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AFTA in the Dynamic Perspective of Asian Trade

by

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Abstract

This paper attempts to provide an initial assessment on the trade effect of AFTA in the dynamic context of the East Asian economy in the 1990s. For this analysis, we have calculated a trade matrix confining on manufactured products for five major ASEAN countries and three major non-partners (Japan, Korea and China) for 1992 and 1999, a set of international competitive indices (ICI) of Thailand and China in 15 manufacturing sectors for the period 1988-1999, and a set of export similarity indices (ESI) for Thailand-China, Thailand-Korea and Thailand-Japan, basing on three-digit SITC manufactured products.

The paper showed that the trade and FDI effects of AFTA have not been as strong as the theory of a free trade area predicts. Intra-ASEAN trade has indeed expanded, but ASEAN trade with non-partner countries in East Asia has expanded at a higher rate. Moreover, major non-partner countries in East Asia such as Japan, Korea and China have also expanded their manufactured exports to the ASEAN market at a faster rate than to the rest of the world. The effect of AFTA on FDI inflows also has not been recognized so far. Apart from the reorganization of import substitution projects, the reaction of Japanese multinational corporations, major direct investors in ASEAN, to the implementation of AFTA has not been substantially positive. Another conclusion of the paper is that, among non-partner countries, China has imposed strong impacts on ASEAN economies since the development process and the comparative advantage structure in China have resembled those of most ASEAN countries, typically Thailand.

The results of the analysis in the paper suggested that, while AFTA is contributing to the increasing confidence and stability of ASEAN countries, its effects on the development of these countries are not as important as the interdependence and dynamic division of labor between ASEAN and other economies in East Asia.

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1. Introduction

In January 1992, at the summit meeting of the Association of Southeast Asian Nations (ASEAN), the establishment of an ASEAN Free Trade Area (AFTA) was decided with the participation of all six-member countries (Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand). This agreement provided for the elimination of tariffs and non-tariff barriers within 15 years from January 1993 (revised later to start from January 1994), with the completion date set at 2008. Until then, tariffs will be reduced to less than 5%. The main instrument of tariff liberalization under AFTA is the Common Effective Preferential Tariff (CEPT). The CEPT scheme will cover manufactured goods and processed agricultural products. Given the rapid development of regional cooperation in North America and Western Europe, the 1995 ASEAN summit meeting decided to move the deadline for the elimination of trade barriers forward to the year 2003, and the coverage of the CEPT scheme was extended to unprocessed agricultural products, as well as services. Facing the deterioration of the regional economic situation following the financial crisis in 1997, the summit meeting of ASEAN in December 1998 decided to speed up the trade liberalization by accelerating the time-frame to 2002, with the hope of making ASEAN a more attractive environment for foreign direct investment (FDI).¹

Since the mid-1990s, four more countries joined ASEAN: Vietnam in 1995, Myanmar and Lao PDR in 1998 and Cambodia in 1999. They are also participating in AFTA with deadlines set for Vietnam in 2006, Myanmar and Lao PDR in 2008 and Cambodia in 2010.

Compared to other free trade areas, AFTA is very unique. It has at least three special features. First, AFTA was created at a time most member-countries enjoyed a fairly high economic growth rate, characterized by rapid export-oriented industrialization. Second, AFTA is located in a wider dynamic region, characterized by rapid region-wide structural changes. Changes in the comparative advantage structure of Japan, Korea, Taiwan and other economies in East Asia have generated markets for products of ASEAN countries, which are lesser developed, and induced direct

¹ One of the major economic purposes for the establishment of AFTA was to attract more FDI to maintain high economic growth. For a more detailed discussion on the background and issues regarding the establishment of AFTA, see Tan (1996), Bowles (1997), Chia (1997), Plummer (1997), and Chia (1998).

investment flows from the former economies to the latter. During the rapid growth process, ASEAN countries have benefited greatly from such regional externalities. Third, ASEAN countries however are also facing the rapid emergence of China, a giant in almost the same development stage and with the same factor endowments. While the development in Japan and the newly industrializing economies (NIEs) have provided a complement to growth in ASEAN, the relationship between ASEAN and China may be characterized as competition.

