study show, however, that FDIs in China are positively related to the inflow of FDIs to East Asia. This means that China's growth has more positive spill-over effects than negative effects on East Asian countries. Furthermore, China's effect is not the most important factor of inward FDIs but market size, policy variables such as openness and corporate tax rates. If only East Asian countries will view this as an opportunity to attract FDIs, they could work on improving policy variables and the market size.

E. FDI Policies in the Region

Foreign direct investments have played an important role in the growth and development of the ASEAN region and its member countries. Its long-term nature makes FDI better than any capital flows. Like trade, regionalism enhances the benefits of FDI within the member countries since it eliminates the

competition for FDI. According to the principles of regionalism, members are able to share the flow of FDI more equally.

Short-term measures have been taken by the ASEAN region to enhance the investment climate. These FDI policies could be categorized into the following: (i) fiscal incentives; (ii) domestic market access; (iii) foreign equity ownership; (iv) right of use of industrial land; (v) customs clearance; and (vi) employment of foreign personnel

The various FDI policies in the ASEAN region provide incentives to member countries that will help enhance investment. Among the fiscal incentives include a minimum of three years corporate income tax exception for foreign investors. This gives the new foreign investor time to earn back the invested capital before paying taxes.

For member countries in the ASEAN region, companies enjoy free market access to the domestic market of the host country. This implies that foreign companies have the liberty to avail of the various opportunities in the market without having to worry about any cost. Aside from this, foreign companies also enjoy 100 percent foreign equity ownership. When it comes to the use of industrial land, foreign companies will be given the right of use or lease of factory or industrial land for a minimum period of 30 years. Another privilege given to ASEAN member countries, approved investment projects will be given fast customs clearance for all raw materials and capital goods required by investment projects. On the issue of employment of foreigners, professional, managerial and technical personnel posts that are required by the investor are granted. All these general FDI policies are geared towards promoting and maintaining a healthy and friendly investment climate in the host countries in the ASEAN region.

1. Investments

If the AFTA's objectives were to increase its share of foreign investment and accelerate technology transfer, inter-regional arrangement with RTAs involving developed countries would be the natural approach. One reason behind this is that the involvement of developed countries could open greater opportunities than those with RTAs of developing countries. However, one should take note that the AFTA's investment measures are not as far-reaching as those of the RTAs of developed countries (e.g., NAFTA) (Austria et al., 2001).

The framework of the ASEAN in promoting the inflow of FDI into the region, the ASEAN Investment Area (AIA), obliges member countries to gradually eliminate investment barriers, liberalize investment rules and policies, grant national treatment and open industries to ASEAN investors by the year 2010 and to all investors by 2020. However, the granting of national treatment and opening of industries has exemptions embodied in the Temporary Exclusion List (TEL) and Sensitive List (SL). In addition, the investment measures apply initially only to the manufacturing sector. Since this is the case where a shallow integration investment within AFTA itself, it would be hard for AFTA to move to deeper integration in this area with the more advanced RTAs (Austria et al., 2001).

2. Philippine case: Strategy for global competitiveness.

According to Austria (2001), the Philippines' experience leads to the importance of domestic policies that promote domestic efficiency and competitiveness before one can participate in regional integration and face global competition. One of the first steps undertaken was that the country pursued trade and investment policies in the 1980s and the 1990s to eliminate the efficiency of the domestic industries arising from its past protectionist region (Austria, 2001). The improved competitiveness enabled the country to participate in the 1990s in regional trading agreements such as AFTA, APEC and WTO.

If one were to look at the country's economic history, it could be seen that the Philippines has a long history of protectionism. Before the 1980s, the country suffered from the classic case of the 'import substitution syndrome.' Industry incentives were distorted, first, by protection through tariffs, import and foreign exchange controls, and the overvaluation of the peso; and second, by capital market intervention favoring heavy industries over light industries. All these had an adverse effect on the efficient allocation of resources. The end result was an imperfectly competitive structure characterized by unrealized scale

economies and poor economic growth performance (Austria, 2001).

With the objective of reducing the overall level of protection and the dispersion of tariff protection within and across sectors and industries, the country pursued a series of tariff reduction. By the end of 1981, average nominal tariff rate fell from 42 percent to 28 percent. However, the reductions were temporarily put on hold in the second half of the 1980s due to political and balance of payments crises (Austria, 2001). Among the notable effects of trade liberalization is the increase in the overall competitiveness of the manufacturing industry and the better allocation of resources.

Aside from reforms in trade, there were also reforms in investment such as expanding areas and industries that are open to foreign investors. The change in foreign investment policies has been an essential factor in building up confidence in its economy. The challenge now for the Philippines is how to respond to the proliferation of RTAs beyond its current participation in the AFTA and the APEC. The country needs to expand and deepen its regional integration in order to benefit not only from regionalism but also from globalization. Liberal trade and investment policies are key elements of competition policy since they eliminate barriers to trade and investment (Austria, 2001).

