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An Economic Analysis of Competitive Regionalism in East Asia

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I. Introduction

In the 21st century, East Asia has finally caught up with the frenzy of free trade agreements (FTA). Although East Asia was not active in the formation of FTAs until very recently, the rest of the world had begun to actively look at FTAs as a means of promoting trade liberalization since the early 1990s, when multilateral trade negotiations under the GATT (the General Agreement on Tariffs and Trade) were making little progress. Interest in FTAs increased even after the establishment of the WTO (World Trade Organization) in 1995, which succeeded the GATT with a broader coverage and stronger legal foundation, especially after the new multilateral trade negotiations (the Doha Development Agenda, DDA) under the WTO entered into the deadlock. Indeed, the cumulative number of FTAs reported to the GATT/WTO since 1949 increased from 86 in 1990 to 165 in 1995, to 251 in 2000, and further to 404 as of August 10, 2008.¹

In East Asia, the AFTA (ASEAN Free Trade Area) covering ASEAN countries was enacted in 1993 but this was the only major FTA in East Asia until the Japan-Singapore FTA was enacted in 2002. East Asian countries began discussing FTAs toward the end of the 1990s, and they have become very active in establishing FTAs in the 21st century as if they are competing with each other.

In light of the rapid expansion of competitive FTAs in East Asia, this chapter analyzes how economic competition leads to FTA proliferation in the region. Specifically, the chapter examines the factors that have led to the proliferation of FTAs in East Asia and their economic impacts. The analysis finds that competition among East Asian countries especially between China and Japan for obtaining market access in East Asian countries and for gaining a leadership role in East Asian integration has been a crucial factor leading to the proliferation of FTAs in the region. Specifically, East Asian countries hurriedly entered into FTA negotiations with other East Asian countries because of the concern about the negative effects of FTA exclusion. Empirical analyses have found that FTAs have promoted trade between and among FTA members in many FTAs, while they have found that the negative impacts arisen from being excluded from FTAs are rather limited.

The structure of the chapter is as follows. Section II examines the impacts and

¹ The figure includes those FTAs which became inactive as well as those active. The figures are taken from the WTO's website on August 27, 2008.
http://www.wto.org/english/tratop_e/region_e/summary_e.xls

determinants of the formation of FTAs mainly from a theoretical aspect. Section III examines empirically the changing patterns of trade and foreign direct investment (FDI) in East Asia by focusing on their intra-regional relationship. This section also summarizes trade liberalization experiences up to the end of 1990s, which contributed to increasing trade and FDI in East Asia. Section IV examines the developments of FTAs in East Asia, as an FTA became an important trade policy tool for East Asian countries. This section also empirically evaluates the quality of FTAs and the impacts of FTAs. Section V presents some concluding comments.

II. Economic Analyses of FTAs

Contrary to the most-favored nation principle of the WTO, the essence of FTAs is the exchange of trade preferences that are not made available to third parties. Preferential liberalization, therefore, creates new incentives for private sector lobbies and governments to achieve competitive goals through these agreements. These objectives include the desire to gain preferential access to a main market of destination; to counter the trade and discrimination effects from existing FTAs; and to leverage tariff concessions in one FTA negotiation into more substantial gains in subsequent trade talks. These are some of the economic motivations behind the formation of FTAs.

This section reviews the economic literature on FTAs. Specifically, I first review the studies that analyzed the impacts of FTAs with an observation that a government forms an FTA if the perceived net benefit (benefits-costs) of an FTA outweighs the costs. The theories reviewed here are rather basic, but it is important to grasp them well in order to understand actual developments. Then I turn to economic studies which analyzed explicitly the factors leading to the formation of FTAs. These studies, which incorporate explicitly government behavior, are rather new but have shed light on the factors determining the formation of FTAs.

II.1 Economic Impacts of FTAs

One can classify the economic impacts of FTAs into two groups: static effects and dynamic effects.² Static effects are “trade creation effects,” “trade diversion effects”

² The analysis here is intended to give concise explanation of the major points and therefore lacks theoretical rigor. For a detailed analysis of the economic impacts of RTAs, that is customs unions and FTAs, see, for example, Baldwin and Venables

and “terms of trade effects,” while the dynamic effects include “market expansion effects” and “competition promotion effects.”

“Trade creation effects” result from the elimination of trade barriers among FTA members and, therefore, the new trade created among them, resulting in an improvement in resource allocation. “Trade diversion effects” address the ways that FTAs replace highly efficient products of non-member countries by imports from less efficient FTA members. In general and from the viewpoint of FTA members, “trade creation effects” have positive impacts while the impacts of “trade diversion effects” are ambiguous. Despite ambiguity of the impacts of FTAs on FTA members, one can derive several important policy implications from the analysis of trade creation and trade diversion. To reduce the negative impacts caused by trade diversion, tariffs on non-members or MFN tariff rates should be low. To maximize the scope for trade creation, a country should form an FTA with a highly productive country. Having pointed out the ambiguity of the impacts of FTAs, it has been proven theoretically that any FTAs can be welfare-improving if they are properly formulated.³

The analysis of trade creation and trade diversion effects above can be applied to a small country, which does not have any influence on international prices or the terms of trade. As such, the terms of trade effect of FTAs is not considered in the above analysis. For a large country or a large FTA group consisting of FTA member countries, the formation of an FTA enables a large country or a large FTA group to gain as it improves its terms of trade by expanding trade between FTA members at the expense of its trade with non-members.

Beyond the economic impacts of FTAs on their members, it is important to recognize that the static impacts of FTAs on non-FTA members are negative. Non-FTA members suffer from welfare loss because trade diversion effects reduce the level of their exports to FTA members and because the terms of trade effect would reduce non-members’ welfare as the terms of trade for non-FTA members deteriorate. Indeed, as we will discuss below, the emergence of negative impacts of FTAs for non-FTA members leads to competitive FTAs and the proliferation of free trade agreements, as

(1995).

³ More accurately, this point is proven for the case of customs union (CU), where the members share common external tariff while they remove tariffs on intra-CU trade. This is known as the “Mead-Ohyama-Kemp-Wan theorem”. See, Baldwin and Venables (1995) and Bhagwati, Greenaway and Panagariya (1998).

non-FTA members try to cope with the negative impacts by creating new FTAs or joining existing FTAs.

As for the dynamic effects of FTAs, both market expansion effects and competition promotion effects contribute to economic growth of FTA members. “Market expansion effects” involves expanded market size needed to achieve efficient production/distribution and economies of scale. “Competition promotion effects” result from market integration in ways that would make regionally oligopolistic industries more competitive thus achieving higher productivity through the introduction of competitive pressures. For non-FTA members these effects are likely to have positive impacts as economic growth of FTA members tends to promote the exports of non-members to the members.

There are two important issues, which arise as a result of the proliferation of FTAs, that I will discuss before turning to empirical investigation. One is the “spaghetti bowl effect” and the other is “hub and spoke” FTA system. The “spaghetti bowl effect,” coined by Bhagwati (1995), refers to a situation where numerous and crisscrossing FTAs with different rules of origin (ROOs) increases transaction costs and facilitates protectionism, thereby reducing the welfare of both FTA members and non-members. ROOs play a key role in determining the impacts of FTAs on foreign trade, since FTAs give preference to the products produced in FTA partner members and the nationality of the products are determined by ROOs. Although the spaghetti bowl effect (in East Asia, some observers call it the “noodle bowl” effect) attracted a lot of attention of researchers and policy makers, its negative impacts may be exaggerated because the “spaghetti bowl” effect may not increase trade cost from the pre-FTA level and thus it does affect trade. In other words, trade can increase if preferential treatment is applied under an FTA, while trade remains the same if preferential treatment is not applied because the product in question does not qualify as local product without passing the ROO test.

