The Shift from "Market-led" to "Institution-led" Regional Economic Integration in East Asia in the late 1990s

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Abstract

The paper identifies the changes in the nature of regional economic integration in East Asia from 'market-led' to 'institution-led' integration in the late 1990s. Before the late 1990s active foreign trade and foreign direct investment (FDI) mainly resulting from trade and FDI liberalization led to greater intra-regional dependence among the countries in East Asia. Indeed, regional production systems have been developed in industries such as electronics, automobiles, and apparel, mainly by the initiatives of foreign companies. After the late 1990s East Asian countries started to show strong interest in regional institutions such as free trade agreements (FTAs) largely because of the outbreak of Asian crisis and growing interest in FTAs in other parts of the world. FTAs are likely to bring economic, political, social and other types of benefits to the region and the rest of the world, but there exist various obstacles to the formation of FTAs. Some serious obstacles are strong opposition to trade and FDI liberalization by non-competitive sectors and a lack of mutual understanding about historic, political, and other issues among East Asian countries. The paper makes several propositions such as increasing mutual exchange of people to overcome these obstacles.

I. Introduction

Globalization of economic activities has been accelerating rapidly as cross border movements of goods, money, information, and people have expanded remarkably in recent years. Although globalization has allegedly brought some negative consequences such as widening income gaps among the countries as well as within countries, on the whole it has brought positive impacts such as rapid economic growth and technological progress. One factor that contributed to globlalization is substantial trade liberalization, which was carried out under the auspices of the GATT/WTO.

Up against rapid globalization, regionalization, or regional economic integration, has emerged in various parts of the world in recent years. Regionalization takes two forms. One type of regionalization arises as a result of natural economic developments in that the benefits of agglomeration including economies of scope, scale, and speed outweigh the costs of agglomeration such as congestion. Indeed, rapidly growing economies in proximity interact with each other through market and non-market channels to accelerate their economic growth. The other type of regionalization involves institutional arrangement such as regional trade agreements (RTAs) including free trade agreements (FTAs) and customs unions. RTAs are discriminatory trade agreements, providing only members with preferential treatment. The former type of regionalization may be characterized as 'market-led,' while the latter 'institution-led.'

Rapid economic growth in East Asia has increased its importance in the world economy in the post WWII period. As a consequence, East Asia has become to be recognized as important region, which influences the world economy, along with North America and Western Europe. Regional economic integration in Western Europe started in the early post WWII period, mainly in the form of establishing regional institutions, while regional economic integration in North America was initially developed through market forces, and then it was supplemented by the regional institution. As such, regionalization in Western Europe may be characterized as 'institution-led,' while regionalization in North America was 'market-led' in the early stages, which was supplemented by 'institution-led' regionalization. In light of these global and regional developments, this paper examines the patterns of regional economic integration in East Asia. From the analysis we observe a pattern similar to that observed in North America, a shift from 'market-led' to 'institution-led' regionalization in East Asia.

The remainder of the paper consists of eight sections. Section II examines globalization of East Asia in terms of trade and foreign direct investment (FDI) in the

1980s and 1990s. Sections III and IV investigate the pattern of regionalization in East Asia with section III focusing on trade and FDI flows separately and section IV focusing on the regional production system by taking into account of trade and FDI flows jointly. Section V turns to institution-led regionalization in East Asia. Section VI examines the factors leading to the emergence and proliferation of regional institution, or FTAs, while sections VII and VIII examine the benefits of an East Asia FTA and the obstacles to the formation of FTAs in East Asia, respectively. Section IX concludes the paper by providing some suggestions to overcome the obstacles.

II. Rapid Expansion of Foreign Trade and Foreign Direct Investment in East Asia

Foreign trade and FDI have played important roles in accelerating international economic activities for the world and in particular for East Asia. Indeed, rapid expansion of foreign trade and FDI has been considered as crucial factors contributing to rapid economic growth for East Asia. This section reviews regionalization of economic activities in East Asia by focusing on the changing patterns of foreign trade and FDI in 1980s and 1990s, in order to set the stage for the analysis of changing nature of regionalization from market-led to institution-led types toward the end of the 1990s.

II.1 Foreign Trade

Foreign trade of the East Asian economies expanded rapidly beginning in the mid-1980s until the outbreak of the East Asian financial crisis (Table 1 and Figure 1). Between 1985 and 1997, exports from emerging East Asian economies expanded steadily to register an almost fivefold increase, before declining in 1998 as a result of the crisis. The rate of expansion was particularly high from 1986 to 1988, when the annual rate of growth exceeded 20 percent. The 1990s saw fluctuations in the annual rates of growth, with a peak at 22 percent in 1995 followed by a decline, resulting in negative growth in 1998. The patterns of export growth for the 1985–99 period are similar for all emerging East Asian economies, with few exceptions. Compared with the four newly industrialized economies (NIE-4, i.e., Hong Kong, Korea, Singapore and Taiwan) and the core Association of Southeast Asian Nations (ASEAN) economies (Indonesia, Malaysia, the Philippines, and Thailand), China registered a significantly higher growth rate in the 1990s. Compared with the emerging East Asian economies, Japan fared less favorably in terms of export expansion, as Japan's exports increased only 2.4-fold between 1985 and 1997.

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As a result of rapid export expansion, East Asia increased its share of world exports from 9 percent in 1980–85 to 18 percent in 1997, before declining slightly in 1998. As a group, the NIE-4 expanded their share from 5 percent in 1980–85 to 10 percent in 1997. China became the largest exporter among the emerging East Asian economies in 1999, accounting for 3 percent of world exports. Although still maintaining a substantial share in world exports, Japan's share in world exports declined from 10.3 percent in 1986 to 7.2 percent in 1998 because of relatively slower growth.

One notable development was the rapid expansion of manufactured exports. Specifically, the share of manufactured products in total exports for the NIE-4 and the ASEAN-5 increased from 71 percent and 18 percent, respectively, in 1980 to 87 percent and 60 percent in 1995. For China, the corresponding share increased from 67 percent in 1990 to 79 percent in 1995.

Similar to the case of exports, imports to emerging East Asian economies increased substantially in the 1980s and 1990s before the crisis. Specifically, their imports increased 6.5 times between 1980 and 1997, before a decline in 1998 due to the crisis. Among the emerging East Asian economies, Hong Kong achieved especially a large increase of an almost tenfold increase during the 1980-97 period. Hong Kong is followed by China and Malaysia, whose imports increased 7.3-fold. In contrast to the emerging East Asian economies, which achieved remarkable import expansion, Japan saw its imports only doubled in seventeen years from 1980 to 1997. Indeed, it should be noted that the magnitude of Japan's imports was comparable to that of the emerging East Asian economies in the early 1980s, but in the late 1990s it was almost one-third of the imports of the emerging East Asian economies.

The rapid expansion of imports by the emerging East Asian economies resulted in the increase in their share in world imports, from 8.1 percent in 1980 to 18 percent in 1997. Contrasting to the increased share by the emerging East Asian economies, Japan's share in world imports declined from 7.4 percent in 1980 to 5.1 percent in 1998, before a slight increase in 1999.

An examination of foreign trade by East Asian economies revealed a substantial increase in both exports and imports in the 1980s and 1990s before they were struck by the financial crisis in 1997. We also observed somewhat contrasting developments between the emerging East Asian economies on the one hand and Japan on the other hand. Emerging East Asian economies, particularly China in the 1990s, registered a remarkable growth, while Japan achieved a less spectacular performance. As a result of rapid trade expansion by East Asian economies, their share in world exports and imports increased from 15 and 15 percent in 1980 to 25 and 21 percent in

1999, respectively. A large part of the increase was achieved by the emerging East Asian economies, although Japan still has a substantial position, amounting to about one-third of trade conducted by all East Asian economies. It is worth noting that the magnitude of exports by East Asian economies was twice as large as the magnitude for the US and approximately 65 percent of the value for the EU in 1999, while the corresponding values in terms of imports were 114 and 56 percent, respectively. These observations indicate that East Asia represents a significant position in world trade.

II.2 Foreign Direct Investment

FDI inflows to emerging East Asian economies grew at a remarkably high rate from the mid-1980s to 1998, significantly faster than exports. Indeed, FDI inflows increased more than 12 times in the 12 years from 1985 to 1999 (Table 2 and Figure 2). Unlike exports, FDI inflows continued to grow throughout the period. As a result of this rapid expansion, the share of emerging East Asian economies in world FDI inflows increased from 8 percent in 1985 to 22 percent in 1994, before declining sharply to 9 percent in 1999. China increased its share in world FDI inflows from 3 percent in 1985 to 14 percent in 1994, though the share declined to 4 percent in 1999. Despite this decline, China was the largest recipient of FDI among emerging market economies and the third largest recipient in the world, behind the United States and the United Kingdom, in 1999. Compared with emerging East Asian economies, Japan received very small amount of FDI inflows throughout the period, although it began to register sizeable amount in recent years. East Asia increased its share in world FDI inflows in the pre-crisis period up to 1997 as the share increased from 7.6 percent in 1985 to 19 percent in 1996 before declining in 10 percent in 1999. The share of East Asia in world FDI inflows is significantly smaller when compared to the case in foreign trade. Indeed, the corresponding shares of the US and the EU in world FDI inflows are much larger at 30 and 40 percent, respectively in 1999.

Two developments are important concerning recent FDI in emerging East Asia. One is its resilience even during the period of economic crisis. Compared with other forms of international capital flows such as bank lending, which declined precipitously before and after the crisis, FDI inflows remained relatively stable in emerging East Asia, even in those economies that were seriously affected by the crisis. Having noted resilience in FDI inflows in East Asia, it is important to point out the increasing divergence in attracting FDI inflows for China on the one hand and ASEAN on the other hand. Specifically, China maintained and even increased its attractiveness to

become the world largest FDI recipient in 2002, while ASEAN continued to experience a decline in FDI inflows after the crisis.

Another important development is the increase in mergers and acquisitions (M&As) as a mode of entry, particularly after the economic crisis (United Nations 1999). Historically, green-field operations used to be a preferred mode of entry for multinationals in East Asia, mainly because of restrictions on equity participation. The economic crisis changed this. Emerging East Asian economies with a keen interest in attracting FDI relaxed the restrictions. Coupled with relaxation of the FDI regime, the huge decline in the values of East Asian currencies and assets encouraged multinationals to undertake M&A.

Turning to FDI outflows from East Asia, one finds that East Asian economies with the exceptions of Japan and Hong Kong have not been large investors. Although Hong Kong registers a sizeable FDI outflows, it may not be considered as a large investor because a substantial amount of FDI outflows from Hong Kong originates in other countries. One finds a dramatic decline in the position of Japan as an FDI supplier in the 1990s. In 1990 Japan was the world largest FDI supplier as it supplied 20 percent of world FDI outflows. However, in ten years its share declined to less than 3 percent.

II.3 Rapid Globalization of Economic Activities in East Asia

Foreign trade and FDI inflows became increasingly important in the economies of emerging East Asia. All of the economies except China and Indonesia registered a ratio of exports to GDP exceeding 30 percent, significantly higher than the average ratio of approximately 23 percent for the developing economies in 1997 (World Bank 2000). Hong Kong and Singapore had extremely high ratios, which are attributable to their engagement in entrepôt trade. Although high, the ratios for Korea and Taiwan declined from the mid-1980s to the mid-1990s because of the rapid increase in GDP. ASEAN-4 countries, consisting of Indonesia, Malaysia, Philippines, and Thailand, exhibited an increase in the ratio of exports to GDP, reflecting faster growth of exports compared with GDP. Considering that large countries tend to be less dependent on foreign trade than small countries, it is notable that the export to GDP ratios for China and Indonesia exceeded 20 percent.

Although increasing steadily for most developing East Asian economies, the ratio of FDI inflows to GDP was significantly smaller than the ratio of exports to GDP and varied widely within the region. Singapore had the highest ratio, around 10 percent, while Korea and Taiwan had the lowest, around 0.5-1.0 percent. China and Malaysia

registered a rapid increase in the ratio, each reaching about 5 percent in 1997. The role of FDI in emerging East Asia's economic activities is even more important because the foreign affiliates of multinationals engage actively in production, employment, purchases and sales, including foreign trade, in the FDI recipient economies.

II.4 Factors behind the Rapid Expansion of Trade and FDI

The factors behind the significant expansion in foreign trade and FDI inflows in East Asia fall into two groups, one concerning domestic factors and the other concerning external factors. The most important domestic factor was the liberalization of both trade and FDI policies. In addition, a favorable macroeconomic environment, reflected in relatively stable price levels, together with an abundant supply of well-educated, low-wage labor contributed to the expansion of exports and FDI inflows. As for the external factors, the substantial realignment of exchange rates, particularly the yen-dollar exchange rate in the mid-1980s, was important in promoting exports and FDI inflows. In the 1990s the record-breaking long economic boom in the US provided huge markets for East Asian exports. In addition, the remarkable technical progress achieved in information technology, which reduced the cost of communications, facilitated global operations by the multinational firms. Finally, increased competition among multinational firms, which resulted partly from liberalization and deregulation in various sectors in many countries of the world, promoted their global activities, thereby expanding trade and FDI.

Emerging East Asian economies embarked on liberalization of trade and FDI policies and deregulation in domestic economic activities as part of more comprehensive structural reform policies. Such policy changes were due to the realization that liberalization and deregulation would promote economic growth. The liberalization of trade and FDI policies 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 economies to foreign investors.

Emerging East Asian economies liberalized their import regimes by lowering tariff rates and non-tariff barriers from the early 1980s through the early 1990s (PECC 1995). The notable exception was Hong Kong and Singapore, which had adopted virtually free trade regimes. China and Indonesia significantly reduced their average tariff rates. The incidence of non-tariff barriers declined in many East Asian economies, except in China. The most remarkable is Indonesia, which reduced non-tariff barriers from 95 percent in 1984–87 to less than 3 percent in 1991–93. Korea also reduced both

its tariff rates and the incidence of non-tariff barriers during the period from 1988 to 1993.