This paper attempts to provide an initial assessment on the trade effect of AFTA in the dynamic context of the East Asian economy in the 1990s, which is characterized by the three points cited above. After a short discussion on a theoretical framework for analyzing a free trade area (Section 2), and on the implementation of the CEPT scheme (Section 3), the paper will show, in Sections 4 and 5, that while the existence of AFTA is useful for raising allocative efficiency in member countries, the intra-ASEAN trade is not as important as the interdependence between ASEAN and the rest of East Asia. Also, while the growth of China is not necessarily generating a zero-sum game with ASEAN, it is essential for ASEAN countries to upgrade their industrial structures to benefit more from the opportunities provided by the emergence of China. We will also argue that further cooperation among ASEAN, Japan, Korea and China (ASEAN+3) is essential for enhancing the dynamic development in the region.

2. The economics of a free trade area in the context of ASEAN

By eliminating trade barriers among member countries, the free trade area (FTA) removes discrimination between partner countries and domestic firms. As a consequence, relatively inefficient domestic production will decrease in favor of partner country production. This results in trade creation. However, the FTA creates a new discrimination between imports from partner countries and those from non-partner countries. Imports from partner countries therefore may replace more efficient non-partner products in the home market. This is a trade diversion. The net trade effect of a FTA will depend on the degree of trade creation compared to the degree of trade diversion. In other words, this net effect will be bigger, the stronger the trade creation effect is, and also the bigger, the weaker the trade diversion effect is.

The two conditions for strong trade creation effects are that the

members of the FTA are major trading partners with each other, and that the tariff rates in the intra-region trade prior to the establishment of the FTA were high. The first condition is critical and only in the case that this condition was met, is the second condition important. The world trade matrix in the first half of the 1990s showed that ASEAN countries were not major trading countries with each other. In 1995 for example, intra-ASEAN trade (all six members before Vietnam joined in 1995) accounted for only 23.6% of their total trade (Chia 1998). If Singapore, a trade *entrepot*, were excluded, the share of intra-ASEAN trade would be reduced substantially. For example, trade among the ASEAN-4 (Indonesia, Malaysia, Philippines and Thailand) accounted for only 5.2% of their total trade in 1991. That share has risen subsequently but still remained at 8.3% in 2000 (Mukoyama 2001). However, as cited earlier, since ASEAN countries have experienced a rapid process of export-oriented industrialization, it is more important to look at the trade pattern of manufactured products, to see the extent of intra-ASEAN trade under the process of high economic growth. Section 4 will provide an analysis based on the trade matrix of manufactured products.

The condition for a weak trade diversion effect is that, in the FTA market, the export structures of non-partner countries are not similar to that of the partner countries. Using the trade matrix of manufactured products and the export similarity index, Section 4 will examine the case of AFTA.

The trade creation and trade diversion effects are static, referring to a one-time change in the allocative efficiency. The FTA also generates dynamic effects, which refer to long-term implications for economic development of partner countries. Some of these dynamic effects can be summarized as follows. First, since the market is expanded beyond each partner's national economy, the economies of scale in production can be reaped and thus production of final goods, as well as intermediate goods, will be concentrated in the most efficient site. The international competitiveness of these products will be stronger and exports will be expanded, resulting in a new trade creation effect. Second, direct investment flows from non-partner countries are expected to expand for three reasons. One is that the FDI is induced by the new expanding market in the FTA. Another reason is the reaction of multinational corporations in non-partner countries to the trade diversion effect i.e., FDI is undertaken to overcome the disadvantage brought about by discriminated tariffs. This is a type of direct investment diversion from

non-partner to partner countries. One more reason is that along with the implementation of trade liberalization and other reform measures, the member countries of the FTA appear to be less risky. The FDI can thus be expected to increase.² . A third dynamic effect is that, under the framework of the FTA, the pressure of competition among partner countries will be stronger and therefore resources will be re-allocated from less efficient areas to more efficient industries.

It is difficult to show evidence of these dynamic effects. In the case of AFTA, these effects will be partially considered in the analysis of trade and FDI flows in Sections 4 and 5.

3. Implementation of the CEPT scheme in AFTA

The CEPT scheme covers products having 40% ASEAN content (at least 40% of its content originates from any member country). The scheme has been implemented on the basis of 4 product lists.

The Inclusion List (IL): Products in the IL are those that have to undergo immediate liberalization through reduction in intra-ASEAN tariff rates, and removal of quantitative restrictions and other non-tariff barriers. Tariffs on these products should be cut to a maximum of 20% by the year 1998, and to less than 5% by the year 2002 (by the year 2006 or later for new members of ASEAN).

The Temporary Exclusion List (TEL): Products in TEL can be shielded from trade liberalization for a temporary period. After the temporary period, all of these products would have to be transferred into the IL and begin a process of tariff reduction.