Thus, the cost of the “spaghetti bowl effect” due to different ROOs applied in different FTAs could be overstated. It is important, however, to point out that ROOs have become an important tool for protectionists to restrict trade. Under an FTA treaty, products qualified as local products by passing ROO test can be exported to an FTA partner country without facing import tariff. Under such situation, the FTA partner interested in protection adopts very stringent definition of ROOs, in order to restrict imports. Indeed, in many FTAs countries have established very complicated and

restrictive ROOs.

A hub and spoke FTA system has emerged in many parts of the world. In East Asia, for example, Singapore has become a hub with many bilateral FTAs involving spoke countries. ASEAN is likely to become a hub-region, when it forms “bilateral” FTAs with various spoke countries including China, Korea, Japan and possibly India, Australia, and New Zealand. The benefits to the hub country are likely to be greater than benefits to the spoke countries, because a hub country is able to reduce the negative impacts of trade diversion while spoke countries cannot do so. To understand why, one should keep in mind that unilateral trade liberalization, which is essentially identical to having FTAs with all the countries, does not give rise to the trade diversion effect. For a spoke country, the welfare implications depend on whether the exports of the new spoke are complements or substitutes to those of old members. If they are substitutes, existing spoke countries may be harmed by an erosion of their degree of preference in the hub market. If they are complements, the initial members tend to gain.⁴ Therefore, the hub-and-spoke dynamics create incentives for countries to become an FTA hub to ensure positive gains.

In addition to its impacts on trade, an FTA also affects other foreign economic activities such as foreign direct investment. As the FTA eliminates regional trade barriers and expands market size, foreign direct investment is likely to flow into the regional market in the expectation of selling more products. This is FTA’s investment creation effect. Investment may also be undertaken in member countries at the expense of investment in non-member countries because of increased attractiveness of member countries for investment. This is FTA’s investment diversion effect. These observations indicate that FTAs would promote economic growth of FTA members by enabling them to attract FDI, which would bring the members various factors needed to achieve economic growth such as funds for fixed investment, technology, and management know-how. The Spaghetti bowl effect due mainly to complicated ROO systems would affect investment negatively as they would distort investment decision of the firms which face difficulty in meeting ROO requirements.

II.2 Determinants of the Formation of FTAs

The findings from the studies above on the expected impacts of FTAs highlight

⁴ Baldwin and Venables (1995).

the factors determining the formation of these trade agreements. More specifically, an FTA is formed if the government believes the benefits of the FTA exceed its costs. According to the theories/models analyzed above, the benefits of an FTA arise from the trade creation effect, terms of trade effect, market expansion effect or economies of scale effect, and competition promotion effect; while the costs emerge from the trade diversion effect.⁵ As discussed, many of those impacts are not determined a priori, but are influenced by FTA partner selection. Thus, it is imperative to examine the characteristics or relationships of potential FTA partners. Although rigorous theoretical investigations are lacking, several conditions for beneficial FTAs have been discussed from the static point of view, which include broad membership, high pre-FTA tariffs, low pre-FTA external tariffs and substantial overlap between FTA partners' production bundles.⁶

In general, however, the trade diversion effect motivates an excluded country form a new FTA in order to avoid reduced export opportunities as it is discriminated against by FTA members in their markets. Indeed, overcoming the trade diversion effect is very important factor behind the proliferation of competitive FTAs.. The terms of trade effect is another factor leading to the formation of FTAs. Small countries attempt to increase their welfare levels by becoming 'large' as they eliminate cross-border trade barriers through FTA formation.⁷ The incentive is that a "large" country can exploit the benefit in the form of terms of trade improvement.

Very few empirical studies on the formation of FTAs have been conducted. One of them is by Baier and Bergstrand (2004), which examines the economic factors affecting the formation of FTAs for 54 countries. They find that the probability of the formation of an FTA increases when two countries are in close geographical proximity, both relatively large and similar in economic size. They also confirmed that the likelihood of a FTA between a pair of countries is higher if one or some of the following conditions are met: the more remote a pair from the rest of the world, the greater the difference in capital-labor endowment ratios between two countries due to the gains from traditional comparative advantage, and the less the difference in capital-labor endowments ratios of the member countries relative to that of the rest of

⁵ Milner (1997) argues the scale effect is important for the firms.

⁶ Winters (1991).

⁷ See, for example, Riezman (1985) and Kennan and Riezman (1990) for the analysis of the terms of trade effect.

the world due to less inter-industry trade diversion.⁸

One of the problems of the theories/models discussed in the previous section for the analysis of the determinants of FTA formation is the exclusion of policy variables such as the presence of other FTAs in the discussions. Accordingly, the analysis neglected the political and strategic interaction of the governments in the formation of FTAs.

Dealing with the problem, recent models take into account of government behavior explicitly. For instance, Grossman and Helpman (1995) assume that governments respond to political pressures from industry special interests but also pay some attention to the effect on the average voter. Using this framework, they show that the government endorses an FTA in two types of situations. One is when the FTA would generate substantial welfare gains for the average voter and adversely affected interest groups fail to coordinate their efforts to defeat the FTA. The other is when an FTA would create profits for actual or potential exporters in excess of the losses that would be suffered by import-competing industries, plus the political cost of any welfare loss that might be inflicted on the average voter. They also show that the formation of an FTA is likely when there is a relative balance in the potential trade between the FTA partners. Furthermore, they show that the prospects for an FTA agreement improve, if some industries can be excluded from the agreement.

Indeed, several studies found that many FTAs in East Asia excluded sensitive sectors. Ravenhill's (2005) survey of Asia-Pacific early FTA initiatives leads him to conclude that these governments are lured by the goal of achieving "liberalization without political pain." Industrialized nations seem increasingly interested in bilateral FTAs with small trade partners because they can offer economic rents to specific producers through preferential treatment; while keeping off limits the most sensitive sectors (Pekkanen, Solís, and Katada, 2007). This combination of targeted rents for exporters and investors with exclusions for import-competing sectors provides a powerful impetus in the FTA race.

Endoh (2005) extends the analysis of Grossman and Helpman by incorporating Cournot type monopolistic competition and introducing tariff revenue increases as one of the government objectives. In addition, he considers that the quality of government -defined as the extent of its acceptance of requests from the industry- affects FTA

⁸ "Trade diversion" will be discussed in the next section.

decisions. According to Endoh, an FTA is likely to be formed between the two countries under the following conditions: large countries of similar sizes, with high quality governments, and in geographical proximity. Finally, he demonstrates that the incentive for a country to form an FTA increases with the number of FTAs it has established. The reasoning behind this observation is as follows. A new FTA gives benefits to exporters as they expand their exports in the FTA partner's market, and so exporters desire new FTAs. FTAs incur losses to domestic producers as competition from imports increases. Under the model framework, one can show that the additional cost to domestic producers declines with the number of FTAs weakening the opposition to subsequent FTAs. Combining these two effects, one finds that additional net gain (benefits-costs) for a new FTA increases. This finding may be interpreted as the "domino effect" discussed by Baldwin (1995). Endoh's empirical analysis of 118 countries for the year 2002 confirmed all the expected relationships discussed above. It is particularly noteworthy that Endoh corroborates that the greater the number of FTAs established by a country in question, the more likely it is for that country to have another FTA.

Having laid out the main theoretical findings on determinants and impacts of FTAs, I turn to the empirical analysis by examining first the situation in East Asia before the FTA wave and the subsequent pattern of FTA proliferation in the region.

III. East Asia Prior to the FTA Race

East Asia experienced substantial changes in the patterns of foreign trade and foreign direct investment (FDI) in recent decades.⁹ One is increased intra-regionalization in foreign trade. Another is increased share of machinery, especially electronic machinery, in foreign trade and FDI. The third distinguishable pattern is increased role of multinational corporations (MNCs) in international trade, intensifying the linkage between FDI and foreign trade. These observed patterns appear to reflect the formation of regional production networks by MNCs. These changes in international trade and FDI in East Asia are mainly promoted by trade and FDI liberalization policies pursued by East Asian countries.