Inward FDI policies were liberalized in the mid-1980s, as East Asian economies began to realize that FDI inflows would promote economic growth. Although it is difficult to quantify the restrictiveness of an FDI regime, it is clear that many emerging East Asian economies have liberalized their FDI policies since the mid-1980s (Yamazawa and Urata, 2001). Restrictions on FDI took various forms, including restrictions on market access, most-favored-nation treatment, and national treatment. Many emerging East Asian economies reduced the restrictions on market access by lowering the number of sectors and industries on the negative list and by relaxing the limits on foreign equity ownership. Among the emerging East Asian economies, Indonesia, Korea, Malaysia, the Philippines, and Thailand adopted substantial FDI liberalization measures in an effort to attract foreign investors. Furthermore, recognizing the important contribution that FDI may make toward economic growth, a number of economies introduced incentives such as tax breaks to attract FDI. Indeed, there has been keen competition among emerging East Asian economies to attract FDI by reducing barriers and providing incentives.

Liberalization of trade and FDI also progressed under regional and global frameworks. The members of the ASEAN formed the ASEAN Free Trade Area (AFTA) in 1992, the only major formal regional trade arrangement in East Asia through the 1990s. The 1992 agreement provided for the liberalization of tariff and non-tariff measures under 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 2003. FDI liberalization in the ASEAN 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. The target dates of the creation of the AFTA are 2003 for the original ASEAN members and Myanmar and 2010 for Vietnam, Laos and Cambodia.

APEC has also contributed to the liberalization and facilitation of trade and FDI for emerging East Asian economies. This trans-regional forum includes not only East Asian economies but also countries 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-country members and by 2020 for developing-country members, APEC members agreed to prepare and implement individual action plans specifying near- and medium-term liberalization measures. Peer pressure is expected to play a crucial role in implementation. All APEC members have made significant progress

toward freer trade and FDI regimes.

The Uruguay Round of multilateral trade negotiations under the GATT started in 1986 and ended in 1994. Although the negotiations lasted eight years, the Uruguay Round made substantial progress toward liberalizing trade and FDI. The achievements include: a reduction in tariff rates; framework agreements on trade in services, on intellectual property rights and on trade-related investment measures; a timetable for phasing out all quantitative restrictions on trade; first steps toward bringing agriculture more firmly under a multilateral discipline; a stronger dispute settlement mechanism; and the establishment of the World Trade Organization (WTO). Though it is difficult to estimate impact of these achievements individually, there is no doubt that the GATT/WTO has promoted trade and FDI liberalization in East Asia.

III. Increasing Intra-regional Dependence in Trade and FDI in East Asia[1]

The preceding section reviewed the recent developments in East Asia's trade and FDI vis-à-vis the rest of the world with a focus on the pre-crisis period. In other words, it focused on the globalization of East Asia. This section turns to the subject of regionalization in East Asia by reviewing trade and FDI patterns. The analysis reveals the formation of regional production system by multinational corporations, which contributed to regionalization in East Asia.

III.1 The Measurement of Intra-regional Dependence

Several studies have examined the changes in intra-regional dependence in foreign trade in East Asia. Computing three sets of measures, Petri (1993) finds that intra-regional dependence in foreign trade in East Asia increased steadily in the post-World War II period, after declining in the pre-World War II period, and that intra-regional bias declined in the post-World War II period. Frankel (1993) also finds a decline in intra-regional bias in foreign trade in the 1980s by estimating the magnitude of the bias in the gravity model framework. This subsection investigates the changing patterns of intra-regional trade and FDI in East Asia from the early 1980s to the late-1990s. Following Petri (1993), the following three measures are computed: absolute measures, relative measures, and double-relative measures.

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[1] Urata (2001) conducted similar analyses for the earlier period.

Absolute measure (*A*): $A = Xij / X..$
Relative measure (*B*): $B = A / (Xi. / X..) = Xij / Xi.$
Double-relative measure (*C*): $C = A / [(Xi. / X..) (X.j / X..)] = Xij*X.. / Xi.*X.j,$

where *Xij* represents exports (or outward FDI) from region *i* to region *j*, and "." indicates the summation across all *i* or *j*. Therefore, *Xi.* represents total exports (or outward FDI flows) of region *i*, *X.j* represents total imports (or inward FDI flows) of region *j*, and *X..* represents world trade (or world total FDI flows).

The absolute measure compares the scale of a particular bilateral trading (or FDI) relationship to world trade (or world FDI), while the relative measure compares it to trade (or FDI) of one or the other of the two partners participating in the relationship. The double-relative measure, which is commonly called the intensity index, shows the intensity or bias of the bilateral trading (or FDI) relationship by taking into account its importance in world trade (or world FDI). The value of unity for the double-relative measure can be interpreted so that the bilateral relationship is neutral, while the relationship is more (or less) biased when the measure is greater (or less) than unity.

III.2 Foreign Trade

Table 3 shows the estimated values of the three measures of foreign trade and FDI for several regions in the world—East Asia, the North American Free Trade Agreement (NAFTA), the European Union (EU), and MERCOSUR. The results indicate that intra-regional trade in East Asia became more important not only in terms of world trade but also in terms of regional trade. However, intra-regional bias became smaller over time.

The importance of intra–East Asian trade in world trade increased significantly from 5 percent in 1980 to 13 percent in 1995, though it declined slightly to 11 percent in 1999. The share of intra-NAFTA trade in world trade also increased over the same period, but the share was smaller, at 10 percent in 1999. The corresponding share for the EU was significantly higher, at 23 percent in 1999, although the share had declined sharply from 29 percent in 1990.

A significant part of intra-East Asian trade takes place between Japan and emerging East Asian economies. This can be seen from the fact that the share of intra-regional trade among emerging East Asian economies (6 percent in 1999) amounts to only slightly more than half of the level observed for East Asia as a whole (11 percent), that is, including Japan. The magnitude of intra-regional trade for the Asian

NIE-4 and for the ASEAN-10 is still quite small in world trade, amounting to 1.2 percent and 1.4 percent of world trade in 1999, respectively.

Intra–East Asian trade increased its importance for East Asia's total trade (exports+imports) over time, as shown in the increase in the relative measure from 36 percent in 1980 to 50 percent in 1997, followed by a slight decline to 49 percent in 1999. The comparable figures for emerging East Asia were 22 and 39 percent in 1980 and 1999, respectively. The importance of intra-regional trade in total regional trade also increased for the members of NAFTA from 33 to 47 percent during the same period, but it declined for the EU from 65 percent in 1990 to 61 percent in 1999, after rising between 1980 and 1990. Among the sub-groups in East Asia, intra-group trade among the NIE-4 was quite small, amounting to only 13 percent of total trade, while intra-ASEAN-10 trade was larger, at 23 percent.

An analysis of the relative measures computed for exports and for imports shows that intra–East Asian trade is more important as a source of imports than as a destination for exports. This finding indicates a trading pattern in which East Asian economies procure imports within the region and sell exports outside the region. This appears to reflect the behavior of multinationals, as will be confirmed in a later section. Many multinationals use East Asia as an export platform, in which they assemble export products for regions outside of East Asia by importing parts and components from within the region. In contrast, intra-NAFTA trade is more important for NAFTA's exports than for its imports.

The results of the double-relative measure (or the trade intensity index) reveal an interesting contrast concerning the intra-regional trade bias for East Asia, on the one hand, and the NAFTA and the EU, on the other hand. Specifically, intra-regional bias declined in East Asia from 2.6 in 1980 to 2.3 in 1999, while the corresponding values for the NAFTA and the EU increased from 2.1 and 1.5 to 2.3 and 1.7, respectively, over the same period. Among East Asian subgroups, intra-regional trade bias is very high for ASEAN, with the double-relative measure at 4.2 in 1999, although the size of the bias has declined over time.

The estimated measures of intra-regional trade dependence reveal that the importance of intra-regional trade in East Asia increased not only in world trade but also in regional trade over time. However, extra-regional trade also expanded rapidly. Indeed, intra-regional trade bias declined in East Asia, while it increased in the NAFTA and the EU. One may attribute these differences partly to differences in the institutional arrangements. Both the NAFTA and the EU have trade arrangements that give preferential treatment to their members, possibly leading to an increasing regional bias.

In East Asia, a preferential trading arrangement has been set up only for the ASEAN members that make up a small portion of intra-East Asian trade, and other economies do not have any discriminatory arrangements. The absence of discriminatory trade arrangements may have caused a decline in trade bias. Unilateral trade liberalization without discriminatory treatment among trading partners, even including those of ASEAN, may have contributed to a decline in regional trade bias in East Asia. Furthermore, a decline in the cost of communications and transportation services, resulting from technological progress and liberalization, contributed to the diversification of trading partners. Rapid industrialization centered on similar industries such as textiles and electric machinery has forced many East Asian economies to look outside the region for markets for their products, diminishing the intra-regional trade bias (Petri 1993).

III.3 Foreign Direct Investment

Similarly to the changing patterns of trade, intra-regional FDI in East Asia increased from 4 percent of world FDI in 1980 to 8 percent in 1994. The corresponding share for the EU also increased from 13 to 19 percent, while it declined for the NAFTA from 14 to 5 percent. Among the East Asian sub-groups, the stock of intra-regional FDI in the emerging economies registered relatively high growth, increasing from 2 to 6 percent of world FDI during the 1980–94 period.

Intra-regional FDI in East Asia increased from 40 percent in 1980 to 43 percent in 1994. Among the sub-groups, intra-regional FDI became particularly important for emerging East Asia. Coupled with this observation, the relatively small shares of intra-regional FDI for NIEs and ASEAN indicate the importance of FDI from the former to the latter sub-group. Intra-regional FDI is particularly important because 87 percent of outward FDI has been directed to emerging East Asia. The share of inward FDI has increased in East Asia, which means that an increasing share of inward FDI originates inside the region. However, the share of intra-regional FDI in regional FDI is substantially smaller for emerging East Asian economies, reflecting the importance of Japan as a source of FDI.

The results of double-relative measures show an interesting contrast between East Asia and the EU. Although the magnitude of the bias is higher for East Asia than for the EU, the magnitude of the bias declined for East Asia, while it increased for the EU. The extent of the bias remained more or less the same for the NAFTA. These observations are consistent with those made for foreign trade, and differences in the

direction of bias for East Asia and for the EU may reflect differences in institutional arrangements, as argued in the case of foreign trade.

Patterns similar to those of trade are found for intra-regional FDI in East Asia. That is, from 1980 to 1994 the importance of intra-regional FDI in East Asia increased not only in world FDI but also in overall regional FDI in East Asia. However, a regional bias declined during the 1980–94 period. These findings indicate that the increasing importance of intra-regional trade and FDI is attributable largely to the rapid expansion of overall trade and FDI in the region that is driven by market forces. This contrasts with the case in the EU or the NAFTA, where intra-regional bias in foreign trade and FDI increased possibly because of discriminatory institutional arrangements under which regional members receive preferential treatment, worsening resource allocation.

A lack of necessary information precludes us from computing the measures for intra-regional dependence in FDI for the period after 1994. However, there appear some evidences that indicate the declining intra-regional dependence in FDI for East Asia since the mid-1990s. One piece of evidence is substantial declines in the shares of East Asia in world FDI inflows and outflows in the latter half of the 1990s (Table 2). Another is the sharp decline in the importance of East Asian economies as foreign investors in East Asia. According to the figures in Table 4, East Asia lost its share as FDI supplier in all the East Asian economies listed in the table except Indonesia. In contrast to the position of East Asia, the EU increased its shares in many East Asian economies. These findings indicate the declining importance of East Asia not only in world FDI but also as a supplier of FDI in East Asia, which in turn tend to show a decline in intra-regional dependence in FDI.

IV. Creation of Intra-regional Production System in East Asia

So far the changing patterns of foreign trade and FDI in East Asia have been examined without considering their relations with the economic structures of the East Asian economies. Our earlier observation that foreign trade of the East Asian economies and in particular intra-regional trade in East Asia expanded rapidly since the 1980s may indicate a substantial impact on economic structures of the East Asian region as well as those of the individual economies. This section investigates intra-regional trade patterns in East Asia by explicitly relating them to procurement sources of the inputs for production by using international input-output tables. From the analysis, the changing characteristics of intra-regional, inter-industry relationships in East Asia will be discerned. This section also examines the role of multinational firms in establishing

intra-regional production system in East Asia by focusing on the activities of Japanese multinational firms.

IV. 1 Increasing Intra-regional Dependence in Production

The Institute of Developing Economies in Japan constructed international input-output tables covering East Asian economies and the U.S. for 1985, 1990, and 1995. The international input-output tables are constructed by linking input-output tables of the individual economies by explicitly specifying the import sources and export destinations of the products among the economies. The international input-output table shows the sources of inputs for production, that is, inputs from domestic market and imported inputs from other economies. Like input-output tables, the international input-output table shows destinations of outputs, that is, outputs sold in domestic market and those exported to other economies. Below we examine the sources of inputs for production by East Asian economies, because our main interest here is to examine the inter-industry, intra-regional production relationship in East Asia.

Table 5 shows the production (input) structures of East Asian economies in 1985 and 1995. Between 1985 and 1995 the importance of imported inputs in production increased for the East Asian economies except Singapore, Korea and Japan, indicating increasing dependence on foreign countries for the supply of intermediate inputs. Wide variations in the importance of imported inputs in production can be observed for East Asian economies. Malaysia, Philippines, Singapore, Thailand, and Taiwan exhibit high dependence as the share of imported inputs in production for these economies exceeded 10 percent. Indonesia, China and Korea have low shares around 6 percent.

To examine intra-regional dependence in production in East Asia, we computed the share of imported inputs, which are originated inside the region, in total inputs (total intermediate goods and value added). The results, which are shown under 'East Asia including Japan excluding itself,' show the increase in intra-regional dependence in production for East Asian economies except Korea and Japan. Singapore and Malaysia register particularly high dependence, while dependence for China and Japan is quite low.

The foregoing analysis did not reveal 'true' intra-regional dependence in production, as it only took account of direct inputs and did not consider indirect inputs, which are required for the production of inputs. To shed light on the true intra-regional dependence, we computed the magnitude of output being induced by a unit increase in

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final demand in a particular economy in East Asia by using international input-output tables. The results of the computation, which incorporate not only inter-industry relationships inside the economy but also those with other East Asian economies, are presented in Table 6. For example, in 1985 one unit increase in final demand in Indonesia increases output of Indonesia by 1.6026 units.[2] It also increases output of Korea and Taiwan by 0.0039 and 0.0030, respectively

The figures in Table 6 show that intra-regional, inter-industry relationships deepened from 1985 to 1995, because for East Asia a higher level of output is obtained in 1995 (16.2102 units) compared with 1985 (16.1393 units) from a unit increase in final demand of all East Asian economies. Although a large part of induced production is realized in the economy registering an increase in final demand, output of other economies also increase. Indeed, the induced level of output in other East Asian economies excluding output induced in an economy having an increase in final demand increased from 0.9762 in 1985 to 1.3591 in 1995, indicating a "net" deepening in intra-regional, inter-industry relationship. However, the magnitude of the contribution to the deepening of intra-regional, inter-industry relationship is not uniform among East Asian economies. Concerning the "net" contribution, all the East Asian economies excluding Indonesia and Japan contributed to deepening of the relationship. An examination of the magnitude of output induced in East Asian economies shows more or less equal dependence on other emerging East Asian economies and Japan for the supply of intermediate inputs. It should be noted that their dependence on Japan increased significantly between 1985 and 1995, probably indicating that large amount of FDI from Japan promoted imports of inputs from Japan. This finding also indicates increasing importance of emerging East Asian economies for Japan's economic growth.