The Sensitive List (SL): This list contains unprocessed agricultural products, such as rice and sugar, which are given a longer period for integration into the free trade area. The commitment to reduce tariffs to 0-5% and to remove non-tariff barriers is extended up to the year 2010 for the ASEAN-6 to meet this deadline (for Vietnam up to 2013, for Lao PDR and Myanmar up to 2015, and for Cambodia up to 2017).

The General Exception List (GEL): The products in this list are permanently excluded from the free trade area for reasons of national security, the protection of articles of cultural value, and other reasons.

² Bowles (1997) and Plummer (1997), among others, emphasize the third reason for the expansion of FDI as an effect of the FTA.

Table 1 shows the number of CEPT products classified by the four lists cited above (as at July 9, 2001). For the six early members of ASEAN, on average, more than 98% of the products have been put in the IL for tariff cuts. The average figure for the four new members is close to 60% (nearly 80% in the case of Vietnam). For these countries, as expected, the large number of products listed in the TEL is noteworthy. Table 2 breaks down the products listed in the IL and shows the number of tariff lines, which had already been cut to fewer than 5%. For the six early members of ASEAN, on average, number of products for which tariffs have been lowered to 0-5% levels accounted for nearly 93% of the products listed in the IL.

Table 1: Implementation of CEPT Scheme
(As of July 9, 2001)

Country	IL	TEL	GE	SL	Total Tariff Lines
Brunei	6,276	0	202	14	6,492
Indonesia	7,192	21	68	4	7,285
Malaysia	10,025	218	53	83	10,379
Philippines	5,621	6	16	50	5,693
Singapore	5,859	0	0	0	5,859
Thailand	9,104	0	0	7	9,111
ASEAN 6 Total	44,077	245	339	158	44,819
Percentage	98.3	0.6	0.8	0.4	100.0
Cambodia	3,115	3,523	134	50	6,822
Laos	1,673	1,716	74	88	3,551
Myanmar	2,984	2,419	48	21	5,472
Vietnam	4,984	1,177	139	51	6,351
New Member Total	12,756	8,835	395	210	22,196
Percentage	57.5	39.8	1.8	1.0	100.0
ASEAN-10 Total	56,833	9,080	734	368	67,015
Percentage	84.8	13.6	1.1	0.6	100.0

Note: IL - Inclusion List; TEL - Temporary Exclusion List; GE - General Exceptions List; SL - Sensitive List.
Source: ASEAN Secretariat.

Table 2 Number of Tariff Lines with Tariff of 0–5% by the Year 2001

Country	Number of Tariff Lines				Percentage			
	0–5%	>5%	Other	Total	0–5%	>5%	Other	Total
Brunei	6,107	157	12	6,276	97.3	2.5	0.2	100
Indonesia	6,483	709	0	7,192	90.1	9.9	0.0	100
Malaysia	9,189	836	0	10,025	91.7	8.3	0.0	100
Philippines	5,040	530	51	5,621	89.7	9.4	0.9	100
Singapore	5,859	0	0	5,859	100.0	0.0	0.0	100
Thailand	8,195	908	1	9,104	90.0	10.0	0.0	100
ASEAN-6 Total	40,873	3,140	64	44,077	92.7	7.1	0.1	100
Cambodia	238	2,877	0	3,115	7.6	92.4	0.0	100
Laos	1,028	645	0	1,673	61.4	38.6	0.0	100
Myanmar	2,426	558	0	2,984	81.3	18.7	0.0	100
Vietnam	3,229	1,755	0	4,984	64.8	35.2	0.0	100
New member Total	6,921	5,835	0	12,756	54.3	45.7	0.0	100
ASEAN-10	47,794	8,975	64	56,833	84.1	15.8	0.1	100

Source: As Table 1.

So far, the implementation of CEPT has been made according to the revised accelerating target for trade liberalization, except for some products, such as automobiles and petrochemicals. For these products, some ASEAN countries requested to be allowed to postpone the schedule for tariff cuts, due to the difficulties they faced after the financial crisis. Under the export oriented industrialization regime, increasingly large numbers of products made in ASEAN have gained international competitiveness. Under these conditions, the tariff-cutting schedule has progressed smoothly.

4. AFTA trade pattern of manufactured products

4.1 Direction of ASEAN trade in manufactured products

With the exception of the Philippines, the ASEAN economies have achieved a fairly good performance at least until 1997. From 1966 to 1997, the average annual growth rates for Indonesia, Malaysia, Singapore, and Thailand were 6.5%, 7.1%, 9.0% and 7.4% respectively. The growth rates in the 1990s were lower (averaging 4.0%, 6.8%, 8.5% and 5.2%, respectively) due to the financial crisis in 1997, but, they were still quite high.³ The growth performance in ASEAN can be characterized as trade-oriented. The trade dependence ratios (the ratio of imports and exports in the GDP) for most ASEAN countries have risen rapidly. For example, the ratio for

³ Growth rate data is based on IMF sources.