⁹ East Asia in this paper is defined to consist of the following 10 countries and economies, China, Japan, NIES4 (South Korea, Taiwan, Hong Kong, and Singapore), and ASEAN4 (Indonesia, Malaysia, the Philippines, and Thailand).

III.1 Changing Patterns of Foreign Trade and Foreign Direct Investment in East Asia

A rapid increase in intraregional trade in East Asia is clearly discernable in Table 1.¹⁰ Intra-regional trade in East Asia increased 2.19 times in ten years from 1995 to 2005, while world trade expanded only twofold. As a result of rapid expansion in intraregional trade, the share of East Asia's intraregional trade in world trade increased from 12.3 percent in 1995 to 13.2 percent in 2005. The magnitude of East Asia's intraregional trade is significantly larger than NAFTA's intraregional trade, but substantially smaller than the EU's. In 2005, the shares of intraregional trade in world trade for the NAFTA and the EU are 7.7 and 25.4 percent in 2005, respectively.

During the 1995-2005 period East Asia's intraregional trade grew faster than its overall trade, as its exports and imports increased 2.08 and 2.03 times, respectively. As a result of rapid expansion of intra-regional trade in East Asia, the share of East Asia in East Asia's overall exports and imports increased from 47.4 and 54.7 percent in 1995 to 49.9 and 59.1 percent in 2005, respectively. The importance of intraregional trade for the region's trade in East Asia is greater compared to the NAFTA (55.1 percent for exports and 38.3 percent for imports, both in 2005) but smaller compared to the EU (66.3 percent for exports and 66.1 percent for imports).

The changes in intra-regional trade in East Asia from 1995 to 2005 are quite striking. In particular the increased importance of China and shrinking importance of Japan. The shares of China and Japan in East Asia's exports changed from 7.4 and 8.5 percent in 1995 to 14.1 and 7.4 percent in 2005, respectively, while those for East Asia's imports changed from 7.2 and 13.4 percent to 16.1 and 11.9 percent, respectively. These changes in the positions of China and Japan in East Asia's trade are largely attributed to the differences in economic growth rates of China and Japan¹¹.

East Asian countries became more important trading partners for most East Asian countries from 1995 to 2005, as the shares of East Asia in their trade increased. However, it was not the case for China, for which the shares of East Asia in its exports and imports declined. Although the importance of overall East Asia in China's trade

¹⁰ Many studies have identified the rapid expansion of intra-regional trade in East Asia. See, for example, Ng and Yeats (2003), and Urata (2001, 2005a)

¹¹ The average annual GDP growth rates of China and Japan for the 1995-2005 period are 9.1 and 1.2 percent, respectively. (Computed from the data obtained from the World Bank's World Development Indicators 2007, CD-ROM.)

has declined, the share of ASEAN in China's trade increased reflecting substantial growth in China-ASEAN trade albeit from a low base. In addition, the importance of the NIES4 for China and ASEAN4 in their trade is crucial. Indeed, the NIES4 were by far the largest trading partner for China and ASEAN4 in 2005. The importance of the NIES4 can be partly explained by the roles of Hong Kong and Singapore as entrepôts. Intra-ASEAN4 trade has also increased noticeably, as reflected in the increased shares of such trade in ASEAN4's trade. The ASEAN Free Trade Area (AFTA) certainly fostered such increase, as trade barriers on intra-ASEAN trade were removed. Finally, though Japan was surpassed by China in terms of the importance as a trading partner for East Asian economies during the 1995-2005 period, for ASEAN4, unlike the case for the NIES4, Japan still has a larger, though rapidly shrinking, trade share than China.

The changing importance of East Asian countries as trading partners for other East Asian countries has significant implications for foreign economic policies in areas such as trade, FDI and economic assistance, as will be discussed below.

The rapid expansion of foreign trade by East Asian countries was accompanied by substantial changes in commodity compositions from 1990-94 to 2000-04 (Table 2). The changes are especially notable for exports, among which manufactured goods and in particular machinery increased remarkably. Among machinery, exports of electronic and electrical machinery grew particularly fast for ASEAN4, NIES4 and China. Exports of automobiles and auto parts account for much smaller share in the exports for the NIES4, ASEAN4 and China, compared to electronic and electrical machinery. Among other manufactured exports, textiles and garment either grew relatively slowly or experienced a decline in their share in total exports for East Asian developing economies, although their share is still high for China and the NIES4.

Turning to the import composition of East Asian countries, one finds relatively small changes, when compared to the case for exports. The share of manufactures remained around 70-80 percent throughout the period for East Asian developing countries. Similar to the changes observed for exports, imports of machinery, in particular electronic and electrical machinery, increased their shares in total imports in many East Asian countries.

The increasing share of machinery products, especially electronic and electrical machinery, in both exports and imports for East Asian countries indicates increasing importance of intra-industry trade. Indeed, various studies including Fukao et.al (2003)

have found an increasing share of intra-industry trade rather than one-way trade for intra-regional trade dynamics in East Asia. They have also found that a large part of intra-industry trade in East Asia can be characterized as vertical intra-industry trade, under which parts and components with different quality and characteristics are actively traded.¹²

The importance of parts in intra-East Asian trade was found by a comparison with trade with the US and the EU. Urata (2006) found that East Asia's exports have lower (higher) share of parts (finished products) in its trade with the US and the EU compared with its trade with East Asia. These trade patterns reflect the regional production network, under which parts are traded in East Asia for the assembling of the finished products, which in turn are exported to the US and the EU. Such trade pattern has been described as "triangular" trade, reflecting that East Asia has become a factory for the world. A closer examination of international trade patterns at disaggregated country levels in East Asia reveals that China has become an increasingly important country for the location of assembling finished products.

Foreign direct investment inflows to East Asia have increased rapidly since the mid-1980s, and they have exhibited several notable characteristics with implications on trade patterns in East Asia. First, the source of FDI inflows to East Asia extends beyond the region, and unlike the case of international trade, no particular increase in intra-regional orientation was observed (Table 3). Out of eight countries, for which the data on the sources of FDI inflows are available, only three countries, Indonesia, Thailand, and Korea, saw the increase in the share of East Asia as a source of FDI inflows. Unlike the pattern observed for international trade, where intra-regional trade accounted for approximately 40-60 percent of total trade for all the East Asian economies, dependence on intra-regional FDI varies widely.

Second, somewhat similar to the pattern found for international trade, the machinery sector, especially electrical and electronic sector, received substantial FDI in many East Asian countries (Table 4), suggesting close relationship between FDI and international trade.

¹² The other type of intra-industry trade is characterized as horizontal intra-industry trade, where products of similar characteristics in quality and price but with different design and other characteristics are traded. Such trade may occur between the countries with similar income levels, where consumers have similar taste but they also have demand for variety.

Multinational corporations (MNCs), major suppliers of FDI, have had huge impacts on East Asian economies through various forms including generating production, fixed investment and employment. Among those activities, their impacts on foreign trade are substantial.¹³ For example, the share of MNCs' exports in China's overall exports increased from 29 percent in 1994 to 55 percent in 2003, while the corresponding share for the imports increased from 46 to 56 percent.¹⁴ Although similar information for many other East Asian countries is not available, the contributions of MNCs for many East Asian countries' trade appear substantial, indicating their elevated position in East Asia and their well-developed regional and global trading networks. In light of these observations, it is useful to investigate the trading patterns of MNCs in East Asia, in order to deepen our understanding of the changing trade patterns in East Asia. Due to the limited availability of necessary information, I focus the examination on the patterns of trade by Japanese MNCs as an illustration.