3. FDI agreements in the ASEAN Region: An overview and evaluation

In order to encourage FDI in the region, FDI agreements have been implemented. The following focuses on a short discussion on the various FDI agreements in the region and their implications and effects on global production networks.

The investment agreements in the ASEAN are binding instruments and they can be divided into two categories. The first category is the *Agreements Relating to Investment Protection*. These agreements encompass protection against expropriation; guaranteeing repatriation of capitals, profits and dividends; and modalities for settlement of investment disputes (ASEAN Secretariat, 2003). In this category, the existing ASEAN agreements are the following:

- i) The 1987 ASEAN Agreement for the Promotion and Protection of Investments;
- ii) The 1996 Protocol to Amend the 1987 Agreement for the Promotion and Protection of Investments; and
- iii) The 1996 Protocol on Dispute Settlement Mechanism

The second category is agreements on enhancing investment cooperation, facilitation, promotion and liberalization. It is geared towards the development of the ASEAN region into a highly competitive and conducive investment area. This is done through providing investors with more opportunities for economies of scale, synergies and lower transaction cost environment (ASEAN Secretariat, 2003). The essential agreements are the following:

- i) ASEAN Industrial Cooperation (AICO) Scheme
- ii) ASEAN Free Trade Area (AFTA)
- iii) ASEAN Investment Area (AIA)

Based on the objectives of the two major categories of agreements, it is evident that they complement each other. Both of them provide investors with an enhanced investment environment. For the agreements to be successful, it is essential that the objectives should be fully appreciated and the provisions clearly understood by investors. The following is a discussion of the various agreements on investment protection:

a. The 1987 ASEAN Agreement for the Promotion and Protection of Investments.

This agreement contains provisions that extend protection to investment and guarantees repatriation of capital, profits and earnings on direct investment activities from the nationals of the contracting parties. Moreover, it protects against expropriation. In situations where there is expropriation, investors will be compensated adequately and paid without reasonable delay meaning the compensation will be based on the market value of the investments affected before such expropriation took place. To have an idea of the

agreement, here are some sections from the ASEAN Secretariat (2003):

Investment of nationals or companies of any contracting party shall not be subject to expropriation or nationalization... Such compensation shall amount to the market value of the investment affected, immediately before the measure of dispossession became public knowledge... The compensation shall be settled and paid without unreasonable delay.

One should also note that the 1987 Agreement does not apply to matters on taxation. Double taxation matters, however, are covered in the Avoidance of Double Taxation Treaties between the parties. Most ASEAN have bilateral double taxation agreements between themselves and with non-ASEAN countries. Furthermore, the 1987 Agreement encourages the granting of national treatment among the contracting parties.

b. The 1996 Protocol to Amend the 1987 Agreement for the Promotion and Protection of Investments.

This protocol amended the 1987 Agreement and added the following elements and the commitments of the member countries to first of all strive to simplify and streamline investment procedures and approval process to facilitate investment flows. Second, to ensure the provision of up-to-date information on all laws and regulations regarding direct investment. In relation to this, member countries should take appropriate measures to ensure that such information is transparent, timely and publicly accessible as possible. The third and last element is to include the ASEAN Dispute Settlement Mechanism as an alternative instrument for the settlement of investment disputes (ASEAN Secretariat, 2003).

c. The 1996 Protocol on Dispute Settlement Mechanism.

This agreement, which was signed in November 1996, provides an alternative mechanism for the hearing of investment disputes when any of the parties to the dispute agrees to use it for conciliation or arbitration. Despite the existence of this agreement, a party to a dispute can resort to other fora for the settlement of disputes at any stage before the Senior Economic Officials Meeting (SEOM) has made a decision on the panel report of the disputed case. This Agreement encouraged consultation first for resolving disputes in an amicable manner between the parties concerned. If the dispute cannot be resolved, the consultation stage, the matter will be raised to the SEOM, which will either establish a panel to assess the case and make an appropriate report for SEOM's ruling on the case. The case will, otherwise, be raised to the special body in charge of the special or additional rules and procedures (ASEAN Secretariat, 2003).

Furthermore, the Agreement also covers and applies to other existing as well as future ASEAN economic agreements. Some of the agreements include: (1) Basic Agreement on ASEAN Industrial Projects, Kuala Lumpur; (2) Supplementary agreement of the basic agreement on ASEAN industrial projects-ASEAN Area project, Kuala Lumpur; and (3) Basic agreement on ASEAN industrial complementation in Manila.

d. ASEAN Investment Area (AIA).

The first three agreements mentioned pertained to the first category on Agreements Relating to Investment Protection. The second category, as mentioned earlier, focuses on agreements enhancing investment cooperation, facilitation, promotion and liberalization in the region. An example of this is the ASEAN Investment Area (AIA).

The main objective of the AIA is to substantially increase the flow of direct investment from ASEAN and non-ASEAN sources through making the region a more competitive, open, and liberal investment area. Under the Agreement, the AIA is to be achieved by January 2010 through the implementation of three broad-based pillars of investment programs. These include cooperation and facilitation, promotion and awareness, and liberalization programs.