Thailand rose from 49% in 1980, to 67% in 1990 and 90% in 1999.⁴ This trade expansion has been led by the expansion of trade in manufactured products. In particular, the expansion of ASEAN manufactured exports was noteworthy. Table 3 recorded the increasing share of manufactured products in the total exports of ASEAN countries. By 1999, more than 90% of Malaysian exports and about 80% of Thailand exports were manufactured products. Those countries have also been successful in expanding their shares in world markets. The share of ASEAN-4 (Indonesia, Malaysia, the Philippines and Thailand) in world markets for manufactured products rose from 0.9% in 1980 to 3.6% in 1998.

In addition to these reasons, since the implementation of the CEPT scheme in AFTA has been centered on manufactured products, the analysis in this section will focus on the trade pattern of manufactured products. Manufactured goods have been the major focus in the relationship between ASEAN and the rest of East Asia in the dynamic context.

Table 3: Manufactured Exports of ASEAN and China (US \$ millions, %)

	1980		1990		1992		1994		1999	
Thailand	2,702	42.4%	15,502	67.2%	22,105	68.1%	32,719	72.6%	45,233	77.4%
Malaysia	3,842	29.7%	17,053	58.0%	26,921	66.0%	43,930	74.7%	69,405	82.1%
Indonesia	1,489	6.8%	11,363	44.3%	15,688	46.2%	20,083	50.1%	25,676	52.8%
Philippines	2,395	41.6%	6,149	76.0%	7,380	75.1%	10,599	79.7%	32,692	93.3%
ASEAN 4	10,428	22.2%	50,067	58.1%	72,095	61.6%	96,732	66.7%	140,314	61.9%
China	8,683	47.9%	48,148	77.5%	67,949	80.0%	101,331	83.7%	175,033	89.8%

Note: Percentage figures are the shares of manufactured products to total exports.

Source: Calculated from UN Trade Statistics.

Table 4 is a trade matrix of manufactured products with a focus on the exports of ASEAN-5, and three major non-partner countries in Asia (Japan, Korea and China). In each exporting country, the manufactured product export figures for 1992 (upper line) and 1999 (lower line) are shown (in millions of US dollars). Table 5 transforms the data in Table 4 into percentage figures denominated by the total export to the world market.

⁴ According to the Asian Development Bank (ADB) data.

With these matrices, the expansion of ASEAN manufactured exports and the direction of that expansion can be observed in the period from the time prior to the establishment of the AFTA to the most recent year for which data are available. The following remarks can be obtained. First, for the ASEAN-5 as a whole, manufactured exports to the world market more than doubled from 1992 to 1999, a rate much higher than Korea or Japan. Expansion by Malaysia and the Philippines is noteworthy. Second, intra-ASEAN trade of manufactured goods has expanded at almost the same rate as the trade with the world as a whole. Starting with a smaller base, Philippine exports have expanded rapidly in almost all markets, not only in the intra-AFTA market. Third, ASEAN exports to China, Korea and Japan have expanded at a higher rate than those to intra-ASEAN markets. In particular, exports to Korea rose 3 times, and to China 4 times, compared with 2.4 times for intra-ASEAN exports. Fourth, the share of intra-ASEAN trade in total exports of ASEAN is still very small. On average of 5 countries, it is only about 20% and the figure showed no substantial change in the period under review (Table 5). Moreover, if Singapore was excluded, the role of intra-ASEAN trade becomes much less significant. Fifth, the US has maintained the position of the most important market for ASEAN manufactured products, even though that position has declined somewhat.

In short, during the 1990s, ASEAN manufactured exports have shown remarkable performance but intra-ASEAN trade was not as important as trade with non-partner countries in East Asia.