An examination of the patterns of trade for the Asian affiliates of Japanese MNCs reveals several interesting patterns. First, Asian affiliates of Japanese MNCs have strong trade orientation, when compared to the affiliates in other parts of the world.¹⁵ In 2004, the share of exports in total sales for the Asian affiliates in the manufacturing sector is 51 percent, significantly higher than 14 percent for the affiliates in North America. Among different sectors, trade orientation is particularly strong for the machinery sectors with the highest orientation registered by the electrical and electronic sector. Transportation machinery exhibits quite a contrasting pattern in that a large share of sales as well as procurement involves transactions in the local market. Low trade orientation found in the transportation machinery stems from several factors. One important reason is import protection policies applied to the transportation machinery sector, the industry which many countries are eager to develop.

Second, intra-Asia trade dominates trade by Asian affiliates of Japanese MNCs, reflecting strong regional orientation of Japanese MNC strategy, which in turn indicates that Japanese MNCs have contributed to the regionalization of foreign trade in East Asia. Intra-regional orientation is particularly strong for the procurements of

¹³ On the impacts of FDI on trade, see, for example, Urata (2001), Kawai and Urata (1998, 2004), and Urata et. al (2006).

¹⁴ China's Statistical Yearbook, various years.

¹⁵ See Urata (2006) for more detailed information.

the Asian affiliates, as more than 95 percent of their imports come from other Asian countries. Among the Asian countries, Japan is by far the most important trading partner for the Asian affiliates of Japanese MNCs. In this way, the Asian affiliates of Japanese MNCs have engaged in regional production network with China, ASEAN4, and NIES4, as their shares in Asian affiliates' imports are substantial.

Third, a large portion of trade conducted by Asian affiliates of Japanese firms take the form of intra-firm trade, trade which takes place between MNC's parent firm in Japan and its affiliates in Asia or between overseas affiliates. For manufacturing as a whole, in 2001 more than 70 percent of Asian affiliates' exports are destined to their affiliated firms regardless of destinations.¹⁶ Coupled with the observation that a large share of international trade by Japanese MNCs' parent offices is destined to their overseas affiliates, our findings on Japanese MNCs' trade and intra-firm trade in Asia appear to indicate that Japanese MNCs have developed their own production and distribution network in Asia. Furthermore, our findings about a high share of intra-firm trade in Japanese MNCs' trade underscore the closed nature of production and distribution network developed by Japanese MNCs.

In sum, this section has revealed the emergence of regional production network in electronic and electric machinery in East Asia. Such regional production networks have been created mainly by MNCs from Japan, Korea, Taiwan, the US, and the EU, as they break up the production process into various sub-processes and locate each process in a country where the sub-process is conducted most efficiently. This kind of fragmentation strategy has been adopted by MNCs, as they take advantage of substantial diversity in the level of economic development and wages among the East Asian countries.

III.2 Changing Trade Policies in East Asia

The rapid expansion of foreign trade and FDI inflows in East Asia discussed above can be attributed to many factors such as a buoyant world economy. Nevertheless, one of the most important factors is trade and FDI liberalization pursued by East Asian countries. Liberalization of trade and FDI regimes led to the expansion of exports and inward FDI because it shifted the incentives from import-substituting production to export production, and increased the attractiveness of these countries to

¹⁶ In the METI survey information on intra-firm is collected every three years. The most recent data are available for 2001 in the 34th survey.

foreign MNCs. Foreign trade and FDI policies in East Asia have undergone dramatic changes in the last two decades.¹⁷

In the 1980s and 1990s, East Asian countries embarked on unilateral liberalization of trade and FDI policies and deregulation in domestic economic activities as part of more comprehensive structural reform policies. It is true that such policy changes were partly induced by their commitments to the World Bank and the IMF for obtaining economic assistance, but it came largely from the realization on the part of East Asian governments that liberalization and deregulation would promote economic growth.¹⁸

East Asian countries unilaterally liberalized their import regimes by lowering tariff rates and non-tariff barriers from the early 1980s through the early 2000s. As shown in Table 5, many East Asian countries reduced their tariff rates from the late 1980s to early 2000s. In spite of substantial reduction in tariff rates, some countries such as Korea and Thailand still maintain relatively high tariff rates. It should be noted that for many countries the primary sector is relatively more protected than the manufacturing sector.

Those governments also started to liberalize policies toward FDI inflows in the mid-1980s, largely because they realized that FDI inflows would promote economic growth. It is difficult to quantify the restrictiveness of an FDI regime, but it is clear that many East Asian economies have reduced restrictions on market access and rights of establishment by diminishing the number of sectors and industries on the negative list, and have relaxed the limits on foreign equity ownership through expanding most-favored-nation treatment and national treatment.¹⁹ In addition, a number of economies introduced incentives such as tax breaks to attract FDI.

Liberalization of trade and FDI also progressed in regional contexts in the 1990s. The members of the ASEAN launched the ASEAN Free Trade Area (AFTA) process in 1992 to make ASEAN a competitive region for exports and for attracting FDI. The 1992 agreement provided for the liberalization of tariff and non-tariff measures under

¹⁷ This section expands Urata (2005a)

¹⁸ See, for example, the World Bank (1993) on this point in its assessment of trade policies during the 1980s. The World Bank (2000) notes that the determination to pursue trade liberalization by policy makers in East Asian countries can be confirmed by their unwillingness to retreat into protectionism in response to the crisis.

¹⁹ Japan PECC (2002) examined the impediments to FDI in APEC economies, and found that many East Asian economies reduced the number and the level of impediments by liberalizing FDI policies.

the Common Effective Preferential Tariffs. The target year for achieving tariff and non-tariff liberalization was originally set for 2008, but was later moved forward to 2002. The AFTA has been in effect among the original five ASEAN members—Indonesia, Malaysia, Singapore, Thailand and the Philippines—since January 2002 when the tariff rates were reduced to 0-5 percent, though the exclusion list is long and individual country circumstances vary. Vietnam is to comply with the same tariff standards by 2003, Laos and Myanmar by 2005, and Cambodia by 2007. By 2010, ASEAN is expected to become a complete free trade area, except for the CLMV members which are given later deadlines. FDI liberalization has been underway after the creation of the ASEAN Investment Area (AIA) in 1998, which provides coordinated investment cooperation and facilitation programs, market access, and national treatment of all industries. But some ASEAN members continue to maintain sizeable sensitive and exclusion lists from FDI liberalization.

The Asia-Pacific Economic Cooperation (APEC) forum is another regional framework that promoted trade and FDI liberalization in East Asia. This trans-regional forum, which was established to promote economic growth in the region, includes not only East Asian economies but also economies in North and South America and Oceania. Following the Bogor declaration in 1994 calling for full liberalization of trade and FDI by 2010 for developed-economy members and by 2020 for developing-economy members, APEC members agreed to prepare and implement individual action plans (IAPs) specifying near- and medium-term liberalization measures. Because voluntarism is the basic principle of APEC in implementing policy measures such as trade and FDI liberalization, peer pressure is to play a crucial role in the implementation of liberalization schemes. All APEC members have made significant progress toward freer trade and FDI regimes. APEC lost its vigor in the late 1990s because it could not help the crisis-affected members. However, APEC regained its attention in 2006, when the United States proposed a Free Trade Area of the Asia-Pacific (FTAAP), which will be discussed below.

In short, East Asian economies have undertaken trade and FDI liberalization policies, which contributed to the rapid expansion of trade and FDI as well as the formation of regional production networks by MNCs. There still remain, however, various obstacles in foreign trade and FDI. As will be discussed in the next section, one of the factors that have led to the recent surge of free trade agreements (FTAs) in East Asia is the desire for East Asian countries to overcome high protection barriers to

expand business opportunities.

IV. FTA Proliferation in East Asia

IV.1. Rapidly Emerging Bilateral and Regional Frameworks in the 21st Century

East Asia was not active in the formation of regional trade agreements (RTAs), which include FTA and customs union, until recently.²⁰ Indeed, ASEAN Free Trade Area (AFTA) was the only major FTA until Japan and Singapore enacted Japan–Singapore FTA (formally named a New Age Japan-Singapore Economic Partnership Agreement, JSEPA) in 2002.²¹ However, the situation changed dramatically in recent years. Many countries in East Asia began to form FTAs with the countries not only in the region but also outside the region.