In order to achieve the aforementioned objection, key activities will be undertaken in the region and these are: (1) opening up all industries, with some exceptions as specified in the Temporary Exclusion List

(TEL) and Sensitive List (SL); (2) granting national treatment, with some exceptions as specified in the TEL and SL; (3) involving the private sector actively in the AIA development process; (4) undertaking joint investment facilitation activities that will help bring down transaction cost and adopting coordinated investment promotion program to facilitate greater awareness of opportunities with the AIA; (5) promoting freer flow of capital, skilled labor and professionals, and technology amongst the ASEAN countries; (6) providing transparency of investment policies, rules, procedures and administrative processes; and (7) providing a more streamlined and simplified investment process (ASEAN Secretariat, 2003).

In summary, the AIA is geared towards binding member countries to achieve the goal of eliminating investment barriers, liberalizing investment rules and policies, granting national treatment and opening up industries, initially in the manufacturing sector and later to cover other sectors under the Agreement.

The AIA Agreement acknowledged that there may be certain industries or measures in which the contracting parties may not be able to open up or accord national treatment for reasons such as the need to protect national security; public morals; human, animal or plant life or health. In line with this, the member countries are allowed to place limited list of industries and limited areas where national treatment cannot be granted in an SL.

4. Evaluation of FDI agreements.

An analysis of the discussion of the Agreement shows significant implications for existing and new investments in the ASEAN region. The AIA will help enhance investors' confidence for locating and operating in the investment area. Moreover, investors will have greater investment market access through the opening up of industries for investment and enjoyment of national treatment. The lower cost of investment and operation in the region is one of the benefits of AIA as a result of a liberal investment regime, the elimination of investment impediments, steps taken to transparency, coordinated promotion program and greater private sector role in the AIA process. Furthermore, investors can enjoy greater synergies and economies of scale and scope of production, whether their operations are aimed at the region's expanding market or whether they are using the region as an export platform to service global demand. Together with the AFTA program, the AIA will give investors, both existing and new, a framework highly conducive for regional integration production activities, procurement, manufacturing and resource-based investment activities (ASEAN Secretariat, 2003).

Foreign direct investment flows are widely viewed as catalysts of development that bring, together with technology, other scarce and critical developmental resources such as entrepreneurship and capital. Because of this, most developing countries seek to encourage investment flows with various policy instruments. Aside from reforming policies, regional integration efforts that aim to lower the costs of cross-border transactions are likewise undertaken.

These investment agreements mentioned above could help promote the spread and growth of global production networks, which in return would benefit developing countries. As discussed earlier in this paper, intra-regional trade in East Asia is increasingly characterized by product sharing, which is the decoupling of previously integrated goods into their constituent parts, components and accessories. This cross-border multi-staged production process has been facilitated vastly by major improvements in policies and others such as transportation, coordination and information communication technologies. Growth in the region is expected to increase in the years to come when participating countries continue to implement and improve investment policies.

5. Multinational companies as investments: Implications on GPN

In the event that all investment barriers will be minimized, if not eliminated in the region, the benefits are numerous and could help in the development of the countries in the region. An example of an investment is a multinational corporation (MNC); MNCs are known as a crucial catalytic institution, which creates and transfers knowledge across borders and are generally welcomed in developing countries (Ozawa & Castello, 2001). One of the effects of MNCs on a host country is that technology transfer takes place and there are also spillover effects. In the long run, investments such as multinational companies creates trade not only within the region but also outside the region. If growth and development in trade will

be sustained, further investment in the region will be guaranteed.

The role of MNCs in the formation and growth of global production networks is explored by Navaretti et al. (n.d.). In their paper, the authors draw from empirical evidence on investments from and to the European Union to come up with trade policy implications. The decision to become multinational, according to the authors, depends on either the firm's desire to serve a local market (made possible by horizontal FDI) or to its search for lower cost inputs (financed by vertical FDI). The latter reason underpins the growth of global production networks. When a multinational corporation decides to locate a segment of its production in another country, it could either set up a subsidiary in that country (i.e., internalize its operations) or engage in arm-length contracts with independent local producers (i.e., externalize its operations). This decision now has implications for trade policies implemented in the country benefiting from inward FDI (also known as the host country) (Navaretti et al. n.d.).

Navaretti et al. (n.d.) proposes a framework that looks into the rent effects, the output effects, and the spillover effects of FDI. Specifically, these effects include the recipients of economic rents generated by FDI (rent effects), the effect on output and employment (output effects), and on the technological and pecuniary externalities created by the FDI (spillover effects). Evidence from the E.U. points to the need to relax restrictive trade policies and to coordinate policies. Arguments forwarded by Navaretti et al (n.d.) to support this case are summarized below.