IV.2 Multinational Firms: Promoters of Regional Economic Integration

East Asian economies have experienced rapid expansion of foreign trade and FDI in recent years. We observed increasing intra-regional dependence in foreign trade and production in East Asia. Recognizing the increasingly important role of FDI in economic activities, we investigate the behavior of multinational firms, major foreign

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[2] The figures are computed as follows. International input-output tables with 24 sector disaggregation and 10 economies are used in the analysis. To derive the amount of output induced by an increase in final demand, the Leontief inverse matrix is multiplied by a final demand vector consisting of unity for 24 sectors. The resulting output is divided by 24 to obtain the level of output induced by one unit increase in final demand.

investors, to examine their role in regional integration. Specifically, we analyze the procurement and sales patterns of their affiliates in Asia. To examine this issue in a comprehensive way, we need the detailed information on trade by multinational firms in East Asia. However, necessary data to carry out such an analysis are not available for foreign firms of all origins in East Asia. Below we use the information on Japanese multinational firms to examine this issue. Although limited in its coverage, the data on Japanese multinational firms would provide us with useful information on foreign firms' trading patterns in East Asia, because Japanese multinational firms account for a large portion of multinational firms operating in East Asia.

Table 7 presents the procurement and sales patterns of Japanese manufacturing multinational firms in Asia in 1992 and 1998. One observes that for the Asian affiliates of Japanese multinational firms, the share of local procurements and sales in their respective total declined and the share of foreign trade increased from 1992 to 1998. Specifically, the shares of imports in total procurements and the shares of exports in total sales for their Asian affiliates increased from 51 and 34 percent in 1992 to 56 and 50 percent in 1998, respectively. The corresponding figures for the North American affiliates changed from 49 and 8 percent to 48 and 12 percent, while the figures for European affiliates declined from 71 and 44 percent to 59 and 40 percent (not shown in the table). These data indicate that the Asian affiliates have a greater trade-orientation when compared with those in North America, but they record a smaller trade-orientation than those in Europe.

An examination of the regional composition of foreign trade for the overseas affiliates of Japanese multinational firms reveals an increasing importance of intra-regional trade in Asia. For imports by the Asian affiliates, the share of Asia (including Japan and other Asia) in total procurements increased from 47 percent in 1992 to 53 percent in 1998. The corresponding shares for exports in total sales increased from 27 percent to 42 percent. It is of interest to observe that for procurements by the Asian affiliates dependence on other Asia increased from 1992 to 1997, while that on Japan declined, possibly reflecting a shift from Japan to other Asia as a source of imports. By contrast, for sales by the Asian affiliates, dependence on both Japan and other Asia increased at the expense of other regions. Among manufacturing subsectors, the affiliates in the electronic machinery subsector exhibit high dependence on trade, especially on intra-regional trade, in their procurements and sales, reflecting the presence of regional production network.

A rapid expansion of foreign trade in Asia by Japanese multinational firms was attributable to rapid expansion of intra-firm trade, that is, foreign trade between the

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Japanese parent and their foreign affiliates, or between their foreign affiliates. In particular, intra-firm trade accounts for a substantial share of foreign trade by the Asian affiliates in their trade with Japan. For the Asian affiliates in Asia, in 1998 as large as 96 percent of their exports to Japan were destined to their parents in Japan (Table 8). Although the dependence on intra-firm trade is less for their imports, as large as 83 percent of the imports by the Asian affiliates from Japan came from their parents. The importance of intra-firm trade is smaller for the trade between the affiliates in Asia, when compared with the case for the trade between the affiliates and the parents.

Two interesting observations may be made from the findings on procurement and sales patterns of Japanese multinational firms. First, Japanese multinational firms have contributed to the promotion of foreign trade in Asia, in particular intra-regional trade. Second, Japanese multinational firms have become more active in pursuing intra-regional, inter-process division of labor, probably contributing to the efficient use of factors of production in Asia.

A large number of multinational firms in East Asia have been found to be of efficiency-seeking type, not market-seeking type. As such, these multinational firms locate themselves in an economy where they can perform their operation most efficiently or at the least cost. Japanese multinational firms in machinery sectors such as electronics, which account for a large part of Japanese multinational activity in East Asia, break up their production process into several sub-processes, and locate each sub-process in an economy where that particular sub-process may be carried out most efficiently. For example, some TV producing Japanese multinationals break up the production process into sub-processes such as parts production and assembly operation, and they locate these sub-processes in economies where the required factor inputs are relatively abundant, for example high-skilled workers for parts production and low-wage labor for assembly operation. TV manufacturers export parts to an economy where the final products are assembled, and export the assembled TVs to other economies.

US multinational firms also have been active in setting up production networks in East Asia. Unlike a more or less closed production system by Japanese multinational firms, production networks constructed by US multinational firms are said to be more open to firms from other nationalities such as those from Korea, Singapore, and Taiwan. Indeed, the basic strategy of US multinational firms is to link up with the most efficient producers regardless of their nationality.[3] Like Japanese multinational firms, US

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[3] See Borrus (1998) for the case of U.S. electronics firms in East Asia.

multinational firms have contributed to increase trade-orientation of the host East Asian economies, but they have not contributed much to the promotion of intra-regional trade, as their ties with the US market are expectedly strong[4].

Many firms from the Asian NIEs also set up production networks in various parts of the world, particularly in East Asia. One of the industries that have actively pursued such a globalization strategy is textiles. All these production systems and networks clearly have contributed to greater intra-regional trade interdependence in East Asia.[5]

V. Recent Surge of FTAs in East Asia

The analysis in the previous sections found market forces as the major promoter of regional economic integration in East Asia. This pattern began to change in the late 1990s, as many East Asian countries became interested in institutional regional arrangements in the form of FTA. This section examines recent developments of FTAs in East Asia.

East Asia has been witnessing the emergence and proliferation of FTAs in recent years. One notable characteristic of FTAs in East Asia is their comprehensiveness in the coverage. As such, some of the FTAs established in East Asia are termed as Economic Partnership Agreement (Japan-Singapore EPA), or Closer Economic Partnership Arrangement (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 in traditional FTAs. It may be worth noting that the basic philosophy of these new types of FTAs is similar to that of APEC, whose three pillars are (1) liberalization and (2) facilitation of foreign trade and FDI, and (3) economic and technical cooperation.

East Asia was not active in the formation of regional trade agreements (RTAs), which include FTA and customs union, until recently (Table 9)[6]. Indeed, ASEAN Free

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4 Dobson (1997)

5 Gereffi (1999) presents an interesting analysis of apparel commodity chain developed by firms form the NIEs

6 In the GATT/WTO, regional trade agreements (RTAs), which violate one of its basic principles of non-discrimination, are permitted under GATT Article XXIV with several conditions, which include liberalization of substantially all the trade of the members, not increasing trade barriers on non-members, and completing the RTA process within

Trade Area (AFTA) was the only major FTA until Japan and Singapore enacted JSEPA in 2002. As noted in section II.4, AFTA was established in 1992 with six ASEAN member countries, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Brunei. New ASEAN members, Cambodia, Laos, Myanmar, and Vietnam joined AFTA in the latter half of the 1990s, and currently AFTA has 10 member countries. Besides AFTA, ASEAN as a group as well as its members individually have become active in FTA discussions 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 started FTA negotiations in January 2003 with the target of concluding the negotiations by June 2004. ASEAN is also discussing the possibility of FTAs with Japan and Korea. Some ASEAN members have become active in establishing bilateral FTAs. Singapore enacted or signed several FTAs with countries such as New Zealand, Japan, the US, the EFTA, and began negotiations with countries including India. Thailand has also become active in establishing FTAs, as it is expected to start negotiations with the US and Japan in early 2004. The Philippines and Malaysia are also scheduled to start negotiations with Japan in early 2004.

Compared to ASEAN countries in Southeast Asia, the economies in Northeast Asia including China, Japan, Korea, and Taiwan had not been active in FTAs until recently. Despite increasingly strong interest in FTAs by Northeast Asian countries, there is only one FTA (JSEPA) that has been enacted so far. Japan is currently negotiating FTAs with Mexico and Korea, while it is scheduled to start negotiations with Malaysia, the Philippines and Thailand. Furthermore, it has been studying possible FTAs with ASEAN, Indonesia, and Vietnam. Korea started having an interest in FTAs before Japan. In 1998 Korea disclosed a plan to start FTA negotiations with Chile, and it also set up a joint-study group at private level on FTA with Japan. Korea started negotiations with Chile in 1999, and Korea and Chile signed the agreement in October 2002 after difficult negotiations on liberalization of agricultural imports. Although the agreement was signed, it has not yet ratified by the Korean National Assembly because of strong opposition from the farmers. Korea also started studying a possible FTA with ASEAN.

China's active FTA strategy has received a lot of attention. China joined the

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ten years. For developing countries, more lenient conditions are applied under the enabling clause. An FTA is considered to be a shallow form of regional integration, because it only removes tariff and non-tariff barriers among the members, while a customs union is a deeper integration, as it adopts common external tariffs on non-members, in addition to the removal of tariff and non-tariff barriers on trade among

WTO in 2001 and established an access to the world market, and it started to pursue regional strategies by using FTAs. China signed a framework agreement on comprehensive economic cooperation with ASEAN in November 2002. The agreement, which was proposed strongly by China, has not only trade liberalization but also cooperation in the areas of FDI and economic development. As noted above, China and ASEAN started negotiations on FTA in 2003. China has offered various schemes attractive to ASEAN and particularly to its new members such as economic cooperation for the new ASEAN members and advanced trade liberalization (early harvest) in agricultural products. In addition to ASEAN, China has proposed Japan and Korea to establish a trilateral FTA including these three countries. China enacted an FTA (CEPA) with Hong Kong

An idea of FTA covering East Asian countries has 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 long term vision for economic cooperation. The group has presented the leaders with recommendations including the establishment of East Asia FTA. Despite the recommendation from the Vision Group, East Asia FTA has not yet become a concrete agenda at the leaders meeting.

VI. The Factors Leading to the Proliferation of FTAs in East Asia

Various factors can be identified behind rapid expansion of FTAs in East Asia. First, rapid expansion of FTAs in other parts of the world has prompted East Asian economies to form FTAs, in order to maintain and expand market access for their exports. (Figure 3) Many East Asian economies have become to realize the benefits of trade liberalization for the promotion of economic growth, as it has brought expected outcome of rapid economic growth. Despite the desire of many policy makers for promoting trade liberalization, it has become apparent that trade liberalization under the GATT/WTO has become increasingly difficult. As the number of GATT/WTO members increased, their views on the pace and the extent of trade liberalization have become diverged. Indeed, the fact that it took the GATT members eight years, twice as long a period as initially planed, to conclude the Uruguay Round (UR) negotiations, indicates the increasing difficulty in reaching a consensus on trade liberalization. The increasing difficulty in reaching a consensus was also manifested by a failure by the WTO members to initiate a new round of trade negotiations in Seattle in 1999. Although an

the members.

agreement was reached in Doha to launch a new round in 2001, the new round has faced difficulty in starting substantive negotiation, since even the modality of the negotiations has not been agreed yet. Faced with the difficulty in carrying out trade liberalization on the global scale, many countries in other parts of the world have opted to form FTAs among the like-minded countries to pursue trade liberalization. As a result of increasing FTAs in other parts of the world, East Asian countries started to feel that they are discriminated against in many markets in the world. To overcome such disadvantage and to secure markets for their exports, East Asian countries have become active in forming FTAs.

It should also be noted that many countries in the world including those in East Asia began to realize that the GATT/WTO rules cannot effectively and adequately deal with newly emerging international economic issues involving FDI, services trade, mobility of labor, and others. To put it differently, the rules concerning border measures such as tariffs, which are main focus of the GATT/WTO, cannot provide foreign as well as domestic firms with the level-playing field. It is necessary go deeper beyond the border measures and to set up the rules covering domestic systems such as competition policy. Many countries share a view that GATT/WTO cannot provide such rules and opt for using FTAs to deal with the problem.

Multinational firms, which have set up operations in East Asia, have strong interest in the creation of freer trade and FDI environment in East Asia to make their East Asian operation efficient. These firms argued strongly the need to establish FTAs to achieve their objectives of making their operation efficient.

It is important to note that East Asian economies recognize that the EU and the NAFTA are very successful in promoting economic growth, and thus East Asian economies have become interested in forming FTAs. East Asia's interest in FTAs has intensified as the EU and the North and South Americas are expanding their FTA networks.

Second, somewhat related to the point just made, East Asian economies have become interested in using FTAs as a way to promote deregulation and structural reforms in the domestic market. Many East Asian economies pursued deregulation and structural reforms in the 1990s, which contributed to the realization of rapid economic growth. Although the need for accelerate deregulation and structural reforms to further promote economic growth is recognized by many East Asian economies, it may not be easy for them to do so as many economies are still recovering from the crisis and its aftermath, and as the room for further deregulation became limited as a result of earlier deregulation. Under these circumstances, external pressures such as FTAs can be very

effective in pursuing deregulation.

Third, many East Asian economies have become interested in using FTAs to promote economic and other types of cooperation in East Asia. The financial crisis in the late 1990s in East Asia increased the awareness of the need for regional cooperation such as FTAs to avoid another crisis and to promote regional economic growth, because East Asian economies could not obtain as much assistance as they hoped from the countries outside the region. Indeed, as we have repeatedly pointed out earlier, FTAs and future FTAs in East Asia include not only trade liberalization a la traditional FTAs, but also trade and FDI liberalization and facilitation under the name of EPAs and others. It should be noted that regional cooperation in the area of finance has moved forward significantly, as many East Asian economies realized the need for such cooperation to avoid another financial crisis. Specifically, the Chaing-Mai Initiative, which consists of bilateral currency swap arrangements, was instituted by several East Asian countries.