Besides AFTA, ASEAN as a group as well as its members individually have become active in FTA negotiations with other countries in recent years. One of the FTAs involving ASEAN that has received most attention recently is that with China. ASEAN and China enacted FTA in goods trade in July 2005 and they are currently negotiating an FTA in services trade. ASEAN enacted an FTA with Korea with the exception of Thailand, which did not reach an agreement because of the exclusion of rice, a commodity of Thai's strong interest, from the FTA agenda. ASEAN reached an agreement with Japan and it is currently negotiating FTAs with India, Australia-New Zealand. Several ASEAN members have become active in establishing bilateral FTAs. Singapore enacted many FTAs with countries such as New Zealand, Japan, Australia, the USA, the EFTA, and India and began negotiations with many countries. Thailand has also become active in establishing FTAs, as it has implemented FTA with Australia, New Zealand, and Japan, and it is currently negotiating FTAs with several countries. Malaysia enacted an FTA with Japan and it began FTA negotiations with several economies including the US. Both the Philippines and Indonesia signed FTA with Japan separately.

Compared to ASEAN countries in Southeast Asia, the economies of Northeast Asia including China, Japan, Korea, and Taiwan had not been active in FTA negotiation. Recently, however, China, Japan and Korea have been very proactive in

²⁰ For the list of FTAs in East Asia, see a table in the framework chapter.

²¹ AFTA was discussed in an earlier section. For discussions on FTAs in East Asia, see for example, Aggarwal and Urata (2006), Urata (2005b), and Pangestu and Gooptu (2004), Soesastro (2006) and Sally (2006).

their FTA policies. China implemented an FTA with ASEAN, Hong Kong, Macau, and it is negotiating FTAs with over 20 countries. Japan enacted FTA with Singapore, Mexico, Malaysia, Chile and Thailand. It has signed an agreement with Brunei, the Philippines, Indonesia and ASEAN, and it is currently in negotiations with Australia, India, GCC, Korea and others. Korea implemented FTAs with Chile, Singapore and ASEAN and has reached an agreement with the US. Korea is actively pursuing FTA policies, as it is currently in FTA negotiations with several countries including the EU, Canada, India, and Mexico.

An idea of an FTA covering East Asian countries has also emerged. At the Leaders' summit meeting of ASEAN+3 (China, Japan, and Korea) in 1998, the leaders decided to set up the East Asia Vision Group to study the long term vision for economic cooperation. The group has presented the leaders with recommendations including the establishment of East Asia FTA (EAFTA). The Expert Group, which was set up at the recommendation of ASEAN+3 Economic Ministers, presented its recommendations to the Economic Ministers in 2006 to start the process in 2007 toward establishment of an East Asia FTA. The recommendations by the Expert Group, however, were not adopted and the Expert Group was asked to conduct further study.

Japan proposed the CEPEA (Comprehensive Economic Partnership in East Asia), which is an Economic Partnership Agreement including an FTA covering ASEAN+3+3 (India, Australia, and New Zealand). ASEAN+3+3 are also the members of the East Asian Summit. Recognizing the rivalry between Japan and China as will be discussed below, it is very likely that behind the CEPEA idea lies Japan's strategy of taking a leadership role in setting up regional institutions in East Asia, as it was China that had taken an initiative in the EAFTA discussions.

One notable characteristic of FTAs in East Asia is their comprehensiveness on issue coverage. As such, some of the FTAs established in East Asia are termed as Economic Partnership Agreement (e.g. Japan-Singapore EPA, JSEPA), or Closer Economic Partnership Arrangement (e.g. China-Hong Kong CEPA), and others. These new types of FTAs typically include facilitation of foreign trade, liberalization and facilitation of foreign direct investment (FDI), and economic and technical cooperation, in addition to trade liberalization, which is included in traditional FTAs. The basic philosophy behind these new types of FTAs is interestingly similar to that of Asia Pacific Economic Cooperation (APEC) forum, whose three pillars are (1) liberalization and (2) facilitation of foreign trade and foreign investment, and (3) economic and

technical cooperation.

There are various reasons behind the recent surge of FTAs in East Asia. First, the rapid expansion of FTAs in other parts of the world has made East Asian economies realize the importance of establishing FTAs in order to maintain and expand their export opportunities. This market seeking FTAs pursued by East Asian countries is largely of defensive nature. A case in point is Japan's FTA with Mexico. Japanese firms were in disadvantageous position vis-à-vis US and EU firms in the Mexican market because the US and the EU have FTAs, under which their firms have duty-free access to Mexico. Japanese firms put pressure on Japanese government to negotiate an FTA with Mexico to overcome their disadvantage.

It should be added here that a stalemate of the negotiations under the Doha Development Agenda under the WTO turned the attention of the WTO members with an interest in trade liberalization to FTAs. I come back to the issue of bilateralism and multilateralism in trade in more detail in a later section addressing economic analysis of FTAs.

Second, countries interested in promoting structural reform to achieve economic growth use FTAs to gain leverage over opponents to liberalization. Third, the Asian financial crisis in 1997-98 prompted East Asian economies to be aware of the need for regional cooperation such as FTAs in order to avoid another crisis.

Finally, rivalry among East Asian economies over market access in potential FTA partners' market, as well as rivalry over gaining a leadership role in the region (as discussed more fully in the political/security chapter) has spurred FTA strategies of countries in the region. The rivalry between China and Japan is most notable. Both China and Japan, which are competing to become a 'leader' in the region, are keen on using FTAs to strengthen the relationships with ASEAN, Korea and other countries. Indeed, in November 2002, Japan proposed an economic partnership framework to ASEAN one day after China agreed to start FTA negotiations with ASEAN. It should also be noted that ASEAN, Korea and other countries also consider FTAs as a means to maintain and increase their influence in East Asia.

IV.2 Empirical Analysis of Welfare and Trade Impacts of FTAs

The theoretical models discussed before showed that the economic welfare impacts of FTAs on members are ambiguous, while their impacts on non-members are likely to be negative. Given the indeterminacy of the impacts of FTAs theoretically, it

is necessary to examine the impacts empirically. Two types of empirical research have been conducted to examine the impacts of FTAs on members and non-members. One is a simulation analysis using computable general equilibrium (CGE) models, and the other is to use econometric methods. Each approach has its strengths and weaknesses.²²

A CGE model is constructed to mimic the actual working of the economic system by specifying activities of economic agents such as producers, consumers and governments. A typical CGE model covers the world consisting of a large number of countries and a large number of sectors. The most popular CGE model used for FTA analysis is the GTAP (Global Trade Analysis Project) model and the most up-to-date (the year 2001) database used for the GTAP analysis includes 87 countries and 57 sectors. The strength of the CGE model is its theoretical consistency and comprehensive coverage in that it captures all economic impacts through the market mechanism including inter-industry and inter-country impacts of policy changes such as FTAs. At the same time, there are several weaknesses. One is the difficulty in constructing a model that reflects the actual economic system. For example, a typical CGE model assumes perfect competition. Although the perfect competition assumption may not be appropriate in many cases, a lack of knowledge on the type of actual competition forces researchers to make the perfect competition assumption.²³ Another problem is the difficulty in obtaining appropriate data and parameters used for the model. Indeed, the more detailed and realistic the model becomes, the more difficult it is to obtain the appropriate data. The third problem is that the results of CGE model cannot be tested statistically, in order to evaluate the validity of the results.