First, rent effects created by a tariff (or any trade barrier) will also accrue to foreign firms owning some of the domestic output. Under this scenario, it does not make much sense to impose trade barriers with the view of redistributing real income towards domestic producers. A trade barrier could also induce inward FDI, with MNCs preferring to internalize their operations rather than export to the host country. The expected government revenues arising from the tariff might not materialize and domestic producers will instead face more competition.

Second, the single market program within the European Union has made the area more attractive for inward FDI. Internal policies do matter in inducing greater investment inflows. Currently, investment policies among ASEAN members are being coordinated to sell the area as a single market.

Lastly, trade and investment incentives intended to attract inward FDI should be analyzed under a cost-benefit framework. When host countries compete for inward FDI, thereby causing a policy competition, benefits might accrue only to the MNC.

Overall, restrictions in one segment of a production network might hamper the growth of the GPN in the area. The study also mentions that GPNs are sensitive to transport costs and other trade barriers. The overarching concept here is the reinforcing relationship between investment and trade. As the catalysts of GPN, multinational corporations invest in host countries. Such activity induces trade in intermediate goods and is, thus, creating trade. This then leads to another round of investments. Trade and investment policies, therefore should be complementary within the host country and among members of a regional trading bloc.

It is thus interesting to note the proliferation of preferential trade agreements (PTAs) among members of a regional bloc, such as ASEAN. This trend is observed and is extensively discussed by Ravenhill (2003). He notes the sudden shift among East Asian economies towards PTAs with the most compelling reason being its use of PTAs as a defensive strategy. It is explained that governments of the western Pacific Rim are wary about existing bilateral agreements elsewhere, fearing that failure to follow suit would lead to adverse economic consequences. Another reason offered is the disappointments with regional institutions like the ASEAN, whose implementation of policies proceed at a slow pace. A political motive that has been forwarded includes the view of PTAs as an opportunity to move agenda forward.

In terms of benefits, PTAs have less to offer. For one, trade creation and welfare gains are expected to be minimal, although some sectors may suffer because of greater market access granted to those engaged in a PTA. Ravenhill (2003), however, is tentative about the overall effect of a PTA. In fact, he mentions that it is too early to say whether bilateral agreements are good testing grounds for further liberalization in the future. He does caution economies, however, against taking advantage of loopholes in the WTO to protect their non-competitive sectors.

6. Asia's electronics industry and FDI: Effects of GPN on the region

Ernst (2003) writes that East Asia's electronics industry is one of the important ingredients to sustain and broaden the benefits of integration into the GPNs. East Asia emerged as one of the dominant global manufacturing base of the electronics industry, especially for the assembly and component manufacturing due mainly to network participation. This provided Asian producers with access to the industry's main growth markets, and helped in compensating for the size of the domestic markets that used to be small (Ernst, 2003). The electronics industry is the major recipient of FDI. A progressive integration into GPN has been one of the main reasons of Malaysia's success in the electronics industry. To give a brief background, as explained in Ernst (2003), the integration started in the early 1970s with offshore chip assembly, primarily by U.S. semiconductor firms. During the early 1980s, the next stage was centered on Japanese electronics makers that moved their export platform production for consumer electronics to Malaysia and other Southeast Asian locations (Ernst, 2003). The effects have been numerous in terms of production, exports, employment and investment. However, despite the achievements, the structural weaknesses of Malaysia's electronics industry have hindered the benefits of growth. One of these structural weaknesses is that Malaysia's integration into GPN gave rise to the development of an asymmetric industry structure in which multiple layers of electronic firms are distinguished by unequal control over resources and decision-making.

Another structural weakness mentioned in Ernst's (2003) is that there was heavy reliance on technological capabilities developed within affiliates of global flagships, and their eventual spillover effects into local firms. This traditional pattern of network integration apparently produces decreasing benefits.

In contrast to countries like Singapore, South Korea and Taiwan, Malaysia has failed to develop a broad and multi-tier base of support industries. Most of the local suppliers possess few proprietary advantages and clearly qualify as "lower-tier" suppliers. As a result, there is lack of efficient domestic linkages and is less attractive to domestic and foreign investors (Ernst, 2003).

The benefits from GPNs, particularly from multinational corporations in the ASEAN region could be maximized if there is a correct mix of economic policies, political climate and the willingness of the people of the host country to be trained and developed. Specifically, this pertains to the absorptive capacity of the local suppliers such as their resources, capabilities and motivations; local suppliers must constantly upgrade their absorptive capacity by investing in their skills and knowledge base. Of course, adequate incentives are required to generate sufficient investments in the development of skills and capabilities. Moreover, countries should strengthen their innovative capabilities through selective international knowledge sourcing.

VI. OTHER LOCATIONAL ADVANTAGES AND GPN

Aside from institutional changes in various countries in reducing uncertainties and allowing access to resources from the outside, there are other distinct country environments that can serve as locational advantages in attracting FDIs, particularly GPN.