Table 4: ASEAN 5 Plus 3 Trade Matrices of Manufactured Products (1992, 1999, USD Million)

Exporter	Importer														
	Thailand	Malaysia	Singapore	Indonesia	Philippines	ASEAN5	Japan	China	Korea	Vietnam	ASEAN5+3	Taiwan	Hongkong	America	World
Thailand	-	572	2,382	96	137	3,187	3,120	76	181	40	6,564		1,145	5,744	22,105
	-	1,651	4,162	458	827	7,098	5,686	1,200	645	460	14,630	1,725	2,463	10,532	45,233
Malaysia	635	-	6,960	209	183	7,987	2,081	268	304	32	10,640		1,361	7,065	26,921
	2,109	-	12,372	831	1,058	16,370	7,212	1,430	1,330	287	26,342	3,356	3,413	17,791	69,405
Singapore	2,762	6,023	-		630	9,415	2,879	661	966		13,920		3,409	12,899	50,155
	4,644	17,018	-		2,420	24,082	7,376	3,389	3,275	820	38,122	5,264	6,536	21,484	101,029
Indonesia	185	238	2,189	-	71	2,683	2,107	648	524	61	5,962		567	2,784	15,688
	362	704	3,470	-	335	4,871	3,378	613		136	8,862	605	864	5,074	25,676
Philippines	94	101	205	31	-	431	934	79	91	25	1,535		365	3,225	7,380
	817	1,438	2,346	74	-	4,675	4,090	454	922	90	10,141	2,922	1,778	9,982	32,692
ASEAN5	3,677	6,934	11,736	337	1,021	23,704	11,120	1,730	2,066	158	38,620		6,847	31,717	122,250
	7,932	20,811	22,350	1,363	4,639	57,095	27,743	7,086	6,173	1,793	98,098	13,872	15,053	64,863	274,035
Japan	10,116	8,017	12,664	5,454	3,408	39,659	-	11,498	17,032	414	68,189	20,327	19,983	95,949	334,287
	10,393	10,315	14,690	4,360	8,074	47,832	-	21,615	20,474	1,402	89,921	26,539	20,189	121,873	389,108
China	648	358	1,019	291	139	2,455	6,321	-	1,135	87	9,911		34,795	7,427	67,949
	1,272	1,289	3,904	1,306	1,153	8,924	25,981	-	5,896	766	40,801	3,560	33,972	40,708	175,033
Korea	1,286	1,117	2,893	1,880	682	7,858	9,152	2,540	-	395	19,549		5,438	17,855	71,793
	1,611	3,539	4,325	2,333	2,934	14,742	10,837	11,979	-	1,386	37,557	5,854	7,781	28,280	128,815
ASEAN5+3	15,727	16,427	28,312	7,961	5,249	73,675	26,592	15,769	20,233	1,055	136,269	20,327	67,063	152,948	596,280