A large number of simulation exercises have been conducted to investigate the possible impacts of FTAs by using CGE models.²⁴ Indeed, it has become customary to conduct a CGE model simulation when policy makers formulate FTA policies. The results of CGE studies show two common trends. First, FTA members are shown to gain in terms of economic welfare and GDP, while non-FTA members generally lose. These findings are consistent with the theoretical predictions. For example, Scollay

²² On the discussions of these approaches, see, for example, Baldwin and Venables (1995).

²³ A few CGE models incorporate imperfect competition, but the models and parameters used in these models suffer from their arbitrariness. For example, the Michigan model developed mainly by Alan Deardorf and Robert Stern incorporates imperfect competition. (Brown, Deardorf and Stern, 1996).

²⁴ See Ando and Urata (2007) for a survey of the CGE studies on East Asian countries.

and Gilbert (2001) obtain the following results from their analysis of an FTA comprised of ASEAN, China, Japan, Korea, Australia, and New Zealand. All the members gain in terms of economic welfare, while non-members such as the US, the EU and Taiwan lose. The world as a whole is shown to gain. Similar patterns of gains and losses are found by Ando and Urata (2007), who examine the static as well as dynamic impacts of FTAs involving East Asian countries using the GTAP model. Their results are reproduced in Table 6. Although there are exceptions, they found that the FTA members gain in terms of economic welfare and GDP growth, while non-FTA members lose in both accounts. Specifically, in terms of economic welfare which reflects the level of consumers' satisfaction, Japan is estimated to lose USD\$1,569,776, 7,625 million dollars. if ASEAN forms an FTA with China, Korea, and China-Korea, respectively, while Japan gains when it forms an FTA with ASEAN. These results from CGE simulations indicate the reasons for competitive FTAs, because a country excluded from an FTA is shown to lose.

Another general trend observed from the results of CGE simulation studies has to do with the number of FTA members or the country coverage. Generally, it is observed that the greater the number of FTA members, the larger the gain from an FTA. This can be seen by comparing the results of FTAs with different country coverage using the same model. Scollay and Gilbert (2001) also find that the welfare gains for the world as well as FTA members tend to increase through wider coverage of countries under liberalization as the coverage of FTAs change from a group consisting of ASEAN, China, Japan, Korea, Australia, and New Zealand to a group of economies belonging to APEC and then to the all the countries in the world. A similar pattern was observed by Ando and Urata (2007) shown in Table 6. These observations are consistent with the theoretical analyses in that the scope for trade creation increases and the scope for trade diversion declines with the number of FTA members.

An econometric analysis of the impacts of FTAs typically examines the impacts of FTAs on foreign trade. Specifically, the gravity model, which is constructed on the assumption that the magnitude of bilateral trade depends on the economic size of the two countries and the distance between them, is estimated to examine the trade creation and diversion effects of FTAs. One weakness of the econometric approach in the FTA analysis is its inability to incorporate simultaneous changes in a number of policy variables. For example, econometric analysis finds it difficult to deal with simultaneous removal of tariffs in many sectors from many countries, as they result in

a complicated interplay of the effects. Another problem is the difficulty in dealing with a large change such as the removal of tariffs under FTAs, which tends to have substantial impacts not only on trade but also on other economic activities such as production and employment, which in turn would affect trade.

Similar to the case of CGE model studies, a large number of gravity model estimations have been conducted to examine the impacts of FTAs on foreign trade. Many studies found that FTAs promoted intra-FTA trade, indicating the presence of the trade creation effects. For example, Frankel (1997) conducted a gravity model estimation covering 63 countries in the 1965-94 period with a variety of different model specifications. He finds that intra-regional trade in Western Europe, East Asia, APEC, and the Western Hemisphere is significantly higher than the predicted values. A recent study by Baier and Bergstrand (2007) reports very significant trade creation effects as they find that an FTA approximately doubles two members' bilateral trade after 10 years.

Relatively few studies examined the presence or absence of the trade diversion effect. Urata and Okabe (2007) analyze the impacts of selected FTAs on trade by explicitly considering trade between FTA members as well as trade between FTA members and non-members. Their results indicate the presence of trade creation effects for most FTAs they study. Specifically, out of 11 FTAs they examine, only three FTAs, ASEAN-China, Singapore-Japan, and Singapore-US, were found to have no significant trade creation effect. As to the trade diversion effect, five out of 11 FTAs were shown to have significant trade diversion effects. These findings indicate that FTAs tend to promote trade between and among FTA members, possibly implying that FTAs are welfare enhancing for FTA members.

Many FTAs are rather new with short history, and thus conducting statistical analysis such as the gravity model estimation faces the problem of insufficient data. Further statistical analysis is warranted and will become feasible with the expansion of the data with the passage of time.

V. Concluding remarks

East Asia has seen a rapid proliferation of FTAs since around the turn of the century. For many countries, this is a shift from a single track GATT/WTO-based multilateral trade policy to multiple track trade policy composed of not only a multilateral approach but also bilateral and regional approaches. The analysis in this

chapter shows that the new bilateral and regional trade policy was preceded by the intensification of regionalization of economic activities based upon regional production networks and market-driven activities in East Asia. As such, the new trade policy is likely to solidify the on-going regionalization and further promote it.

The economic analysis of FTAs in this chapter identifies several economic reasons leading to the proliferation of FTAs in East Asia. One of the most important factors is a defensive motive on the part of many East Asian governments as they felt disadvantage in foreign markets, where the sharp increase in FTAs led to the discrimination against non-FTA members such as those East Asian countries. To overcome the (perceived or real) negative trade-diversion effects, East Asian countries became active in forming FTAs. This defensive motive has clearly contributed to the formation of many bilateral FTAs in East Asia. In this regard, China and Japan rivalry has contributed to the precipitation of this trend. One important question is whether the proliferation of bilateral FTAs would lead to the formation of region-wide FTA. From the view point of economic analysis, the future development depends on the costs and benefits of FTAs to potential FTA members. Such calculation of costs and benefits would be extremely dependent on government policies. In other words, the governments could formulate policies so that FTAs would bring net benefits, leading to the formation of FTAs.

A brief survey of empirical analysis of the impacts of FTAs has shown that many FTAs have contributed to an improvement of economic welfare and economic growth for FTA members, as FTAs promoted intra-FTA trade. In other words, for many FTAs the trade creation effects are detected. Some FTAs are found to produce the trade diversion effects. This finding justifies the rationale for many countries to formulate FTAs, which in turn results in FTA proliferation. Due to new and short history of East Asia's FTAs, further investigations and follow up on those FTAs are essential in understanding their determinants and economic impacts.

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Table 1 Changing Patterns of East Asia's Trade from 1995 to 2005