Fourthly, it has to be emphasized that the political factors have contributed to the increased interest in FTAs in East Asia. A rivalry between China and Japan for becoming a "leader" in East Asia has made them interested in using FTAs to strengthen their relationships with ASEAN and the NIEs. Indeed, in November 2002 Japan proposed an economic partnership framework to ASEAN one day after China agreed to start FTA negotiations with ASEAN. It is also argued that the establishment of Japan-Singapore FTA triggered China to consider FTAs with ASEAN and other Asian economies.

It should also be noted that ASEAN and the NIEs also consider FTAs as a means to maintain and increase their influential position in East Asia. This is particularly notable for ASEAN, as it has been seeking to establish FTAs with China, Japan, and Korea separately, or three "ASEAN+1" FTAs, to maintain and increase its influence before the establishment of an East Asia wide FTA, which will be dominated by China and Japan. ASEAN has been successful in attracting India, the US, the EU and other countries outside East Asia to form FTAs, hoping to maintain its influential position in East Asia. It should be noted that India, the US, the EU and other countries outside the region regard the relationship with ASEAN countries important to maintain their presence in East Asia, in light of emergence of regionalization and high expectation of strong economic growth in East Asia.

Korea, one of the NIEs, which is sandwiched between China and Japan not only geographically but also economically and politically, is keen on maintaining its position as a balancer between the two countries. Indeed, Korea has been an active advocate of an FTA involving China, Japan, and Korea. It should also be noted that

Korea is interested in establishing a cooperation mechanism in Northeast Asia with China and Japan, which would contribute to facilitate the unification of South and North Korea. Taiwan stepped up its efforts to establish FTAs with various countries after becoming a WTO member in 2002. Taiwan is interested in using FTAs not only to expand economic relationships but also establishing political and diplomatic relationships. Despite its desire to form FTAs with many countries, its diplomatic status in the international community has made it difficult to achieve its objectives so far.

Finally, we should point out the reasons for the emergence of NPAs rather than traditional FTAs in East Asia. One notable characteristic of East Asia is diversity in the level of economic development for the countries in the region, ranging from high-income countries such as Japan and Singapore to low-income countries such as new ASEAN members. In order for FTAs involving such diverse countries to become a success, traditional trade liberalization under FTA should be supplemented by cooperation programs such as trade and FDI facilitation and economic assistance under NPAs, as such programs reduce the adjustment costs arising from trade liberalization.

VII. Benefits of FTAs in East Asia

The countries interested in FTAs expect various benefits from the formation of FTAs, ranging from economic to non-economic benefits. This section first discusses benefits of FTAs from trade liberalization and then turns to additional benefits from deeper integration through implementing additional features such as FDI liberalization and economic cooperation under new types of FTAs.

Let us first examine the possible impacts of an FTA on member countries through foreign trade. The trade impacts of an FTA can be classified into two types. One is the static effect and the other is the dynamic effect. As to the static effect, trade creation, trade diversion, and terms of trade effects are important. Removal of trade barriers among the members would promote trade among them (trade creation effect) sometimes at the expense of imports from non-members (trade diversion effect). If an FTA leads to a reduction in imports from non-members, FTA members are likely to experience the improvement in their terms of trade vis-à-vis non members (terms of trade effect). Trade creation effect and terms of trade effect lead to an increase in economic welfare of the members, while trade diversion effect is likely to reduce economic welfare of the members because imports from most efficient suppliers in non-members are replaced by imports from less-efficient producers from the members. It is important to note that for non-members trade diversion effect and terms of trade

effect lead to harmful impacts on their economic welfare.

The preceding discussions on the impact of FTA on foreign trade are given from the point of view of an economy as whole. From the point of the view of the business sector, which has strong influence on policy-making process, two different types of effects are expected. For competitive business, FTA will bring benefits as it enables them to increase their access to members' markets. However, for non-competitive business sector, FTA will have a harmful effect as it introduces competitive pressure.

Besides these static effects, dynamic effects can be expected. They include mainly scale effect and competition enhancing effect, both of which would increase economic welfare for both members and non-members. The scale effect may arise from the formation of larger market as a result of an FTA. Faced with larger market, firms may be able to exploit the benefits of economies of scale, giving beneficial impacts on consumers in not only member but also non-member countries. Pro-competition effect may be expected as competition in member counties' market is likely to intensify as a result of trade liberalization. Pro-competition effect may give rise to new products and new technology, which in turn would benefit consumers in both member and non-member countries. One may consider pro-competition effect as the effect, which would promote domestic policy reform. Many countries can use external pressure to promote domestic reform. In the past GATT commitments as well as threats from the US and other countries were effective external pressure. However, at present, virtually these pressures do not exist. Under such circumstances, FTAs could be effective external pressure.

In addition to the impacts on foreign trade, FTA is likely to have impacts on FDI. As to the possible impacts of FTA on FDI, one would expect both FDI creation effect and FDI diversion effect. FDI creation effect indicates an increased FDI among member countries, while FDI diversion effect refers to a shift of FDI from non-member to member countries. Both effects have positive impacts on member countries in that FDI would be flown into member countries, as trade liberalization via FTA would increase attractiveness of members' market. While FDI creation effect does not have any immediate negative impacts on non-member countries, FDI diversion effect has negative impacts as FDI is diverted from non-member to member countries. So far the impacts of FTA, or free trade agreement, on FDI were discussed. If an agreement has FDI liberalization under new types of FTAs, then naturally it would yield directly the kinds of impacts involving FDI discussed above.

The preceding discussions indicate possible benefits for member countries and

possible negative impacts on non-member countries. Having noted this, we would like to emphasize the point that the above statement is correct if only static effects of FTA are considered, and if both static and dynamic effects are taken into account FTA is likely to bring benefits not only to members but also to non-members.

Let us examine the possible impacts of an East Asia FTA on East Asian economies. Urata and Kiyota (2003) conducted a simulation exercise by using a general computable equilibrium (CGE) model. Table 10 presents their results for GDP and welfare, measured by equivalent variation (EV), for East Asian economies with a few selected countries. The results indicate that all FTA member economies gain benefits from an East Asia FTA in terms of GDP and EV. The positive impacts are very large for the ASEAN countries. Among the ASEAN countries Thailand gains substantially. Indeed, Thai GDP is estimated to increase as much as 16 percent from the East Asian FTA. A large gain for Thailand is attributable mainly to high protection imposed on the Thai economy before the formation of East Asia FTA. Vietnam and Indonesia also would gain substantially from the East Asia FTA.

By contrast to the gains accrued to the FTA members, non-member countries experience negative impacts in the forms of declines in GDP and EV. These negative impacts are mainly attributable to the trade diversion effect from the East Asia FTA, through which non-member countries' exports to East Asia are substituted by member countries' exports as a result of preferential treatment given to trade between the members. It should be noted that the negative impacts on the United States and the EU are quite small while they are somewhat substantial for Australia/New Zealand and other Asia. Relatively large negative impacts for Australia/New Zealand and other Asia are attributable to the fact that East Asia is a very important region for their export destination.

Having presented the estimates based on CGE model exercise, it is important to note that these estimates are likely to be smaller than the actual impacts, because they do not include dynamic effects fully. In addition, the impacts would be greater if deeper integration including trade and FDI facilitation, and economic cooperation is adopted.

Before ending the discussions on the benefits of FTAs on member countries, we should emphasize non-economic benefits from these arrangements. Through FTAs the members countries expect to deepen mutual understanding, which would reduce political and social frictions to achieve social and political stability. Social and political stability in turn would contribute to economic growth.

VIII. Obstacles to FTAs in East Asia

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One may classify the obstacles on the formation of FTAs in East Asia into several categories including economic, historic, and political factors. Let us begin with economic factors. The formation of FTA involving the countries in different levels of economic development as the case for East Asia is likely to result in sizeable economic benefits as the removal of trade barriers through FTA enables the members to use resources efficiently by making them specialize in the production of goods with a comparative advantage. Theoretically, this observation may be used as a rationale for establishing FTAs in East Asia, particularly an East Asia-wide FTA, but in reality the formation of such FTA would encounter strong opposition from non-competitive sectors, which are pressured to go through painful structural adjustment. Indeed, it may be argued that the formation of FTA involving the countries with similar levels of economic development is easier because they are engaged in intra-industry trade of horizontal type more actively, and under such circumstances weaker opposition may be expected.

This point may be supported by the results of simulation exercises by Urata and Kiyota (2003). According to their estimates shown in Table 11, the level of production of the non-competitive and "sensitive" sectors is projected to decline as a result of FTA. For example, an East Asia FTA would result in the reduction in output of agriculture in Japan and Korea, transportation machinery in China, Taiwan, Malaysia, Indonesia and several other countries. Although agriculture is a declining industry for Japan and Korea, and therefore it may be better to reduce the size of agricultural production from the point of view of resource allocation, a strong opposing coalition of farmers, politicians, and bureaucrats makes it difficult for these governments to pursue East Asia FTA. Many emerging East Asian economies, which are interested in developing the automobile sector, presently non-competitive sector, would not like to see the decline of the sector.

In addition to these economic factors, several political factors are hindrance to FTAs in East Asia. One is a security issue. East Asia has countries with different political systems. Most countries have democratic political system, but China and Myanmar have authoritarian regime. While many countries have security alliances with the US, China is still considered as a possible threat to these alliances. These issues may be dissolved as economic development is achieved and as international exchange among these countries is enhanced to result in sharing common views toward political system and regional security.

Another political problem in this region is the absence of strong political

leadership to lead the moves toward the formation of East Asia FTA. The experiences in Europe remind us of the crucial role that strong political leadership played in the formation of the EEC and subsequent deepening experiences. It is reasonable to assume that China and Japan should jointly take leadership in East Asia, but so far the differences in their views in various issues such as political system and regional security, as noted above have been obstacles, have precluded them to share a common view toward the formation of an East Asia FTA.

Finally, different views on history involving the Northeast Asian countries, namely, China, Japan and Korea are obstacles to East Asia FTA. Closer economic and social relations will contribute to reducing the gaps in their views on historic and other issues.

IX. Conclusions: Suggestions to Overcome the Obstacles toward the Establishment of an East Asian FTA

East Asian countries have become active in forming FTAs with other East Asian countries. Many East Asian countries consider the formation of an East Asia FTAs as a tentative goal and deeper economic integration like the EU as a long-term goal. The motive behind these policies is potential economic and non-economic benefits from these arrangements. However, various obstacles do exist as was discussed in the previous section. In this section some ways to overcome these obstacles will be discussed.

One of the obstacles has to do with structural adjustment that is required for the formation of FTAs. More specifically, non-competitive sectors have to face increased competitive pressure from FTA partners. One possible way to deal with the needed structural adjustment is to implement scheduled trade liberalization in sensitive sectors as a part of FTA agreement. GATT/WTO allows the members of FTA to take ten years to complete FTA. East Asian countries should use the breathing space to facilitate structural adjustment through appropriate adjustment policies. For example, potentially impacted workers should be given financial, technical and other types of assistance so that they can improve the quality of human resources, in order to be able to obtain more productive jobs. If such program is successful, trade liberalization through FTA can be pursued smoothly to result in the benefits for all the countries. Indeed, the needed assistance should be provided by the members as a part of economic assistance programs under new types of FTAs. For example, in the case of educating and training workers for upgrading their skills, more developed members such as Japan, Korea,

Taiwan, and Singapore can provide useful assistance to other countries. In the case of developing competitive small and medium-sized enterprises (SMEs), which would ease the transition process, Japan can provide assistance to other countries. Furthermore, it is very important to analyze the economic and other issues jointly to learn important policy lessons, which may be applicable to the member countries. The need for establishing new types of FTAs should be stressed.

As repeatedly noted, East Asian countries need to deepen mutual understanding at all levels, from top leaders to young people, to increase the awareness of the importance of integrated regional market and regional political and social stability. Leaders' meetings should be held at least annually to increase their mutual understanding. Frequent television-conferences can be used to supplement face-to-face meetings. Policy makers, who are responsible to formulate policies, should establish close communication links. Bureaucrats, business people, academics, students, and others should also increase their exchange. In order to facilitate such exchange, the establishment of frameworks such as student exchange programs is effective. Such programs can be set up independently but they would be more effective if they are coordinated under new FTAs. Having discussed the need for deepening mutual understanding for the implementation of FTAs in East Asia, it should be emphasized that strong political leadership is a crucial factor that would realize new and drastic policies such as FTAs.

Finally, East Asian countries should not regard completing integration of regional market in East Asia under an FTA as a goal, and they should regard it as a step toward achieving global free trade under the WTO. This is very important as an East Asia FTA has negative impacts on non-members such as the U.S., the EU and other countries. To avoid an East Asia FTA becoming a stumbling bloc for global free trade, East Asian countries should make every effort to promote multilateral trade negotiations under the WTO and establish FTAs with countries outside East Asia. This is because expanded and intensified interactions with countries outside East Asia are of crucial importance for East Asia for its economic growth, political stability and social prosperity.