	21,208	35,954	45,268	9,362	16,800	128,592	64,561	40,680	32,543	5,347	266,377	49,825	76,995	255,723	966,991

Note: Due to the data unavailability, 1999 figures of Indonesia used in this table are from 1998 data.

Source: Calculated from UN Trade Data

Table 5: ASEAN 5 Plus 3 Trade Matrices of Manufactured Products (1992, 1999, percentage)

Importer Exporter	Thailand	Malaysia	Singapore	Indonesia	Philippines	ASEAN5	Japan	China	Korea	Vietnam	ASEAN5+3	Taiwan	Hongkong	America	World
Thailand	–	2.6	10.8	0.4	0.6	14.4	14.1	0.3	0.8	0.2	29.7	0.0	5.2	26.0	100
	–	3.7	9.2	1.0	1.8	15.7	12.6	2.7	1.4	1.0	32.3	3.8	5.4	23.3	100
Malaysia	2.4	–	25.9	0.8	0.7	29.7	7.7	1.0	1.1	0.1	39.5	0.0	5.1	26.2	100
	3.0	–	17.8	1.2	1.5	23.6	10.4	2.1	1.9	0.4	38.0	4.8	4.9	25.6	100
Singapore	5.5	12.0	–		1.3	18.8	5.7	1.3	1.9	0.0	27.8	0.0	6.8	25.7	100
	4.6	16.8	–		2.4	23.8	7.3	3.4	3.2	0.8	37.7	5.2	6.5	21.3	100
Indonesia	1.2	1.5	14.0	–	0.5	17.1	13.4	4.1	3.3	0.4	38.0	0.0	3.6	17.7	100
	1.4	2.7	13.5	–	1.3	19.0	13.2	2.4	0.0	0.5	34.5	2.4	3.4	19.8	100
Philippines	1.3	1.4	2.8	0.4	–	5.8	12.7	1.1	1.2	0.3	20.8	0.0	4.9	43.7	100
	2.5	4.4	7.2	0.2	–	14.3	12.5	1.4	2.8	0.3	31.0	8.9	5.4	30.5	100
ASEAN5	3.0	5.7	9.6	0.3	0.8	19.4	9.1	1.4	1.7	0.1	31.6	0.0	5.6	25.9	100
	2.9	7.6	8.2	0.5	1.7	20.8	10.1	2.6	2.3	0.7	35.8	5.1	5.5	23.7	100
Japan	3.0	2.4	3.8	1.6	1.0	11.9	–	3.4	5.1	0.1	20.4	6.1	6.0	28.7	100
	2.7	2.7	3.8	1.1	2.1	12.3	–	5.6	5.3	0.4	23.1	6.8	5.2	31.3	100
China	1.0	0.5	1.5	0.4	0.2	3.6	9.3	–	1.7	0.1	14.6	0.0	51.2	10.9	100
	0.7	0.7	2.2	0.7	0.7	5.1	14.8	–	3.4	0.4	23.3	2.0	19.4	23.3	100
Korea	1.8	1.6	4.0	2.6	0.9	10.9	12.7	3.5	–	0.6	27.2	0.0	7.6	24.9	100
	1.3	2.7	3.4	1.8	2.3	11.4	8.4	9.3	–	1.1	29.2	4.5	6.0	22.0	100
ASEAN5+3	2.6	2.8	4.7	1.3	0.9	12.4	4.5	2.6	3.4	0.2	22.9	3.4	11.2	25.7	100
	2.2	3.7	4.7	1.0	1.7	13.3	6.7	4.2	3.4	0.6	27.5	5.2	8.0	26.4	100