The level of infrastructure, particularly in telecommunications, is an important locational advantage of a country in attracting FDI with global production networks. As mentioned earlier, the emergence and growth of global production networks was driven to a great extent in an atmosphere of fierce competition. The ability of firms in responding adequately to these competitive challenges is facilitated by the state of ICT infrastructure in countries where GPNs are operating. Thus, the extent of ICT utilization in various countries in the ASEAN will dictate the future growth of GPN in the region. Moreover, the level and magnitude on how countries used ICT as an instrument in global production networks will likewise determine the direction of intra-regional trade. In addition, aside from the requisites of hard infrastructure in ICT, there is a need to know if the human resources required to implement the ICT needs of GPN are available in the host countries.

Another form of infrastructure that is equally important in attracting GPN refers to the state and quality of the soft infrastructure that can include the country's political stability, peace and order situation, administration of justice, the quality of human resources, and industrial relations.

Another interesting and important component of locational advantage is the strategic significance of the country to the flagship company in the GPN. The strategic importance may include the proximity of the country with other locations in the hierarchy of GPN. Sometimes the strategic significance of a country is not based on spatial considerations but on technological and market linkages of the country with the other components of the GPN. It is, therefore, important to know how geographical location helps a country in reaping the benefits from global production networks.

VII. GPNs AND REGIONAL TRADE AGREEMENTS

Ernst and Kim (2001) presented a GPN framework termed the flagship model which put forth that ultimately, the flagship directs the operations of the network, which is comprised of local suppliers. In effect, this model is also a “hub and spoke” model. This is mentioned because the hub and spoke model is apparent in several regional trade agreements (RTAs). Lloyd (2003), for one, cites Wonnacott (1996) in explaining the hubs and spokes in RTAs, who writes that a hub arises when a country or a customs union is a member of two distinct bilateral agreements. Identified as hubs in the Asia-Pacific region are Australia, Canada, Chile, Mexico, Peru, New Zealand, Russia, Singapore, and the U.S.

These two models are similar in the sense that one entity is at the core of several relationships. The difference lies in the nature of the relationships: a GPN crosses geopolitical boundaries and is driven by production arrangements; a hub and spoke RTA is an inter-country relationship driven by trade considerations. Multinational enterprises act as flagships; countries or trading blocs act as hubs. The trading agreements between countries (or between a big trading bloc, such as E.U., and another country or trading bloc) determine considerations made by multinational companies in their choice of location. Elek (2002) notes that the emergence of big hubs like the U.S. and the E.U. poses a serious challenge for the rest of the world, specifically for East Asia. He even points to the possibility of forming a third big hub in the region. The question now is who will act as a hub—China or a larger trading bloc.

This paper already discussed the trade benefits of RTAs in the previous sections. To reiterate, RTAs provide incentives to members, which translates to better business facilitation and lower trade barriers. For a member country with local suppliers, this arrangement facilitates access to a GPN in a particular industry. For a non-member country with GPN links, exclusion from incentives created by RTAs spell losses in competitive advantage that could even cause exclusion in the network.

The literature points to greater cooperation between or to the formation of a large trading bloc between ASEAN and the North Asian economies of China, Japan and Korea. In fact, several RTAs are already in place or are being explored between ASEAN and these countries and between ASEAN member states and each of these North Asian countries. These two blocs comprise roughly 22 percent of the world's GDP (as of 1998) and as a region, these two blocs become a relatively attractive market (Scollay, 2001).

1. Integration in the Region and into Production Networks

Elek (n.d.) discusses trade strategy options for East Asia, which could also serve as a framework in analyzing the trade environment in the region. He groups impediments which add costs and risks to doing business as:

- i) Border barriers to trade in products and factors of production,
- ii) Uncertainty,
- iii) Divergences in standards or administrative procedures, and
- iv) Physical impediments

In this research paper's framework of analysis, the first group pertains to trade and investment barriers while the third and the fourth group pertain to business facilitation issues. Elek (n.d.) has also identified policy options which can address these issues, to wit:

- i) Unilateral policy reforms by individual governments,
- ii) Voluntary cooperation among groups of economies,
- iii) Formal agreements of treaties among groups of economies, which may involve PTAs, and

- iv) Multilateral agreements on disciplines to limit policies which create impediments to international commerce, for example, through the WTO.

Each of these policy options, which is observed to be taking place in the Southeast Asian region, could be used to address the impediments cited above

2. The link to GPN

With RTAs being the trend, ASEAN and its member economies have been involved in a number of trading agreements with other countries. Whether this is favorable to the further integration of the region or of its member states in production networks depends on the terms of the agreements. Theoretically, lower trade barriers and improved infrastructure in the region will have to attract investments from multinational companies. However, political issues within the region and within its members could pose a challenge in the further integration into the production networks.

VIII. GPNs AND MULTINATIONAL COMPANIES

Global production networks and global commodity/value chains perspective highlight the essence of transnational organizational linkages as the conduit of technology transfer and knowledge diffusion. Through this, manufacturers in less developed countries, such as some members of the ASEAN region, are able to catch up by learning from lead firms in more developed countries. A very good example of this is the case of Taiwan wherein global production networks were found to play a pivotal role in the initial stage of development of the information technology industry (Poon, 2004). According to Poon (2004), the changing structure of the IT industry and emerging threat from low-cost competitors, the roles of the state and institutions were found to be increasingly important in overcoming barriers against the further upgrading of the industry concerned.