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$million
Figure 1 Exports of Developing East Asia and Latin America
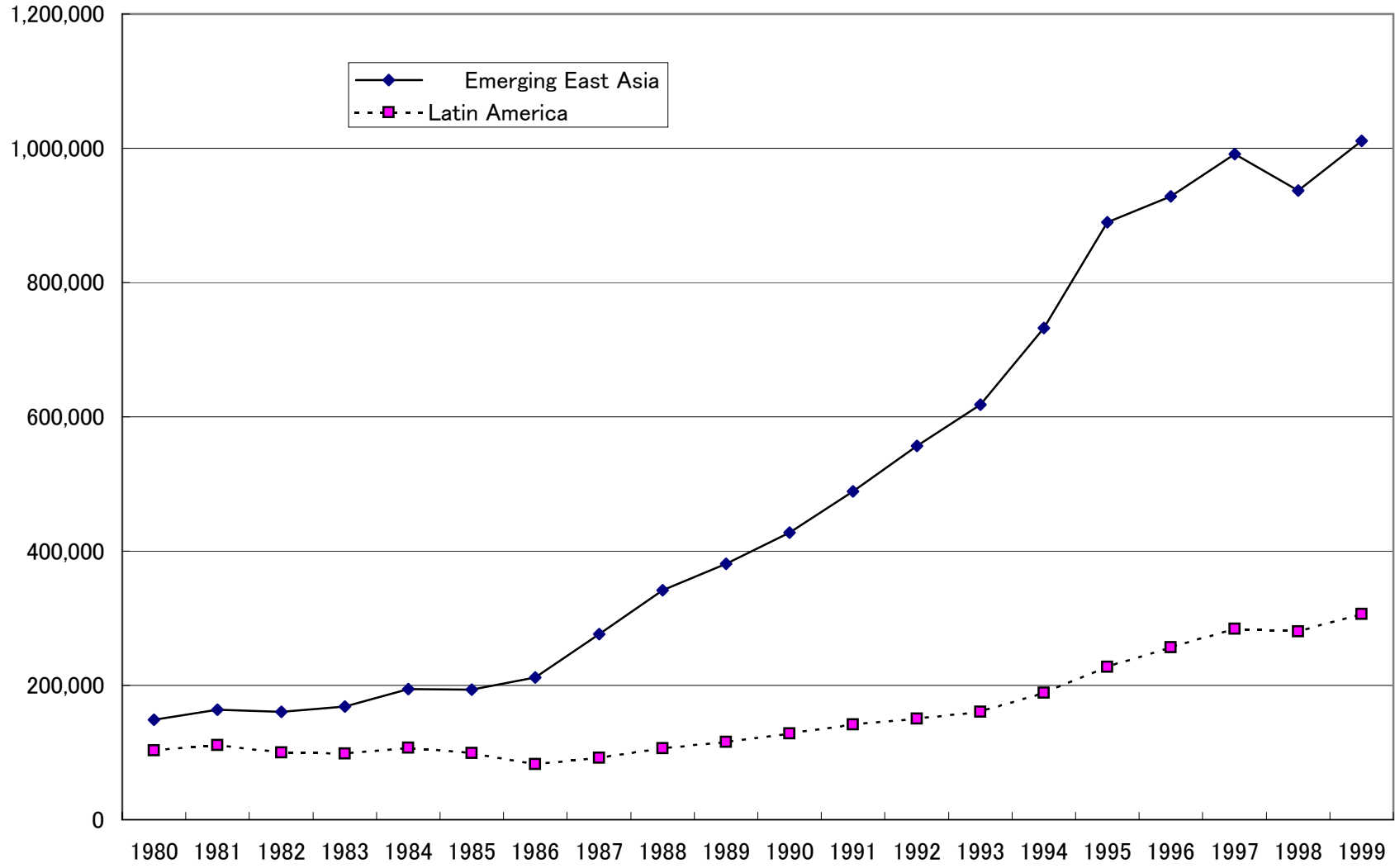
Figure 2 FDI Inflows in Developing East Asia and Latin America
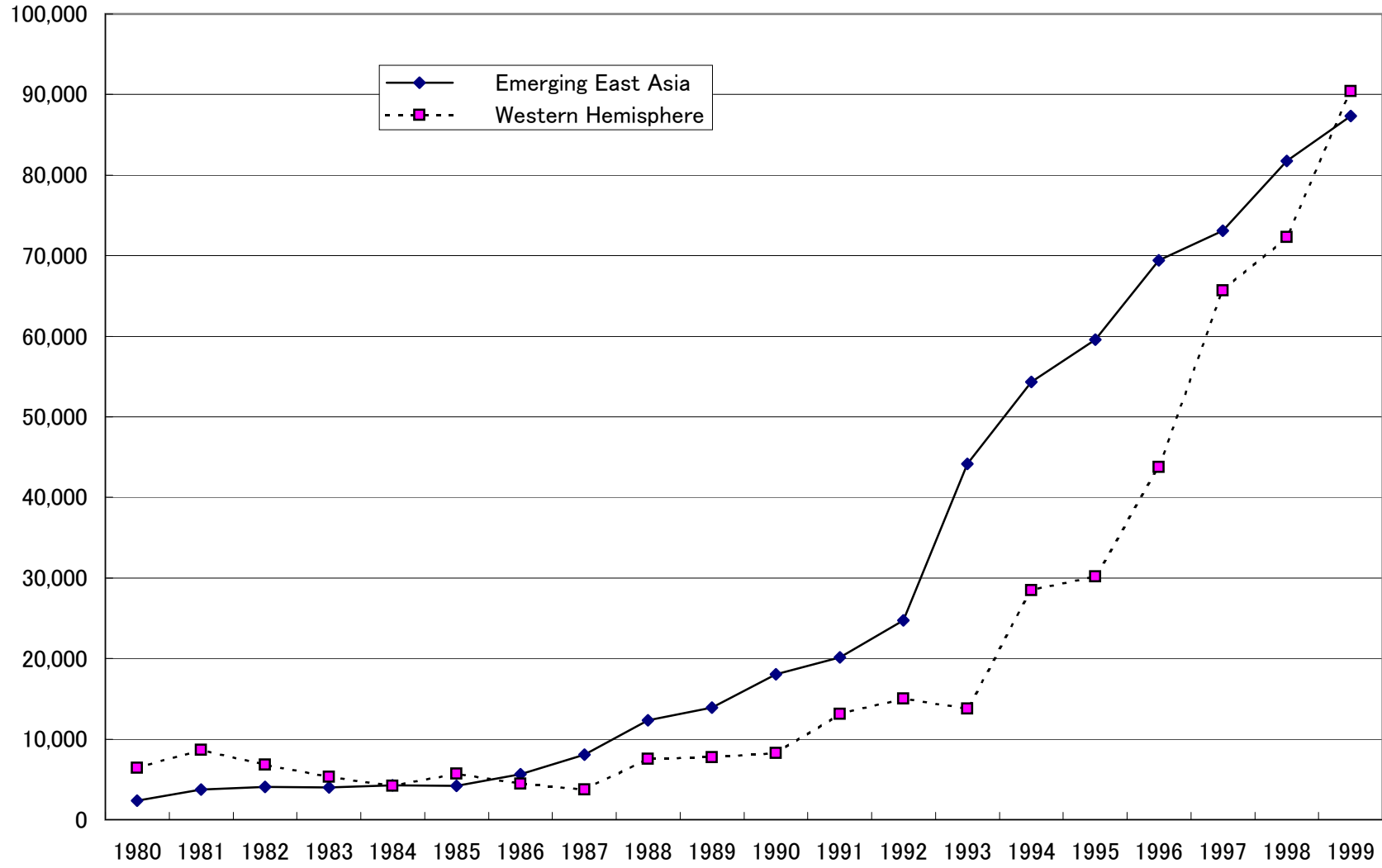
Figure 3 RTAs in the World (Cumulative number of RTAs reported to GATT/WTO)
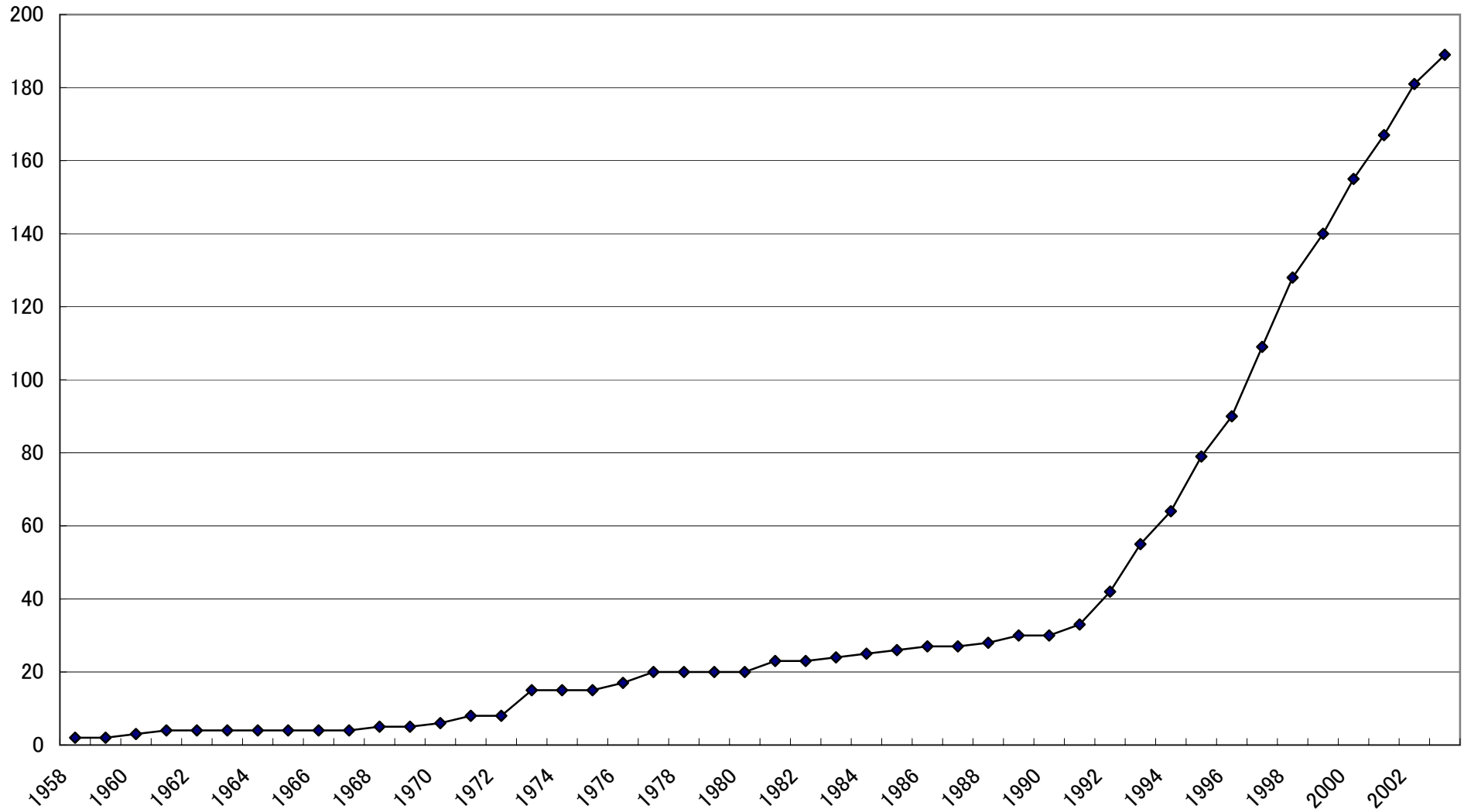
Table 1 International Trade of East Asian Economies in the 1980s and 1990s

(a) Value in millions of US dollars

Regions/Countries	Exports					Imports					Total trade (exports + imports)				
	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999
WORLD	1,832,508	1,874,505	3,381,690	5,070,827	5,663,310	1,918,724	1,975,924	3,517,259	5,137,927	5,810,326	3,751,232	3,850,429	6,898,949	########	########
United States	220,781	213,146	393,106	583,451	690,689	256,959	361,620	517,020	770,972	1,048,435	477,740	574,767	910,126	1,354,423	1,739,124
European Union-15	751,159	708,197	1,488,365	2,018,290	2,208,491	843,944	724,609	1,538,964	1,914,173	2,143,856	1,595,103	1,432,805	3,027,329	3,932,463	4,352,347
East Asia	279,576	370,825	715,547	1,332,658	1,429,911	292,342	323,547	669,517	1,267,960	1,202,865	571,918	694,372	1,385,064	2,600,618	2,632,776
Japan	130,435	177,189	287,678	443,047	419,207	141,284	130,516	235,307	336,027	310,733	271,719	307,705	522,985	779,074	729,940
Emerging East Asia	149,141	193,636	427,869	889,611	1,010,704	151,058	193,031	434,210	931,932	892,132	300,199	386,667	862,079	1,821,544	1,902,836
NIE-4	76,262	113,966	269,222	529,143	553,671	88,148	107,119	271,594	556,160	521,150	164,410	221,085	540,815	1,085,303	1,074,821
Hong Kong SA	19,720	30,182	82,144	173,556	173,793	22,399	29,701	82,482	192,764	179,650	42,119	59,883	164,626	366,321	353,443
Korea	17,439	30,289	67,812	125,588	143,647	22,063	31,058	74,405	135,352	119,740	39,502	61,347	142,217	260,940	263,387
Singapore	19,377	22,812	52,753	118,187	114,730	24,013	26,237	60,954	124,394	111,071	43,390	49,049	113,707	242,581	225,801
Taiwan	19,726	30,683	66,513	111,813	121,501	19,673	20,123	53,753	103,649	110,689	39,399	50,806	120,266	215,462	232,191
ASEAN-9	52,162	49,692	91,612	204,417	255,046	40,525	39,999	102,289	235,746	197,636	92,686	89,691	193,902	440,163	452,682
Indonesia	21,909	18,596	25,675	45,428	57,193	10,837	10,275	22,005	40,629	28,950	32,747	28,871	47,680	86,056	86,142
Malaysia	12,960	15,408	29,420	73,724	84,550	10,821	12,301	29,170	77,620	65,491	23,782	27,709	58,590	151,344	150,042
Philippines	5,787	4,614	8,194	17,371	35,474	8,295	5,351	12,993	28,282	31,368	14,082	9,965	21,186	45,653	66,842
Thailand	6,501	7,123	23,072	57,201	61,797	9,213	9,259	33,407	73,692	53,207	15,714	16,382	56,479	130,892	115,003
Vietnam	0	693	2,525	5,450	10,474	0	1,842	2,842	8,155	13,213	0	2,535	5,367	13,606	23,687
Other ASEAN-	5,004	3,258	2,727	5,243	5,559	1,359	970	1,872	7,368	5,407	6,362	4,228	4,599	12,611	10,966
China	18,139	27,329	62,760	148,955	194,931	19,505	42,480	53,809	132,163	165,718	37,644	69,809	116,569	281,118	360,649
Other East Asia	2,577	2,648	4,275	7,096	7,056	2,880	3,433	6,517	7,863	7,628	5,458	6,081	10,792	14,959	14,685

(b) Shares in world trade (%)

Regions/Countries	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999
WORLD	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
United States	12.0	11.4	11.6	11.5	12.2	13.4	18.3	14.7	15.0	18.0	12.7	14.9	13.2	13.3	15.2
European Union-15	41.0	37.8	44.0	39.8	39.0	44.0	36.7	43.8	37.3	36.9	42.5	37.2	43.9	38.5	37.9
East Asia	15.3	19.8	21.2	26.3	25.2	15.2	16.4	19.0	24.7	20.7	15.2	18.0	20.1	25.5	22.9
Japan	7.1	9.5	8.5	8.7	7.4	7.4	6.6	6.7	6.5	5.3	7.2	8.0	7.6	7.6	6.4
Emerging East Asia	8.1	10.3	12.7	17.5	17.8	7.9	9.8	12.3	18.1	15.4	8.0	10.0	12.5	17.8	16.6
NIE-4	4.2	6.1	8.0	10.4	9.8	4.6	5.4	7.7	10.8	9.0	4.4	5.7	7.8	10.6	9.4
Hong Kong SA	1.1	1.6	2.4	3.4	3.1	1.2	1.5	2.3	3.8	3.1	1.1	1.6	2.4	3.6	3.1
Korea	1.0	1.6	2.0	2.5	2.5	1.1	1.6	2.1	2.6	2.1	1.1	1.6	2.1	2.6	2.3
Singapore	1.1	1.2	1.6	2.3	2.0	1.3	1.3	1.7	2.4	1.9	1.2	1.3	1.6	2.4	2.0
Taiwan	1.1	1.6	2.0	2.2	2.1	1.0	1.0	1.5	2.0	1.9	1.1	1.3	1.7	2.1	2.0
ASEAN-9	2.8	2.7	2.7	4.0	4.5	2.1	2.0	2.9	4.6	3.4	2.5	2.3	2.8	4.3	3.9
Indonesia	1.2	1.0	0.8	0.9	1.0	0.6	0.5	0.6	0.8	0.5	0.9	0.7	0.7	0.8	0.8
Malaysia	0.7	0.8	0.9	1.5	1.5	0.6	0.6	0.8	1.5	1.1	0.6	0.7	0.8	1.5	1.3
Philippines	0.3	0.2	0.2	0.3	0.6	0.4	0.3	0.4	0.6	0.5	0.4	0.3	0.3	0.4	0.6
Thailand	0.4	0.4	0.7	1.1	1.1	0.5	0.5	0.9	1.4	0.9	0.4	0.4	0.8	1.3	1.0
Vietnam	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.2
Other ASEAN-	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
China	1.0	1.5	1.9	2.9	3.4	1.0	2.1	1.5	2.6	2.9	1.0	1.8	1.7	2.8	3.1
Other East Asia	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1

Source: International Monetary Fund, IFS CD-ROM.