Note: Due to the data unavailability, 1999 figures of Indonesia used in this table are from 1998 data.
Source: Calculated from UN Trade Data

4.2 An observation on the trade diversion effect of AFTA

So far we have observed the direction of ASEAN exports. Next, let us observe how the rest of the world has exported to the ASEAN market.

From 1992 to 1999, manufactured exports from Korea to the world markets increased by 1.8 times and to ASEAN markets by 1.9 times. The same figures for Japan were 16% and 23% respectively. Chinese performance is noteworthy. Its exports to the world market showed an expansion of 2.6 times while exports to ASEAN expanded 3.8 times. These facts suggest that the “gravity” of ASEAN has been strong for three major non-partners in East Asia.

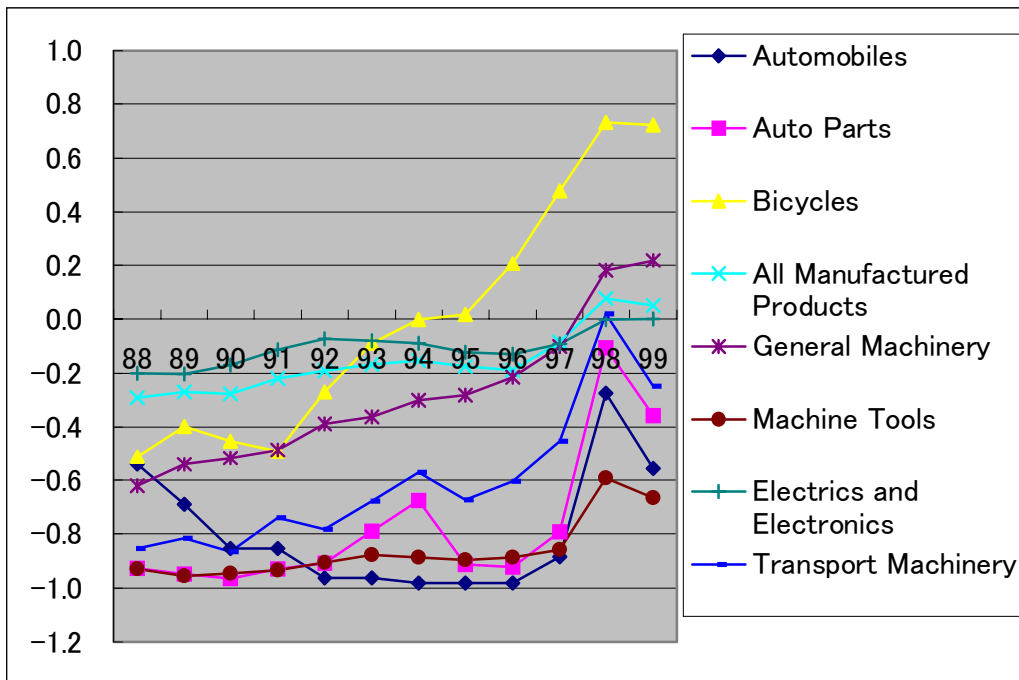
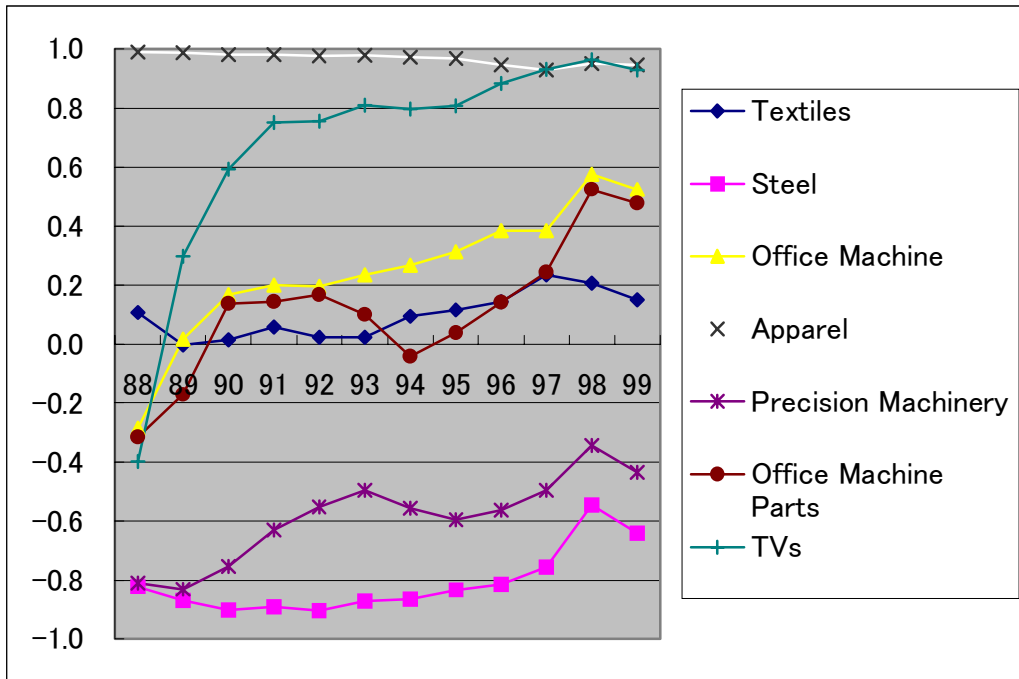
Next, let us have a closer look at the dynamic relation between ASEAN and the rest of East Asia, by focusing on the industrialization process and the direction of manufactured exports of Thailand and China. Thailand is one of the original members of ASEAN and one of the most active partners in implementing the CEPT scheme of AFTA. China is a rapidly growing economy and a major non-partner AFTA in the dynamic East Asian region.

China also has similar factor endowments and is in almost the same development stage as Thailand.

Figures 1 and 2 trace the development process of major manufacturing industries in Thailand and China respectively. For analyzing the development process of an industry, one must observe trends in production, and consumption as well. However, by computing the international competitiveness index (ICI) of each industry in a given country, we can get an idea of the trends in the development of an industry. The ICI is defined as the ratio of (exports minus imports) divided by (exports plus imports) for a product. The value of this ICI ranges from minus 1 (where exports are almost zero) to plus 1 (where imports are almost zero). If exports and imports of a product have almost the same value, its ICI is zero. Thus the product records a trade deficit if its ICI is negative, and a trade surplus if it is positive.