Taiwan's post-World War II economic growth has shown how industrial upgrading has occurred as a result of the impact of globalization on technology and industrial development. Industrial upgrading is the process whereby manufacturers have successfully moved from engaging in lower-value to higher-value economic roles to produced labor-intensive as well as capital or technology-intensive products. As mentioned by Poon (2004), one accepted indicator of industrial upgrading is a manufacturer's shift from engaging in original equipment/design manufacturing (OEM/ODM) to original brand manufacturing (OBM). In effect, there is the production and marketing of products bearing their own names. Since the late 1970s, the involvement of Taiwanese manufacturers in the global IT production networks has facilitated transfer of technology and knowledge creation and has fostered the gradual upgrading of the industry.

The local manufacturers in Taiwan have played a very significant role in information technology global production networks that led to the gradual upgrading of the IT industry. With technology advancing fast in various sectors of the IT industry, network flagships such as IBM or Intel are able to disaggregate the value chain into a variety of discrete functions to be located wherever they can be carried out most effectively (Poon, 2004). Given the excellent capabilities for low-cost and flexible production, Taiwanese firms were drawn into the IT GPN as international suppliers to produce finished IT commodities for export bearing the brand names of network flagship (Poon, 2004). It could be noted that playing the OEM/ODM role for network flagships to design and produce finished commodities for export, large first-tier Taiwanese suppliers gradually upgraded their technological capabilities through technology transfer and knowledge diffusion. The larger Taiwanese suppliers started by picking up simple assembly skills and developing incremental process capabilities to control quality and the speed of production. Once they acquired full production skills, they became involved in product design, quality control, process engineering, and innovation (Poon, 2004). Acer and Mitac, for example, gradually developed their product and process innovation capabilities through learning, as international suppliers, from U.S. flagship companies such as Dell, IBM, and Compaq. In the same way, the Taiwanese Semiconductor Manufacturing Company in Taiwan had its level of technology gradually upgraded by meeting stringent technological requirements imposed by network flagships such as Philips and Intel (Poon, 2004).

Transnational organizations as opposed to multinational companies allow for more room for technology transfer and knowledge diffusion as shown in the literature on global production networks.

Multinational companies merely tap the resources of the host country and although there is possible transfer of technology and knowledge, it is very unlikely that the host country would be able to develop their own product.

Given the effects of the production networks of transnational corporations, the question now is what motivates them to engage in networks with the ASEAN region. In general, many U.S. transnational corporations have production networks in the ASEAN region because of the economic advantages such networks offer. They believe that ASEAN countries are bound together in an inextricable way; there is an overwhelming economic self-interest for all ASEAN countries to work together to bring down trade barriers and promote economic growth and cooperation. Regional production networks depend upon the free movement of goods and services throughout ASEAN and they bring great efficiency savings and enhanced productivity and competitiveness. An example could be the Ford Motor Company's regional production network in the ASEAN region. Basically, Ford wants to build one product in one country in ASEAN and then trade the product freely within ASEAN. The AFTA has allowed Ford, and other auto companies, to move towards product complementation in the region.

The first incentive for transnational corporations to set up production networks is location. Ford for instance chooses location for production based on a number of factors. The first factor is domestic demand for a product, linked to export potential for the same model of vehicle. The second incentive or motivation is the host country's commitment to free and fair trade. In the case of Thailand, if it were not strongly committed to AFTA, Ford's production there would be considerably less significant than it is today. The commitment to free and fair trade must be manifested by a lack of tariff and non-tariff barriers, extensive transport links with trading partners, productive ports and airports, and efficient customs procedures to facilitate imports and exports. Economic and political stability are also important factors in deciding where to locate production. Political uncertainty or doubts about the management of a nation's economy tend to drive away investors.

Aside from the challenges coming from the process of liberalization, stiff global competition and developments in information technology, there are incentives as well as costs for firms, both local and flagship, for joining global production networks prevailing in the global commerce. Local firms in developing countries, for example, participate in these networks to avail of an expanded market, vast resources and modern technology offered under the command of the flagship firms from developed countries. In addition to these short-run considerations, there are long-term benefits that may accrue to these local suppliers. Foremost among these are opportunities for local partners to shift from local suppliers to original equipment/design manufacturing or even to original brand manufacturing resulting from technological transfers from flagship firms over time. However, such transformation can only occur provided that the local suppliers have the absorptive capacity to adopt the technology being transferred.