		Change from 1995 to 2005		Share of world trade		Share of region/country's total trade			
		Exports	Imports	1995	2005	Exports		Imports	
						1995	2005	1995	2005
East Asia	East Asia	2.19	2.19	12.3	13.2	47.4	49.9	54.7	59.1
	China	3.96	3.74	1.8	3.3	7.4	14.1	7.2	13.4
	Japan	1.81	1.49	2.9	2.3	8.5	7.4	16.1	11.9
	NIES4	1.92	2.14	5.4	5.3	21.8	20.1	22.6	23.9
	ASEAN4	1.78	2.31	2.3	2.2	9.8	8.3	8.7	9.9
	NAFTA	1.78	1.22	5.0	3.8	24.0	20.5	16.8	10.1
	EU25	2.11	1.49	3.5	3.1	14.9	15.1	14.0	10.3
	World	2.08	2.03	24.3	24.4	100.0	100.0	100.0	100.0
China	East Asia	3.74	3.96	1.8	3.3	55.7	40.6	66.8	59.6
	China	--	--	--	--	--	--	--	--
	Japan	2.95	3.65	0.5	0.8	19.1	11.0	15.0	12.4
	NIES4	3.97	3.72	1.2	2.2	32.9	25.5	48.1	40.3
	ASEAN4	5.72	8.26	0.1	0.4	3.7	4.1	3.8	7.0
	NAFTA	6.82	3.53	0.4	1.1	17.8	23.7	9.6	7.7
	EU25	7.08	3.31	0.4	1.0	13.6	18.9	13.3	9.9
	World	5.12	4.44	2.9	6.8	100.0	100.0	100.0	100.0
Japan	East Asia	1.49	1.81	2.9	2.3	41.7	46.4	37.9	43.4
	China	3.65	2.95	0.5	0.8	5.0	13.4	9.6	18.0
	Japan	--	--	--	--	--	--	--	--
	NIES4	1.30	1.29	1.6	1.0	24.7	24.0	16.9	13.8
	ASEAN4	1.00	1.61	0.9	0.5	12.1	9.0	11.4	11.6
	NAFTA	1.15	0.88	2.0	1.0	29.7	25.5	24.9	14.0
	EU25	1.22	1.26	1.1	0.7	16.1	14.6	14.6	11.6
	World	1.34	1.58	7.3	5.1	100.0	100.0	100.0	100.0
NIES4	East Asia	2.14	1.92	5.4	5.3	48.4	57.2	58.0	63.0
	China	3.72	3.97	1.2	2.2	13.1	26.9	9.9	22.2
	Japan	1.29	1.30	1.6	1.0	9.4	6.6	22.0	16.3
	NIES4	1.55	1.55	1.6	1.2	14.9	12.7	16.1	14.1
	ASEAN4	1.80	1.86	1.1	1.0	11.1	11.0	10.0	10.5
	NAFTA	1.32	1.13	2.0	1.2	22.2	16.2	16.0	10.3
	EU25	1.73	1.35	1.4	1.1	14.1	13.4	13.1	10.0
	World	1.81	1.77	10.1	8.9	100.0	100.0	100.0	100.0
ASEAN4	East Asia	2.31	1.78	2.3	2.2	51.4	54.7	62.3	69.9
	China	8.26	5.72	0.1	0.4	2.8	10.8	2.7	9.6
	Japan	1.61	1.00	0.9	0.5	17.4	13.0	25.9	16.4
	NIES4	1.86	1.80	1.1	1.0	25.6	21.9	28.5	32.4
	ASEAN4	3.51	3.51	0.2	0.4	5.6	9.0	5.2	11.5
	NAFTA	1.87	1.16	0.6	0.5	20.8	17.9	12.3	9.0
	EU25	1.82	0.97	0.6	0.4	15.4	12.9	15.7	9.6
	World	2.17	1.59	3.9	3.6	100.0	100.0	100.0	100.0
NAFTA	East Asia	1.22	1.78	5.0	3.8	22.6	16.0	32.5	26.8
	China	3.53	6.82	0.4	1.1	1.7	3.4	2.7	8.6
	Japan	0.88	1.15	2.0	1.0	8.6	4.5	13.5	7.2
	NIES4	1.13	1.32	2.0	1.2	9.3	6.2	12.2	7.4
	ASEAN4	1.16	1.87	0.6	0.5	3.0	2.0	4.1	3.6
	NAFTA	2.04	2.04	7.8	7.7	46.2	55.1	40.5	38.3
	EU25	1.53	2.32	2.9	2.8	16.5	14.8	16.1	17.3
	World	1.71	2.16	18.0	17.2	100.0	100.0	100.0	100.0
EU25	East Asia	1.49	2.11	3.5	3.1	7.6	6.0	9.8	10.4
	China	3.31	7.08	0.4	1.0	0.9	1.6	1.0	3.6
	Japan	1.26	1.22	1.1	0.7	2.1	1.4	3.5	2.2
	NIES4	1.35	1.73	1.4	1.1	3.1	2.2	3.7	3.3
	ASEAN4	0.97	1.82	0.6	0.4	1.5	0.8	1.5	1.4
	NAFTA	2.32	1.53	2.9	2.8	7.5	9.1	7.0	5.4
	EU25	1.91	1.91	27.3	25.4	66.1	66.3	68.9	66.1
	World	1.90	1.99	40.5	38.4	100.0	100.0	100.0	100.0

Source: Computed from JETRO's trade matrix.

Table 2 Commodity Composition of International Trade for East Asian Economies with East Asian Economies
(percentage share of total)

Exports	East Asia		ASEAN		NIES		China		Japan		World	
	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04
Agriculture	7.0	4.1	15.7	9.0	4.7	2.3	13.7	5.2	1.1	1.0	12.1	8.8
Mining & fuels	5.4	5.1	16.5	12.6	2.1	3.5	6.4	4.1	1.3	1.7	9.9	11.3
Total manufacture	86.1	88.7	65.2	75.6	92.7	93.2	78.5	90.1	95.8	93.0	74.9	76.9
Chemicals	5.0	6.5	3.8	6.2	5.2	6.8	5.3	4.6	5.6	7.8	9.0	10.4
Lther, rubber, trvl goods, ftwear	4.0	2.9	2.3	1.7	7.1	3.5	6.9	5.4	1.3	1.2	2.5	2.1
Wood, paper, & furnitures	2.3	2.0	4.6	3.3	2.2	1.5	2.0	3.3	0.8	0.6	3.5	3.2
Metal	4.6	4.3	1.7	1.6	5.7	5.1	4.4	5.1	5.5	5.0	5.1	4.6
Machinery	46.6	53.6	37.6	51.0	36.8	52.6	17.4	40.6	71.6	67.1	38.0	41.4
Power gntr	1.9	1.7	0.9	0.9	0.9	1.0	0.8	1.1	3.9	3.9	2.5	2.6
Indstral & metal wrking	6.8	6.3	3.1	3.0	4.7	4.9	2.6	3.8	12.8	12.6	8.3	7.1
Electronic	15.9	19.4	19.5	22.0	14.4	21.6	6.3	22.3	17.7	12.2	7.9	10.2
Electrical	11.1	16.8	11.9	23.2	11.2	18.0	4.0	10.1	12.7	15.2	6.9	9.3
Autos	9.0	7.7	0.9	1.3	3.9	4.9	3.0	2.6	21.8	20.6	9.3	9.5
Oth. transpt	1.8	1.7	1.2	0.6	1.7	2.3	0.6	0.8	2.7	2.5	3.0	2.6
Textiles & garment	12.7	9.1	8.7	5.8	20.6	11.8	29.1	18.3	2.1	1.5	7.1	5.7
Other manufactures	11.0	10.2	6.6	6.0	15.0	11.9	13.4	12.8	9.0	9.8	9.7	9.3
Others	1.5	2.1	2.6	2.8	0.5	1.0	1.4	0.6	1.8	4.3	3.1	3.0
Total	100	100	100	100	100	100	100	100	100	100	100	100

Imports	EA		ASEAN		NIES		China		Japan		World	
	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04	1990-94	2000-04
Agriculture	12.9	8.9	8.5	6.9	9.9	6.2	9.3	7.7	23.3	15.6	12	9.1
Mining & fuels	15.4	16.8	11.5	13.6	11.5	14.7	7.7	13.7	27.9	25.5	12.2	13.3
Total manufacture	68.8	72.7	76.5	77.5	75.4	77.8	82.3	77.9	45.7	56.7	72.5	74.7
Chemicals	8.8	9	8.9	8.6	9	8.3	11.7	12.2	7	7.3	9.1	10.5
Lther, rubber, trvl goods, ftwear	2.3	1.9	1.1	1	3.6	2.8	1.8	1.2	1.9	2	2.4	2.1
Wood, paper, & furnitures	2.1	1.7	1.6	1.3	2.2	1.5	2.7	1.5	2.3	2.6	3.4	3.2
Metal	5.3	4	6.6	4.6	5.1	4.1	8.6	5.5	2.7	2.1	5.1	4.6
Machinery	34.3	41.8	47.6	52.9	34.4	42.6	42	45	16.9	27.6	36	39.5
Power gntr	2.1	1.8	3.3	2.1	1.8	1.6	2.7	2	1	1.6	2.3	2.5
Indstral & metal wrking	9	6.8	12.1	7.8	8.4	6.4	18	10.5	2.9	3.2	7.9	6.7
Electronic	7.5	11.6	10.2	12.3	7.8	13.2	6.6	10.3	4.4	10.1	7.8	9.9
Electrical	9.7	18.1	14.5	25.9	11.4	19.3	5.6	18.6	4.1	8.8	6.8	9.5
Autos	3.7	2.3	4.1	2.9	3.3	1.5	5.7	2.3	3	2.9	9	9
Oth. transpt	2.3	1.2	3.4	1.9	1.8	0.8	3.3	1.5	1.5	1	2.2	1.9
Textiles & garment	7.3	5.4	3.7	2.9	10	7	9.4	4.4	6.6	6.5	6.8	5.5
Other manufactures	8.7	8.9	7.2	6.3	11	11.5	6.2	8	8.2	8.5	9.7	9.3
Others	2.9	1.6	3.5	2	3.2	1.3	0.7	0.7	3.1	2.2	3.3	2.9
Total	100	100	100	100	100	100	100	100	100	100	100	100