Table 2 Foreign Direct Investment (FDI) Flows of East Asian Economies in the 1980s and 1990s

(a) Millions of US dollars

Regions/Countries	Inflows					Outflows					Total FDI (inflows + outflows)				
	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999
WORLD	52,216	55,502	202,635	318,883	917,481	55,390	59,971	245,820	335,501	871,010	107,606	115,473	448,455	654,384	#######
United States	16,930	20,010	48,497	57,776	275,535	19,230	14,060	37,184	98,750	150,900	36,160	34,070	85,681	156,526	426,435
European Union-15	21,264	15,836	96,173	115,316	371,839	27,067	25,689	130,595	160,931	592,633	48,331	41,525	226,768	276,247	964,472
East Asia	2,654	4,868	19,795	59,590	99,633	2,535	7,964	59,815	39,209	56,918	5,188	12,832	79,609	98,799	156,551
Japan	280	638	1,777	39	12,308	2,390	6,492	50,497	22,508	22,267	2,670	7,130	52,274	22,547	34,575
Emerging East Asia	2,374	4,230	18,017	59,551	87,324	145	1,472	9,318	16,701	34,652	2,518	5,702	27,335	76,252	121,976
NIE-4	1,242	1,280	7,693	10,541	42,312	124	829	8,334	12,816	32,465	1,365	2,109	16,027	23,358	74,777
Hong Kong SA	0	0	0	0	23,068	0	0	0	0	19,904	0	0	0	0	42,973
Korea	6	234	788	1,776	9,333	26	591	1,052	3,552	4,198	32	825	1,840	5,328	13,531
Singapore	1,236	1,047	5,575	7,206	6,984	98	238	2,034	6,281	3,943	1,333	1,284	7,609	13,488	10,927
Taiwan			1,330	1,559	2,926			5,249	2,983	4,420	0	0	6,579	4,542	7,346
ASEAN-9	1,018	1,180	6,566	12,593	5,936	3	1	140	1,888	359	1,021	1,181	6,706	14,481	6,294
Indonesia	0	310	1,093	4,346	-2,745	0	0	0	603	72	0	310	1,093	4,949	-2,673
Malaysia	934	695	2,332	4,178	1,553	0	0	0	0	0	934	695	2,332	4,178	1,553
Philippines	-106	12	530	1,478	573	0	0	0	399	-59	-106	12	530	1,877	514
Thailand	190	163	2,444	2,068	6,213	3	1	140	886	346	193	164	2,584	2,954	6,559
Other ASEAN-	0	0	167	523	342	0	0	0	0	0	0	0	167	523	342
China	0	1,659	3,487	35,849	38,753	0	629	830	2,000	1,775	0	2,288	4,317	37,849	40,528
Other East Asia	114	111	271	567	324	18	14	13	-3	53	132	125	285	564	377

(b) Shares in world FDI (%)

Regions/Countries	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999	1980	1985	1990	1995	1999
WORLD	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
United States	32.4	36.1	23.9	18.1	30.0	34.7	23.4	15.1	29.4	17.3	33.6	29.5	19.1	23.9	23.8
European Union-15	40.7	28.5	47.5	36.2	40.5	48.9	42.8	53.1	48.0	68.0	44.9	36.0	50.6	42.2	53.9
East Asia	5.1	8.8	9.8	18.7	10.9	4.6	13.3	24.3	11.7	6.5	4.8	11.1	17.8	15.1	8.8
Japan	0.5	1.1	0.9	0.0	1.3	4.3	10.8	20.5	6.7	2.6	2.5	6.2	11.7	3.4	1.9
Emerging East Asia	4.5	7.6	8.9	18.7	9.5	0.3	2.5	3.8	5.0	4.0	2.3	4.9	6.1	11.7	6.8
NIE-4	2.4	2.3	3.8	3.3	4.6	0.2	1.4	3.4	3.8	3.7	1.3	1.8	3.6	3.6	4.2
Hong Kong SA	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.4
Korea	0.0	0.4	0.4	0.6	1.0	0.0	1.0	0.4	1.1	0.5	0.0	0.7	0.4	0.8	0.8
Singapore	2.4	1.9	2.8	2.3	0.8	0.2	0.4	0.8	1.9	0.5	1.2	1.1	1.7	2.1	0.6
Taiwan	0.0	0.0	0.7	0.5	0.3	0.0	0.0	2.1	0.9	0.5	0.0	0.0	1.5	0.7	0.4
ASEAN-9	1.9	2.1	3.2	3.9	0.6	0.0	0.0	0.1	0.6	0.0	0.9	1.0	1.5	2.2	0.4
Indonesia	0.0	0.6	0.5	1.4	-0.3	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.2	0.8	-0.1
Malaysia	1.8	1.3	1.2	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.9	0.6	0.5	0.6	0.1
Philippines	-0.2	0.0	0.3	0.5	0.1	0.0	0.0	0.0	0.1	0.0	-0.1	0.0	0.1	0.3	0.0
Thailand	0.4	0.3	1.2	0.6	0.7	0.0	0.0	0.1	0.3	0.0	0.2	0.1	0.6	0.5	0.4
Other ASEAN-	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
China	0.0	3.0	1.7	11.2	4.2	0.0	1.0	0.3	0.6	0.2	0.0	2.0	1.0	5.8	2.3
Other East Asia	0.2	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0

Source: International Monetary Fund, IFS CD-ROM.

Table 3 Intra-Regional Dependence for Trade and FDI

(a) Absolute Measure (%)

	Trade					FDI	
	1980	1985	1990	1995	1999	1980	1994
East Asia, incl. Japan	5.4	6.7	8.3	12.7	11.3	3.5	8.4
Emerging East Asia-14	1.7	2.5	3.9	6.6	6.4	1.5	5.5
NIE-4	0.4	0.5	0.9	1.5	1.2	0.1	0.1
ASEAN-10	0.7	0.7	0.8	1.5	1.4	0.5	0.8
ASEAN-9, excl. Singapore	0.1	0.1	0.1	0.3	0.4	-	-
NAFTA	5.7	7.9	6.6	7.8	10.3	13.6	5.3
MERCOSUR	0.2	0.1	0.1	0.3	0.3	-	-
European Union-15	24.3	21.7	28.3	23.8	23.1	12.9	19.3

(b) Relative Measure (%)

	Exports					Ouward FDI	
	1980	1985	1990	1995	1999	1980	1994
East Asia, incl. Japan	35.9	34.5	40.1	49.3	45.0	38.1	35.0
Emerging East Asia-14	23.3	26.4	32.4	39.6	37.0	86.8	86.6
NIE-4	9.7	8.9	12.4	16.1	14.8	8.6	2.8
ASEAN-10	18.7	19.8	19.8	25.4	22.2	73.2	56.5
ASEAN-9, excl. Singapore	3.9	5.1	5.0	7.3	8.1	-	-
NAFTA	33.6	43.9	41.4	46.2	54.6	27.5	18.7
MERCOSUR	11.6	5.5	8.9	20.3	20.5		
European Union-15	60.8	59.2	65.9	62.4	62.8	38.6	47.9

	Imports					Inward FDI	
	1980	1985	1990	1995	1999	1980	1994
East Asia, incl. Japan	35.3	40.5	43.6	51.2	54.1	42.0	54.0
Emerging East Asia-14	21.1	24.2	30.6	34.6	40.5	19.7	38.3
NIE-4	7.1	8.2	10.3	11.8	11.4	4.1	4.6
ASEAN-10	18.2	19.7	16.4	19.4	23.9	10.2	11.3
ASEAN-9, excl. Singapore	5.0	6.9	4.8	7.3	10.7	-	-
NAFTA	32.8	34.4	33.9	38.4	41.1	41.5	21.2
MERCOSUR	8.3	9.5	14.2	18.2	19.2	-	-
European Union-15	54.0	57.5	63.1	61.3	59.6	36.2	55.0

	Trade (Exports+Imports)					FDI (Out + In)	
	1980	1985	1990	1995	1999	1980	1994
East Asia, incl. Japan	35.6	37.3	41.8	50.2	49.2	40.0	42.5
Emerging East Asia-14	22.2	25.3	31.5	37.1	38.7	32.1	53.1
NIE-4	8.3	8.6	11.3	13.9	13.2	5.6	3.5
ASEAN-10	18.4	19.7	18.0	22.2	22.9	17.9	18.8
ASEAN-9, excl. Singapore	4.3	5.9	4.9	7.3	9.2	-	-
NAFTA	33.2	38.3	37.2	42.0	46.8	33.0	19.9
MERCOSUR	9.7	7.0	11.0	19.2	19.8	-	-
European Union-15	57.2	58.3	64.5	61.9	61.2	37.3	51.2

(c) Double-Relative Measure (Trade Intensity Index, %)

	Trade					FDI	
	1980	1985	1990	1995	1999	1980	1994
East Asia, incl. Japan	2.56	2.28	2.27	2.14	2.25	4.59	2.25
Emerging East Asia-14	2.97	2.93	2.84	2.32	2.49	11.36	6.08
NIE-4	2.09	1.75	1.70	1.64	1.75	4.20	0.98
ASEAN-10	5.12	6.06	4.60	3.80	4.15	14.09	7.59
ASEAN-9, excl. Singapore	1.70	2.65	1.87	1.64	2.34	-	-
NAFTA	2.05	1.96	2.15	2.39	2.27	0.84	0.74
MERCOSUR	6.55	4.93	9.70	13.27	14.68	-	-
European Union-15	1.48	1.60	1.51	1.66	1.66	1.08	1.37

Notes: Definitions are described in the text
Source: Computed from the data from the following sources
   Trade data: IMF, Direction of Trade Statistics, and FDI data: Industry Canada

Table 4 Sources of Inward Foreign Direct Investment in East Asian Economies (%

	China (actualized value)			Indonesia (approved)			Korea (approved)			Malaysia (approved)			Philippines(BOP)			Singapore (committed)			Taiwan(approved)			Thailand (BOP)		
	1990	1995	1999	1990	1995	1999	1990	1995	1999	1991	1995	1999	1990	1995	1999	1990	1995	1999	1990	1995	1999	1990	1995	1999
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
US	13.1	8.2	10.5	1.8	6.9	1.3	39.6	33.2	24.1	10.5	19.7	42.0	26.9	6.8	4.5	47.6	42.8	57.3	25.3	44.6	222.7	9.5	13.0	8.0
East Asia	69.8	77.9	64.1	55.3	20.8	30.0	31.9	29.0	17.3	65.9	58.5	18.6	46.6	70.1	26.4	31.9	23.8	18.9	50.0	27.3	25.3	75.5	54.0	46.4
Japan	14.4	8.3	7.4	25.6	9.5	5.9	29.3	21.5	11.3	21.7	22.9	8.2	27.7	30.0	16.0	31.9	23.8	18.9	36.4	19.6	12.2	43.2	27.8	12.2
Korea	0.0	2.8	3.2	8.3	1.7	2.4	0.0	0.0	0.0	10.7	6.6	0.3	3.9	1.0	0.7	0.0	0.0	0.0	0.1	0.1	0.1	0.8	0.6	0.2
Taiwan	0.0	8.4	6.4	7.1	1.4	13.7	0.5	0.5	0.2	21.1	15.8	2.2	3.9	0.9	0.8	0.0	0.0	0.0	0.0	0.0	0.0	11.1	4.8	3.9
Hong Kong	53.9	53.5	40.6	11.4	4.4	0.7	0.4	3.0	3.0	3.5	1.9	0.5	7.9	28.9	1.1	0.0	0.0	0.0	10.3	5.0	3.8	10.9	13.9	7.2
Singapore	1.4	4.9	6.6	3.0	3.7	6.7	1.7	3.4	2.7	6.5	11.0	7.3	3.2	9.3	1.9	0.0	0.0	0.0	3.2	2.6	9.2	9.5	6.8	23.0
China	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.6	0.2	2.3	0.2	0.1	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	-0.1
EU	3.4	5.2	10.0	8.1	21.4	6.1	20.8	17.5	35.5	4.7	5.6	10.0	7.7	12.9	22.7	17.5	30.9	17.4	8.4	10.4	9.4	5.7	12.3	41.6
Italy	0.1	0.7	0.5	0.0	0.1	0.0	0.2	0.2	0.0	0.2	0.2	0.6	0.0	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.0	0.1	-0.3	0.0
UK	0.4	2.4	2.6	0.7	15.8	4.7	5.6	4.5	3.1	3.2	2.1	1.6	4.4	6.5	0.5	4.1	15.9	1.5	3.9	6.7	3.4	1.7	2.8	5.1
Netherlands	0.5	0.3	1.3	6.5	0.9	0.4	4.5	8.8	21.4	0.0	0.6	6.3	1.7	3.7	20.3	3.3	8.1	3.0	2.2	2.6	4.6	1.0	4.3	18.1
Germany	1.8	1.0	3.4	0.2	3.4	0.8	7.8	2.3	6.2	1.1	1.6	1.5	1.1	2.0	1.3	7.5	3.8	10.1	1.6	0.8	0.7	1.8	1.9	8.2
France	0.6	0.8	2.2	0.8	1.2	0.2	2.8	1.8	4.9	0.2	1.1	0.1	0.5	0.8	0.6	2.7	2.9	1.5	0.8	0.4	0.8	1.1	3.6	10.2

Source: Country sources.