What is interesting is the fact that these benefits are reaped without the equity participation of the flagship firm in the management of their local suppliers. This phenomenon emanates from the flagship's need to have more flexibility in confronting the pressures of intense competition from rival firms. The absence of ownership stakes in local suppliers allows flagship firms to shift quickly to more competitive suppliers elsewhere without the costly and lengthy structural adjustments. For the local suppliers, this costly consequence makes them very vulnerable to the dynamic changes of a competitive world. However, this condition likewise presents a challenge for the local firms to improve, adapt and shift to higher category of supplier by exploiting the vast marketing, technological and resource expanse that global production networks provide.

Similarly, flagship firms are encouraged to shift towards GPN and away from the traditional equity mode often taken by multinational corporations. Intense competition in the global market and rapid changes in technology force these flagship firms to engage in production networks worldwide even without the benefit of an equity control in partner firms in various parts of the world. Intense global competition will require from flagship firms enormous resources for technology improvement. This will push them to explore non-equity arrangements in production, distribution and technology that linked firms globally. Non-equity participation in global partners, unlike the equity and direct control of MNC, will give them ample resources to compete in a highly competitive commercial world. Aside from accessibility to vast resources, the non-equity system of partnership allows flagship firms to maneuver with ease from the costly structural adjustments resulting from

their loss in competitive advantage. However, this benefit has a corresponding cost to flagship firms in terms of sharing their technological advancement with their respective local suppliers. This cost may not be a major concern in the short-run; but, it may be costly in the long-run. As local suppliers transform technologically over time, they can threaten the competitive edge of flagship firms.

Multinational corporations, therefore, invest in local partners to have operational control over these firms. This operational control, in turn, gives them ample power over the domestic market and in sourcing its raw materials. However, the intense competition in contemporary global commerce force transnational corporations to enter into non-equity relationships that benefit both the local suppliers and the flagship firms.

IX. IMPLICATIONS FOR REGIONAL AGREEMENTS

The role of Regional Trading Arrangements (RTA) is a part of institutional changes that has driven firms to form GPNs for market access, cost reduction, and meeting uncertainty. Given the growing importance of GPN in international commerce, particularly in the East Asia, several questions emerge as to the role of regional cooperative arrangements. For example, are the existing agreements on trade, investments and services sufficient to attract GPN in the ASEAN region? In addition, will regional agreements lead to less complex competition and make uncertainties more manageable for GPN in the region?

At the country level, several implications emerge. First, countries should identify sectors (that is, production components) where they have or could develop locational competitive advantages. These advantages could be derived either from cost leadership (lower-tier supplier) or technology leadership (higher-tier supplier). Second, increasing competitiveness requires continuous technology upgrading to move from a lower-tier position in the GPN to a higher-tier position. Third, liberalization policies should be promoted with the view of strengthening local firms and industries, which could be or are currently integrated in GPNs. Fourth, improvements in ICT should be undertaken to improve and to strengthen linkages with other players in the GPN.

In a mad scramble for positions in a global production network, the governments should go beyond trade liberalization measures to entice flagships to establish their presence in their territory. The demands of regionalism and, eventually, multilateralism, drive economies towards unified trade policies.

The impact of GPN on regional cooperative efforts will focus on the major drivers and major issues interfacing GPN. Thus, the three major drivers of GPN (liberalization, ICT, and competition) interact with three major issues of intensification, diffusion and governance. The issue of intensification refers to the various conditions and requirements for promotion and expansion of GPN in various locations across regions. The issue of diffusion, on the other hand, refers to the transfer of technology as well as the strengthening of linkages between the local suppliers and the flagships and the development of these local suppliers and local contract producers. The issue of governance refers to the regulatory environment where GPN operates and the necessary regulatory framework that will promote the expansion of GPN in the region. The interface between the major drivers and key issues affecting GPN may not only require individual country responses but may likewise involve resolutions and conformity at the regional level.

On the issue of intensification, liberalization measures (e.g., at the regional level that lead to the formation of the AFTA, implementation of CEPT, convergence of tariff rates, reduction in non-tariff barriers, agreements on trade facilitation measures, reduction in investment restrictions as well as the similarity of investment policies across countries in the region) have addressed the issue of intensification. In fact, these regional cooperative initiatives, together with individual country liberalization measures, have been identified as the key factors that have invited FDI and expanded GPN in the region.

Although there is a regional consensus to make ASEAN as a single investment region, countries, individually, are competing among themselves in attracting FDI particularly in the provision of fiscal incentives. Aside from draining the government of needed public funds, these competitive measures do not really promote the ASEAN as a single investment region.

One measure that should be resolved at the regional level is the agreement among countries to

reduce, if not totally remove, the fiscal incentives. Savings generated by such regional measure can be used by countries in activities and projects that can upgrade the human resources of the region as well as the quality of transportation and the telecommunication infrastructure-requisites for the expansion of GPN in the region. Instead of a competitive stance among countries, the ASEAN can forge cooperative measures that will complement their locational advantages.

The Framework Agreement on Trade in Services should be further reviewed to expand the coverage and deepen the liberalization in trade in services. In addition, since transportation in adjacent regions is an essential component of GPN production and marketing activities as well as a key factor in expanding intra-regional trade, the Framework Agreement on the Facilitation of Goods in Transit should be fully implemented.