Table 3 Sources of FDI Inflows to East Asian Developing Economies (%)

	China (actualized)		Indonesia (Approved)		Malaysia (Approved)		Philippines (BOP)		Singapore (committed)		Thailand (BOP)		Korea (Approved)		Taiwan (Approved)	
	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04
World	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
East Asia	73.1	61.6	38.3	41.7	45.4	36.4	48.5	37.5	29.0	21.6	52.0	99.1	26.3	26.5	34.8	31.0
Japan	8.3	8.6	14.7	9.7	18.6	11.6	25.4	24.3	29.0	21.6	26.5	42.1	8.8	13.5	17.2	15.2
East Asia ex Japan	64.8	52.9	23.6	32.0	26.8	24.9	23.1	13.3	0.0	0.0	25.5	57.0	17.6	13.0	17.7	15.8
China	0.0	0.0	0.1	10.2	0.7	4.4	2.7	0.0	0.0	0.0	0.0	0.5	0.2	2.9	0.0	0.0
NIES4	62.9	51.2	17.6	16.6	25.5	19.3	19.2	12.5	0.0	0.0	24.5	53.1	7.3	4.5	14.2	13.3
ASEAN4	1.9	1.6	5.9	5.3	0.6	1.2	1.1	0.8	0.0	0.0	0.9	3.2	10.1	5.5	3.5	2.5
US	8.5	8.8	4.0	1.7	29.7	21.2	20.6	19.1	45.3	42.4	20.4	2.2	31.3	31.5	24.9	16.6
EU	7.7	7.0	24.0	17.0	9.1	30.3	18.7	4.8	23.2	30.8	17.3	-0.2	29.5	21.6	7.5	17.0

Note: The EU includes Italy, UK, the Netherlands, France and Germany. In the case of Singapore, the EU indicates Europe.

Source: Country data sources.

Table 4 Sectoral Distribution of FDI Inflows (%)

	Malaysia (Approved)		Thailand (BOP)		Korea (Approved)		Taiwan (Approved)	
	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04	1995-99	2000-04
Manufacturing	100	100	100	100	100	100	100	100
Food	2.5	3.5	7.3	7.3	11.9	4.4	3.2	3.4
Textiles	2.6	1.9	4.2	2.6	1.3	0.9	2.8	1.3
Wood	8.2	8.0	a	a	11.3	0.9	0.5	1.6
Metals	8.3	9.6	20.2	13.6	3.6	5.1	12.2	6.9
Chemicals	33.0	17.1	9.3	10.2	18.9	18.5	12.6	10.0
General machinery	2.2	1.7	25.9	32.2	8.7	13.2	3.1	5.3
Electric/electronic machinery	35.4	43.1	26.9	11.9	29.6	35.9	56.9	61.9
Transport machinery	2.9	6.5	b	b	8.8	12.6	5.3	4.0
Others	4.9	8.4	10.9	22.3	5.5	8.4	3.4	5.5
Manufacturing share of total	na	na	39.6	53.5	49.4	36.4	48.6	35.0

Note: For Thailand Wood (a) is included in others and transport machinery (b) is included in general machinery

Source: Country data sources

Table 5 Trade Liberalization in Selected East Asian Economies

		All products			Primary products		Manufactured products		Ad valorem equivalent of non-tariff barriers
		Binding Coverage	Unweighted averages	Import-weighted averages	Unweighted averages	Import-weighted averages	Unweighted averages	Import-weighted averages	
China	1992		40.4	32.1	36.1	14.1	40.6	35.6	
	2004	100	9.8	6.0	10.0	5.6	9.7	6.0	1.5
Indonesia	1989		19.2	13.0	18.2	5.9	19.2	15.1	
	2003	96.6	6.4	5.2	8.0	3.1	6.1	5.8	0.5
Japan	1988		4.2	3.6	8.3	4.4	3.5	2.7	
	2004	99.6	2.9	2.4	5.3	3.9	2.4	1.6	1.6
Korea	1988		18.6	14.0	19.3	8.3	18.6	17.0	
	2002	94.4	15.5	9.5	20.9	19.0	7.8	5.0	0.0
Malaysia	1988		14.5	9.7	10.9	4.6	14.9	10.8	
	2003	83.7	7.3	4.2	4.5	2.1	7.8	4.6	1.7
Philippines	1988		28.3	22.4	29.9	18.5	27.9	23.4	
	2003	66.8	4.5	2.6	5.7	5.0	4.2	2.0	0.4
Singapore	1989		0.4	1.1	0.2	2.5	0.4	0.6	
	2003	69.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Thailand	1989		38.5	33.0	30.0	24.3	39.0	35.0	
	2003	75.0	14.0	8.3	16.4	4.4	13.5	9.3	0.3

Source: World Bank, World Development Indicators 2005

Table 6 Economic Effects of FTAs in East Asia

	FTA Partner Countries							
	A	A+C	A+J	A+K	A+C+J	A+C+K	A+J+K	A+C+J+K
Static Effects Only								
Welfare (US\$million)								
China	-241	-211	-731	-524	-623	189	-1,131	800
Japan	-497	-1,569	933	-776	6,555	-2,123	1,783	6,584
Korea	-135	-630	-378	912	-1,761	7,625	640	5,973
ASEAN	2,665	6,646	4,777	2,903	7,355	6,197	5,186	7,107
Change in GDP (%)								
China	0.00	0.02	-0.01	-0.01	0.09	0.01	-0.02	0.13
Japan	0.00	0.00	0.00	0.00	0.01	-0.01	0.00	0.01
Korea	0.00	-0.03	-0.01	-0.02	-0.09	1.12	0.03	1.11
ASEAN	0.07	0.22	0.16	0.10	0.30	0.25	0.22	0.36
Static and Dynamic Effects								
Welfare (US\$million)								
China	-308	3,575	-872	-690	8,487	5,580	-1,384	11,306
Japan	-265	-1,632	3,038	-516	10,544	-2,208	4,457	11,054
Korea	-184	-1,130	-507	2,514	-3,213	16,046	3,754	14,508
ASEAN	10,603	21,670	20,558	13,033	27,468	22,374	22,779	28,423
Change in GDP (%)								
China	-0.01	0.49	-0.03	-0.04	1.23	0.65	-0.06	1.41
Japan	0.00	-0.02	0.07	0.00	0.18	-0.03	0.10	0.19
Korea	-0.03	-0.21	-0.07	0.55	-0.62	4.15	1.13	4.19
ASEAN	1.93	3.64	3.74	2.44	4.80	3.90	4.17	5.07

Notes: A, C, J, K indicate ASEAN, China, Japan, Korea, respectively.

The cell with hatching indicates the membership in FTAs.

Source: Ando and Urata (2007)

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