Table 5 Sources of Inputs in Production for East Asian Economies, 1985 and 1995

		Indonesia	Malaysia	Philippines	Thailand	Singapore	Taiwan	Korea	China	Japan
Domestic inputs	1985	0.3517	0.3367	0.3843	0.4073	0.2976	0.4614	0.4435	0.5008	0.4737
	1995	0.3920	0.3371	0.3385	0.3719	0.3433	0.3869	0.4782	0.5547	0.4395
Imported inputs	1985	0.0624	0.1718	0.0797	0.0996	0.3353	0.1371	0.1290	0.0417	0.0481
	1995	0.0692	0.2396	0.1452	0.1605	0.2868	0.1621	0.0612	0.0614	0.0306
From NIES3	1985	0.0062	0.0298	0.0045	0.0106	0.0117	0.0022	0.0024	0.0010	0.0022
	1995	0.0079	0.0397	0.0198	0.0189	0.0260	0.0090	0.0031	0.0071	0.0022
From ASEAN4	1985	0.0007	0.0073	0.0067	0.0112	0.0635	0.0062	0.0095	0.0011	0.0053
	1995	0.0018	0.0096	0.0084	0.0097	0.0553	0.0094	0.0060	0.0026	0.0027
China	1985	0.0012	0.0028	0.0040	0.0021	0.0350	0.0000	0.0000	0.0000	0.0019
	1995	0.0018	0.0052	0.0036	0.0042	0.0072	0.0044	0.0053	0.0000	0.0015
From Emerging East Asia	1985	0.0080	0.0399	0.0151	0.0239	0.1102	0.0083	0.0119	0.0021	0.0094
	1995	0.0115	0.0545	0.0317	0.0327	0.0884	0.0228	0.0144	0.0097	0.0064
From Japan	1985	0.0121	0.0287	0.0051	0.0150	0.0338	0.0242	0.0241	0.0095	0.0000
	1995	0.0100	0.0560	0.0191	0.0339	0.0663	0.0342	0.0196	0.0095	0.0000
From East Asia	1985	0.0201	0.0686	0.0202	0.0389	0.1440	0.0325	0.0360	0.0115	0.0094
	1995	0.0216	0.1105	0.0508	0.0666	0.1547	0.0569	0.0340	0.0193	0.0064
From Rest of the World	1985	0.0423	0.1033	0.0595	0.0607	0.1913	0.1045	0.0930	0.0302	0.0387
	1995	0.0476	0.1291	0.0944	0.0939	0.1320	0.1051	0.0271	0.0421	0.0242
Total inputs	1985	0.4141	0.5085	0.4640	0.5069	0.6329	0.5985	0.5724	0.5425	0.5218
	1995	0.4612	0.5767	0.4837	0.5324	0.6301	0.5490	0.5393	0.6160	0.4700
Value added	1985	0.5859	0.4915	0.5360	0.4931	0.3671	0.4015	0.4276	0.4575	0.4782
	1995	0.5388	0.4233	0.5163	0.4676	0.3699	0.4510	0.4607	0.3840	0.5300
Output	1985	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
	1995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Source: Institute of Developing Economies, International Input-Output Tables, 1985 and 1995 version

Table 6 Inter-economy, Inter-industry Linkages in East Asi

An increase in final demand in

	Indonesia	Malaysia	Philippines	Thailand	Singapore	Taiwan	Korea	China	Japan	Total
Increase in production										
Domstic production										
1985	1.6026	1.4722	1.6189	1.7045	1.5308	1.7638	1.6971	1.8965	1.8768	15.1631
1995	1.5680	1.4469	1.4850	1.5685	1.5083	1.6420	1.6553	2.1608	1.8161	14.8511
1985-95	-0.0346	-0.0253	-0.1338	-0.1360	-0.0225	-0.1218	-0.0417	0.2644	-0.0607	-0.3121
NIES3										
1985	0.0172	0.0914	0.0141	0.0278	0.0275	0.0050	0.0060	0.0029	0.0067	0.1987
1995	0.0171	0.0728	0.0557	0.0381	0.0567	0.0222	0.0063	0.0227	0.0066	0.2981
1985-95	-0.0001	-0.0187	0.0417	0.0102	0.0292	0.0172	0.0003	0.0197	-0.0001	0.0995
ASEAN4										
1985	0.0029	0.0186	0.0157	0.0159	0.1106	0.0119	0.0152	0.0031	0.0224	0.2163
1995	0.0040	0.1088	0.0184	0.0162	0.0979	0.0221	0.0222	0.0078	0.0099	0.3072
1985-95	0.0011	0.0901	0.0027	0.0003	-0.0128	0.0102	0.0071	0.0048	-0.0125	0.0909
China										
1985	0.0041	0.0160	0.0130	0.0091	0.0714	0.0008	0.0007	0.0000	0.0061	0.1211
1995	0.0053	0.0135	0.0135	0.0112	0.0281	0.0165	0.0153	0.0000	0.0056	0.1090
1985-95	0.0012	-0.0026	0.0006	0.0021	-0.0433	0.0157	0.0146	0.0000	-0.0005	-0.0121
Emerging East Asia excluding own domestic production										
1985	0.0242	0.1261	0.0428	0.0528	0.2096	0.0177	0.0218	0.0060	0.0352	0.5361
1995	0.0264	0.1950	0.0877	0.0655	0.1827	0.0608	0.0438	0.0305	0.0221	0.7144
1985-95	0.0022	0.0689	0.0449	0.0127	-0.0269	0.0431	0.0219	0.0245	-0.0131	0.1783
Emerging East Asia including own domestic production										
1985	1.6268	1.5983	1.6616	1.7573	1.7404	1.7815	1.7189	1.9025	1.9120	15.6992
1995	1.5944	1.6418	1.5727	1.6340	1.6910	1.7028	1.6991	2.1913	1.8382	15.5654
1985-95	-0.0324	0.0436	-0.0889	-0.1233	-0.0494	-0.0787	-0.0198	0.2889	-0.0738	-0.1338
Japan										
1985	0.0378	0.0839	0.0206	0.0488	0.0897	0.0627	0.0639	0.0327	0.0000	0.4401
1995	0.0263	0.1221	0.0657	0.0769	0.1777	0.0922	0.0479	0.0359	0.0000	0.6448
1985-95	-0.0115	0.0382	0.0451	0.0281	0.0880	0.0296	-0.0160	0.0032	0.0000	0.2047
East Asia excluding own domestic production										
1985	0.0619	0.2100	0.0634	0.1017	0.2993	0.0803	0.0857	0.0387	0.0352	0.9762
1995	0.0527	0.3170	0.1534	0.1424	0.3604	0.1530	0.0916	0.0664	0.0221	1.3591
1985-95	-0.0092	0.1071	0.0900	0.0407	0.0611	0.0727	0.0060	0.0277	-0.0131	0.3830
East Asia including own domestic production										
1985	1.6646	1.6822	1.6822	1.8062	1.8301	1.8441	1.7828	1.9352	1.9120	16.1393
1995	1.6207	1.7639	1.6384	1.7109	1.8688	1.7951	1.7470	2.2272	1.8382	16.2102
1985-95	-0.0439	0.0817	-0.0438	-0.0953	0.0386	-0.0491	-0.0358	0.2920	-0.0738	0.0709

Source: Institute of Developing Economies, International Input-Output Tables, 1985 and 1995 versions

Table 7 Procurements and Sales of Foreign Affiliates of Japanese Firms: 1992 and 1998
(Percentage of Total Procurements or Sales)

Procurements	1992 WORLD Local Procurements	Imports from Japan	North America	Asia	Europe	1992 ASIA Local Procurements	Imports from Japan	North America	Asia	Europe	1998 WORLD Local Procurements	Imports from Japan	North America	Asia	Europe	1998 ASIA Local Procurements	Imports from Japan	North America	Asia	Europe
Manufacturing Total	**46.5**	**40.9**	**1.3**	**5.2**	**5.0**	**48.5**	**37.9**	**1.8**	**8.9**	**0.5**	**46.9**	**36.6**	**3.2**	**8.1**	**4.6**	**43.9**	**34.8**	**1.6**	**18.2**	**0.6**
Food	84.8	6.1	0.1	7.0	0.2	72.0	4.5	0.3	22.9	0.1	81.7	4.1	1.8	10.0	0.3	78.8	6.6	0.4	8.0	0.5
Textiles	44.4	20.8	4.0	9.8	6.1	40.7	22.4	4.7	12.1	1.4	56.2	23.2	3.1	9.5	2.4	52.9	26.1	2.9	11.2	0.6
Wood and Pulp	89.1	7.8	1.8	0.1	1.2	83.7	13.2	0.9	0.3	1.9	94.5	2.2	0.3	1.3	1.7	76.8	12.4	1.0	7.7	2.1
Chemical Products	64.9	26.2	2.5	1.5	3.2	71.4	16.9	3.7	3.5	1.3	64.0	20.7	4.0	5.2	4.7	54.4	18.6	7.1	14.8	2.2
Iron and Steel	75.5	16.4	0.0	7.6	0.0	29.0	47.3	0.0	22.3	0.0	63.2	29.9	1.9	3.7	0.2	19.2	70.0	0.0	10.4	0.2
Nonmetallic Products	67.0	9.9	0.4	5.0	1.2	64.8	9.2	0.4	6.2	0.4	71.7	13.2	1.5	6.2	6.1	44.1	31.7	0.3	19.0	1.1
General Machinery	43.4	47.6	2.1	1.7	5.1	49.0	47.8	1.7	1.1	0.4	38.6	44.1	2.6	2.8	11.3	57.7	32.2	0.8	8.8	0.4
Electric Machinery	26.6	53.8	1.1	9.2	9.3	36.6	46.7	1.2	15.4	0.1	36.8	44.1	1.0	15.4	2.4	35.7	37.0	0.4	26.4	0.2
Transport Machinery	55.1	39.3	1.3	2.5	1.1	52.9	43.8	1.8	1.1	0.4	50.2	35.8	6.1	2.0	5.6	53.7	37.0	2.5	6.0	0.7
Precision Instruments	22.7	58.3	0.9	0.8	17.4	34.2	60.2	1.9	3.7	0.0	39.0	45.2	2.1	12.3	1.2	40.2	41.2	2.6	14.5	1.5
Coal and Petroleum Products	86.8	10.3	0.9	2.0	0.0	92.6	3.8	1.1	2.5	0.0	21.0	15.2	3.2	27.3	33.2	21.7	18.0	10.3	45.5	3.9
Other Manufacturing	61.8	24.2	1.7	6.2	5.5	58.6	27.5	4.0	6.2	2.1	49.6	32.1	2.2	8.2	7.4	52.8	29.7	1.8	14.2	0.9

Sales	WORLD Local Sales	Exports to Japan	North America	Asia	Europe	ASIA Local Sales	Exports to Japan	North America	Asia	Europe	WORLD Local Sales	Exports to Japan	North America	Asia	Europe	ASIA Local Sales	Exports to Japan	North America	Asia	Europe
Manufacturing Total	**76.7**	**6.3**	**2.7**	**3.6**	**9.9**	**66.1**	**15.8**	**3.7**	**11.2**	**2.0**	**70.0**	**9.6**	**4.7**	**5.7**	**8.8**	**49.8**	**25.1**	**4.5**	**16.6**	**2.6**
Food	63.7	20.8	2.4	2.8	3.5	46.0	26.5	3.1	4.9	2.0	76.7	11.6	1.4	2.5	7.0	69.1	16.1	3.3	6.4	3.5
Textiles	58.5	11.3	6.6	10.4	9.9	56.1	14.2	7.2	12.3	6.7	57.6	16.6	8.4	8.7	7.2	47.7	22.2	10.9	12.0	5.5
Wood and Pulp	47.7	32.5	11.1	2.4	4.1	50.2	47.2	2.4	0.3	0.0	37.7	34.4	12.1	7.9	6.4	58.9	26.7	2.1	10.9	0.0
Chemical Products	64.5	4.9	3.0	10.1	15.4	64.7	4.9	0.4	28.6	0.2	76.1	4.5	2.2	6.3	9.2	72.4	7.6	0.6	16.6	1.7
Iron and Steel	95.8	0.8	2.1	0.8	0.1	85.5	2.1	3.0	8.6	0.9	91.7	1.3	2.2	2.2	0.7	85.3	3.0	2.7	6.6	0.1
Nonmetallic Products	67.7	18.1	0.4	12.2	1.4	63.3	21.4	0.1	14.9	0.0	63.0	14.6	2.8	9.5	9.9	55.9	15.6	0.9	26.3	1.0
General Machinery	72.3	4.2	5.1	2.1	15.3	53.0	23.6	2.1	11.3	9.8	65.4	10.8	4.6	4.4	12.3	32.4	40.6	5.5	14.8	4.6
Electric Machinery	60.6	9.3	3.3	6.1	19.9	45.7	27.2	5.3	19.0	2.2	57.9	15.4	4.0	11.5	10.0	32.3	33.0	5.3	24.8	2.9
Transport Machinery	94.1	1.4	1.8	0.4	1.9	92.6	1.7	3.9	1.0	0.5	81.2	2.6	6.6	0.5	8.6	81.1	11.0	3.5	2.2	1.5
Precision Instruments	71.4	21.3	2.7	0.7	3.7	36.9	51.8	5.2	1.9	3.8	46.5	27.6	5.9	13.1	5.2	27.2	46.0	1.5	23.0	2.0
Coal and Petroleum Products	58.1	0.8	38.3	2.0	0.8	55.9	0.0	43.9	0.2	0.0	18.9	63.3	0.1	1.6	15.0	21.2	65.7	0.0	2.9	10.2
Other Manufacturing	80.7	4.4	1.7	1.8	1.1	78.6	9.4	2.6	5.6	2.8	81.3	7.2	3.0	2.3	5.0	59.8	24.9	4.1	8.9	1.8

Note: A hyphen "-" means that the data are not disclosed

Source: Ministry of International Trade and Industry, *Kaigai Jigyo Katsudo Kihon Chosa (Comprehensive Survey of Overseas Activities of Japanese Firms)*, Nos. 5 and 7, 1994 and 2001.