On the issue of diffusion of knowledge, liberalization measures can be active and passive conduits of transfer of technology. Foreign investment flows can serve as active conduits in the transfer of technology through FDI, turnkey plants, and technical consultancies. On the other hand, allowing easy importation of machineries through a liberal trading environment can passively transfer technology.

On the issue of governance, regional liberalization measures can likewise address the issue of regulatory framework. Expanding trade in services will require accreditation of service providers in the light of existing differences in standards across countries. Although public interest is a legitimate reason for domestic regulation, these domestic regulations are oftentimes used as veiled trade barriers in services. Another alternative to domestic regulation that can still ensure the same public interest objective of domestic regulation without being used as a trade barrier is the formation of mutual recognition agreements on various fields.

In the light of numerous and sometimes conflicting domestic policies on standards, qualifications and other requirements, the formation of regional Mutual Recognition Agreements (MRAs) in various service sectors can pave the way towards the standardization of procedures in the region. This, in turn, will clearly define the regulatory environment and framework where GPN can operate within the region instead of relying on multiple domestic regulation measures across countries. The formation of MRAs is important since under GPN, goods move across boundaries at various stages of production.

Although trade and other liberalization measures have contributed immensely in the growth of the GPN in the region, there is a need to go beyond liberalization measures since tariff rates and investment policies and non-tariff barriers have been converging over time across countries in the region.

The two other drivers of GPN, information and communications technology and competition, have distinct impact on the intensification, diffusion and governance issues surrounding GPN. These interfaces may have to be resolved at the country level or even at the network level and may not lend themselves directly under regional cooperative agreements. For example, strengthening ICT infrastructure to address the issue of the intensification of GPN in the region can be addressed by individual countries. In addition, on the issue of diffusion of knowledge, regional agreements may not be the ideal route of responding to this issue but the strategic relationship between the flagship and local suppliers. Moreover, the transfer of technology is not only a decision made by the flagship companies but determined by the ability of local suppliers to absorb the technology.

On the issue of governance, the use of ICT in various service sectors, however, can be subject to regional cooperative initiatives. For example, the regulatory framework on the use of ICT under Mode 1 (cross border transactions) can be agreed upon on a regional level. Since cross border transactions are usually facilitated by information and communication technology, is there a need for a regional regulatory framework that will govern cross border transactions in various service sectors? But then, is a regional regulatory framework for cross border transactions of various services more beneficial and practicable than a purely domestic regulatory framework?

Competition, as a driving force in GPN, can likewise address the issue of intensification through individual country measures as well as by regional initiatives including the plan to promote the ASEAN as a single investment region. If this is the case, regional agreements or existing regional arrangements in

promoting competition should be examined, reviewed and fine-tuned to make them more practicable. On the diffusion of knowledge, are there regional cooperative schemes that create a competitive environment that can promote transfer of technology? On the other hand, diffusion of knowledge can be considered as simply as a domestic concern between the flagship firms and the local suppliers.

The benefits brought about by global production networks could be maximized, as it was discussed previously in the paper, through increased cooperation and efforts in the region to improve mainly trade facilitation both at the border and behind the border. This means that first of all, reforms in the customs procedures should be made through the use of information technology. The utilization of ICT in customs will drastically reduce the time spent in making transactions that entails a huge amount of opportunity cost. This is return, brings efficiency and productivity and reduces red tape. An example of which is the implementation of the Super Green Lane in the Philippines which is an improvement in the customs clearance facility.

Further expansion of the GPN in the East Asian region can be facilitated with dismantling of the remaining trade barriers. In particular, there is a need to forge the MRAs on various fields that will establish a common and acceptable product standards and regulations. Moreover, ICT and reforms in infrastructure should be undertaken.

X. CONCLUSION

There has been a tremendous surge of Global Production Networks in the Asian region in recent years. This has been facilitated by the rapid liberalization mechanisms undertaken by host countries in trade and investment. The liberalization measures have brought about convergence in the tariff rates as well as the investment climate in the region. Likewise, the hard and soft infrastructure on the ICT of selected countries like Taiwan, India, and Malaysia are readily available in selected countries that has facilitated the growth of GPN in the region. The competitive and strategic advantage of China has made it the most popular destination of FDI including GPN.

The regional cooperative efforts, on the other hand, have influenced one of the major drivers of GPN-liberalization. However, given the convergence of tariff rates and investment promotional incentives of various countries in the region, the most that regional cooperative undertakings can do currently is to fine-tune existing agreements.

The impact of regional arrangements, however, on the other two major drivers is rather limited and indirect. What can be done is to review existing regional agreements, evaluate the extent of their implementation and recommend ways of improving these agreements to expand the coverage and deepen the depth of liberalization measures. In addition, such improvements in existing regional cooperative initiatives can intensify the growth of GPN in the region, hopefully contribute in the diffusion of knowledge, and lay down alternative regulatory frameworks that are still conducive to foreign capital.

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