Table 8 Intra-firm Transactions in Procurements and Sales of Foreign Affiliates of Japanese Firms: 1992 and 1998
(Percentage Share in Each Procurement or Sale)

	Procurements										Sales								
	WORLD					ASIA					WORLD					ASIA				
	Local Procurements	Imports from				Local Procurements	Imports from				Local Sales	Exports to				Local Sales	Exports to			
		Japan	North America	Asia	Europe		Japan	North America	Asia	Europe		Japan	North America	Asia	Europe		Japan	North America	Asia	Europe
1992																				
Manufacturing Total	**9.0**	**84.3**	**52.6**	**58.9**	**68.6**	**4.2**	**78.0**	**47.7**	**50.2**	**35.8**	**17.4**	**78.3**	**47.5**	**43.9**	**37.8**	**6.3**	**84.2**	**62.4**	**44.4**	**47.6**
Food	5.4	93.1	33.8	54.3	0.9	0.2	75.8	14.3	48.8	0.0	5.2	84.6	27.2	17.2	18.6	7.6	85.4	51.9	26.3	50.1
Textiles	15.1	37.1	3.2	31.5	2.7	19.5	34.2	3.3	31.5	14.3	3.1	40.1	1.1	20.9	21.2	4.3	36.1	1.1	23.0	0.9
Wood and Pulp	6.3	30.1	0.0	0.0	0.0	0.1	79.4	0.0	0.0	0.0	2.3	80.9	0.0	0.0	0.0	0.0	57.9	0.0	0.0	0.0
Chemical Products	13.5	81.7	31.8	4.6	50.8	18.0	57.5	7.7	4.3	17.1	9.2	50.4	52.3	9.5	30.8	2.4	49.0	11.5	3.2	17.6
Iron and Steel	0.7	2.0	0.0	0.0	0.0	5.2	1.1	0.0	0.0	0.0	0.0	16.2	3.2	0.0	0.0	0.0	29.0	23.3	0.0	0.0
Nonmetallic Products	8.4	67.6	7.3	1.0	78.3	0.0	26.0	0.0	0.0	0.0	7.8	82.6	73.5	53.0	18.9	0.8	82.6	0.0	55.1	0.0
General Machinery	28.7	90.8	32.5	78.7	60.1	4.5	93.9	80.3	84.8	23.9	18.3	91.2	61.6	52.8	75.2	3.0	96.7	54.3	55.6	93.9
Electric Machinery	16.6	76.0	69.0	62.6	77.3	2.0	84.6	86.6	59.8	98.1	17.2	86.2	49.5	52.7	34.8	8.0	90.0	82.6	53.7	58.0
Transport Machinery	3.3	98.6	72.2	90.3	19.0	0.6	81.7	76.2	34.6	86.2	24.5	49.0	67.8	75.0	42.9	7.2	73.9	71.2	57.9	28.3
Precision Instruments	9.9	74.9	93.4	15.2	98.4	17.5	85.6	0.0	100.0	0.0	7.5	95.1	39.2	74.1	42.2	32.4	96.5	51.1	77.9	50.8
Coal and Petroleum Product	0.0	100.0	100.0	10.0	0.0	0.0	100.0	100.0	10.0	0.0	0.0	100.0	0.0	90.1	100.0	0.0	0.0	0.0	0.0	0.0
Other Manufacturing	4.3	72.2	5.9	22.5	46.4	7.3	64.1	0.7	61.8	11.8	5.5	62.0	28.3	51.4	28.6	6.3	67.0	25.3	49.8	18.4
1998																				
Manufacturing Total	**22.2**	**92.3**	**39.8**	**59.9**	**40.7**	**11.3**	**83.2**	**72.5**	**58.5**	**45.3**	**20.4**	**94.6**	**50.6**	**56.7**	**40.5**	**16.1**	**95.7**	**66.4**	**58.9**	**66.1**
Food	13.6	93.3	56.1	44.0	9.1	3.9	94.4	48.8	71.7	15.1	10.7	78.6	18.6	55.8	9.5	26.1	85.7	15.9	73.3	18.0
Textiles	13.1	87.0	49.6	52.7	48.9	22.1	85.1	40.5	54.8	14.2	5.8	84.2	62.0	52.6	48.0	11.2	83.4	60.0	52.2	66.5
Wood and Pulp	37.4	60.5	20.6	0.0	0.0	3.5	53.8	20.6	0.0	0.0	4.2	87.3	35.3	20.5	0.0	16.3	76.6	30.4	42.4	0.0
Chemical Products	16.9	86.5	71.7	77.9	47.7	17.6	76.8	85.4	79.5	82.6	16.5	92.1	37.5	27.2	23.1	12.0	91.3	42.5	25.4	38.3
Iron and Steel	13.6	85.6	0.0	100.0	0.0	42.6	85.3	0.0	39.9	0.0	1.5	74.3	42.2	29.1	90.9	3.1	95.4	74.0	34.6	33.5
Nonmetallic Products	29.3	83.2	10.4	39.5	16.0	20.3	78.9	58.1	37.9	1.4	35.4	90.4	13.9	32.3	5.7	14.8	99.3	98.9	32.8	94.4
General Machinery	8.9	94.4	41.7	79.7	76.6	3.9	93.5	21.2	89.7	0.0	11.3	98.1	90.8	81.5	69.8	10.8	98.5	95.0	94.4	99.2
Electric Machinery	19.2	91.2	39.1	59.6	51.4	8.6	80.8	32.8	58.8	10.8	16.0	96.5	49.1	64.1	53.1	20.5	96.3	55.3	66.4	66.1
Transport Machinery	29.8	95.1	35.3	82.0	16.3	13.4	86.7	100.0	66.2	62.5	33.8	94.0	45.6	59.9	21.4	11.5	96.9	98.6	56.7	94.7
Precision Instruments	28.9	95.7	13.3	34.3	94.4	39.1	95.5	0.0	28.3	99.5	24.6	98.4	50.0	21.8	54.0	58.3	98.4	24.2	19.1	49.6
Coal and Petroleum Product	59.5	2.0	0.0	9.4	0.0	74.6	1.7	0.0	9.4	0.0	6.2	90.8	0.0	0.0	0.0	6.9	91.3	0.0	0.0	0.0
Other Manufacturing	13.7	90.6	38.3	35.3	77.6	6.1	81.2	48.0	57.3	34.2	10.7	92.1	41.1	31.3	46.1	8.1	94.3	62.7	32.7	29.4

Note: A hyphen "-" means that the data are not disclosed.

Source: Ministry of International Trade and Industry, *Kaigai Jigyo Katsudo Kihon Chosa (Comprehensive Survey of Overseas Activities of Japanese Firms)*, Nos. 5 and 7, 1994 and 2001.

Table 9 Selected FTAs in East Asia (as of January 2004)

Action	Negotiation	Study
Bangkok Treaty(1976)	China-ASEAN	Japan-ASEAN
AFTA(1992)	Hong Kong-New Zealand	Korea-ASEAN
Singapore-New Zealand(2001)	Japan-Mexico	Korea-Singapore
Japan-Singapore(2002)	Japan-Korea	Korea-Australia
China-Hong Kong (2003)	Japan-Thailand	Korea-New Zealand
	Japan-Philippines	Singapore-Chile
	Japan-Malaysia	Singpore-Taiwan
	Korea-Chile(concluded)	Thailand-US
	Singapore-EFTA (concluded)	Thailand-Peru
	Singapore-US (concluded)	ASEAN-India
	Singapore-Australia (concluded)	ASEAN-US
	Singapore-Canada	
	Singapore-Mexico	
	Singapore-India	
	Taiwan-Panama (concluded)	
	Thailand-Baharain (concluded)	
	Thailand-India (concluded)	
	Thailand-Australia	

Table 10 Effects of East Asia FTA on Real GDP and Equivalent Variation

	GDP	Equivalent Variation	
	(Changes from basedata, %)	(Changes from basedata, US$ million)	(Changes divided by GDP in 1997, %)
Australia/New Zealand	-0.23	-1,342	-0.29
China	1.27	5,485	0.64
Hong Kong	1.41	3,389	2.42
Japan	0.05	8,199	0.19
Korea	1.71	7,805	1.75
Taiwan	1.51	5,597	1.87
Indonesia	5.61	10,209	4.89
Malaysia	2.83	2,279	2.15
Philippines	2.02	602	0.77
Singapore	2.26	2,944	3.69
Thailand	15.90	19,790	12.54
Vietnam	8.42	1,446	6.61
Other Asia	-0.31	-1,803	-0.34
United States	-0.06	-7,059	-0.09
EU	-0.01	-1,807	-0.02

Notes: The figures indicate the changes from the base data
Source: Urata and Kiyoto (2003)

Table 11 The Impacts of East Asia FTA on Regionalization in Trade in East Asia

A) Regionalization in 1997

Sector	East Asia Absolute measure	East Asia Relative measure Exports	East Asia Relative measure Imports	East Asia Double relative measure	ASEAN Absolute measure	ASEAN Relative measure Exports	ASEAN Relative measure Imports	ASEAN Double relative measure
Total	0.11	0.44	0.50	2.02	0.01	0.21	0.20	3.17
Agriculture	0.04	0.56	0.19	2.53	0.01	0.19	0.13	3.81
Forestory	0.10	0.71	0.20	1.38	0.01	0.07	0.22	1.79
Fishing	0.18	0.84	0.52	2.37	0.02	0.22	0.54	6.52
Mining	0.05	0.81	0.19	2.87	0.01	0.13	0.14	2.67
Food products and beverages	0.07	0.58	0.33	2.72	0.01	0.15	0.24	3.37
Textiles	0.17	0.48	0.77	2.20	0.00	0.08	0.15	2.32
Pulp, paper and paper products	0.07	0.55	0.45	1.72	0.01	0.11	0.26	2.83
Chemicals	0.10	0.56	0.49	3.32	0.02	0.31	0.25	3.78
Iron, steel and metal products	0.12	0.63	0.47	2.68	0.01	0.30	0.10	4.81
Transportation machinery	0.04	0.18	0.32	2.54	0.00	0.24	0.04	4.26
Electronic equipment	0.22	0.42	0.68	1.61	0.05	0.23	0.32	5.73
General machinery	0.11	0.46	0.52	1.31	0.01	0.29	0.13	1.63
Other manufacturing	0.09	0.29	0.52	2.12	0.01	0.11	0.16	3.82

B) Regionalization resulting from East Asia FTA

Sector	East Asia Absolute measure	East Asia Relative measure Exports	East Asia Relative measure Imports	East Asia Double relative measure	ASEAN Absolute measure	ASEAN Relative measure Exports	ASEAN Relative measure Imports	ASEAN Double relative measure
Total	0.14	0.53	0.59	2.17	0.02	0.22	0.22	3.09
Agriculture	0.13	0.85	0.46	3.06	0.01	0.36	0.21	5.55
Forestory	0.11	0.72	0.20	1.38	0.01	0.07	0.23	1.78
Fishing	0.23	0.87	0.59	2.30	0.02	0.25	0.61	6.43
Mining	0.06	0.82	0.19	2.84	0.01	0.14	0.14	2.65
Food products and beverages	0.18	0.80	0.65	2.93	0.02	0.16	0.32	2.97
Textiles	0.24	0.57	0.88	2.11	0.01	0.08	0.14	1.92
Pulp, paper and paper products	0.09	0.61	0.51	3.42	0.01	0.12	0.28	3.69
Chemicals	0.12	0.62	0.55	2.72	0.02	0.33	0.27	4.75
Iron, steel and metal products	0.14	0.68	0.53	2.58	0.01	0.33	0.12	4.34
Transportation machinery	0.08	0.36	0.60	2.64	0.00	0.20	0.04	3.97
Electronic equipment	0.24	0.45	0.72	1.34	0.05	0.24	0.34	1.63
General machinery	0.14	0.52	0.59	2.23	0.01	0.32	0.15	3.95
Other manufacturing	0.12	0.37	0.63	1.91	0.01	0.13	0.19	3.04

Changes from 1997 (A) to FTA (B)

Sector	East Asia Absolute measure	East Asia Relative measure Exports	East Asia Relative measure Imports	East Asia Double relative measure	ASEAN Absolute measure	ASEAN Relative measure Exports	ASEAN Relative measure Imports	ASEAN Double relative measure
Total	0.03	0.08	0.10	0.15	0.00	0.01	0.02	-0.09
Agriculture	0.09	0.29	0.27	0.52	0.01	0.17	0.08	1.73
Forestory	0.00	0.01	0.00	0.00	0.00	0.00	0.00	-0.01
Fishing	0.04	0.04	0.07	-0.07	0.01	0.03	0.07	-0.10
Mining	0.00	0.01	0.00	-0.03	0.00	0.01	0.00	-0.02
Food products and beverages	0.11	0.22	0.32	0.22	0.01	0.01	0.09	-0.40
Textiles	0.07	0.10	0.11	-0.09	0.00	0.00	0.00	-0.40
Pulp, paper and paper products	0.02	0.06	0.06	1.70	0.00	0.01	0.02	0.87
Chemicals	0.02	0.05	0.06	-0.60	0.00	0.02	0.02	0.97
Iron, steel and metal products	0.02	0.06	0.06	-0.10	0.00	0.03	0.02	-0.47
Transportation machinery	0.05	0.18	0.28	0.10	0.00	-0.03	0.00	-0.28
Electronic equipment	0.02	0.03	0.03	-0.27	0.00	0.01	0.02	-4.10
General machinery	0.02	0.06	0.07	0.92	0.00	0.03	0.02	2.32
Other manufacturing	0.03	0.08	0.11	-0.20	0.00	0.02	0.03	-0.77

1) For the definition of variables, see Appendix and the notes in Table 3.

2) Services are not reported since trade barriers in service sectors are not available and it might underestimate the impacts.