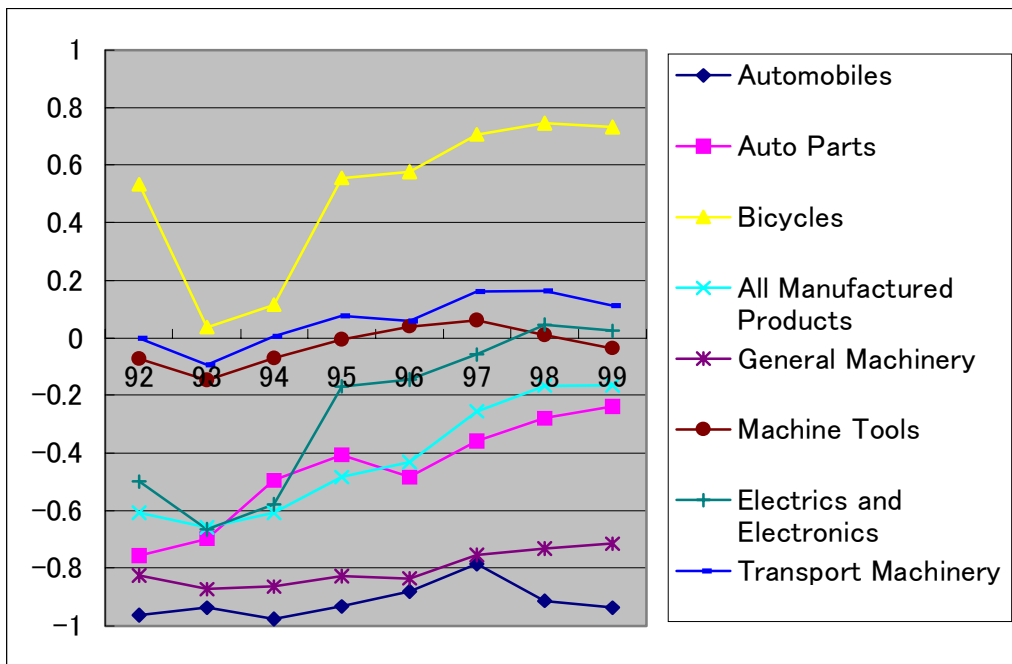
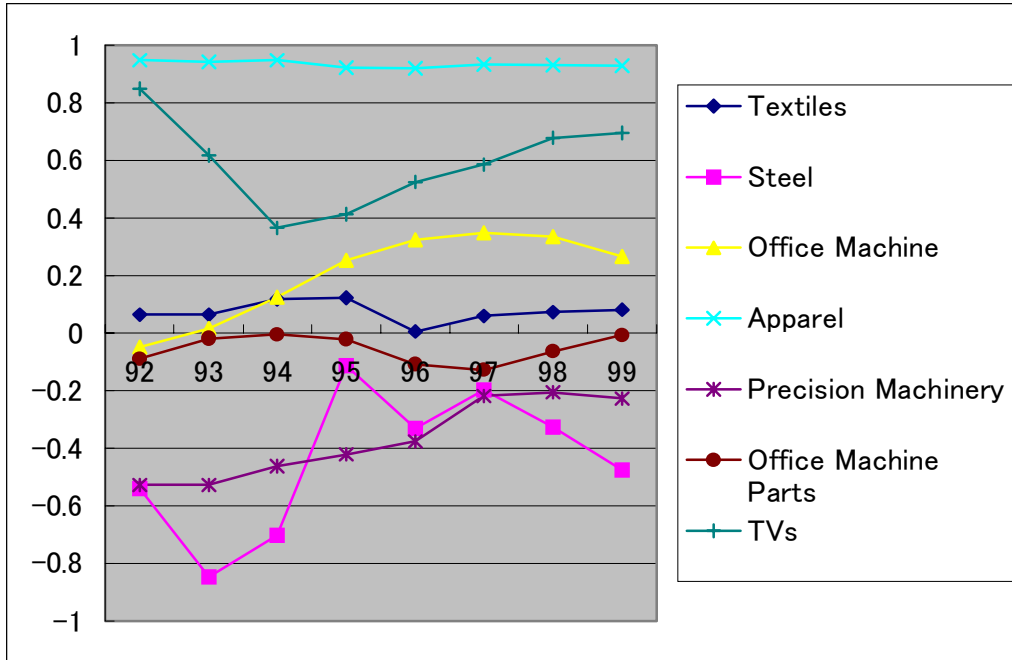
It is interesting to remark from Figures 1 and 2 that the structures of comparative advantage in Thailand and China are quite similar and their long-term pattern of change is also almost the same. For example, the ICI of apparel was nearly plus 1 before the 1990s, and the industry continued to be the strong competitive industry for both countries. In the case of television and motorbikes, the ICI of Thailand turned out to be positive in the early 1990s and has rapidly approached plus 1 in the second half of the decade. For China, the ICI showed some fluctuations in the first half of the 1990s, but illustrated almost the same pattern as that of Thailand in the latter half of the decade. For office machines, Thailand changed from a trade deficit to a surplus in 1990, and has expanded the surplus during the course of the 1990s. Some years behind, China also showed the same trends. For other industries, a similar pattern can also be observed.

Figure 1: International Competitiveness Indices of Thailand's Manufactured Products



Source: Calculated from UN Trade Statistics.

Figure 2: International Competitiveness Indices of China's Manufactured Products



Source: Calculated from UN Trade Statistics.

Next, let us see whether Thailand and China have the same export structure in a given market. The more similar the export structure is in the same market, the stronger the competition can be anticipated in that market. Such a situation can be captured by calculating the export similarity index (ES), which is defined as follows:⁵.

$$ES = \left| X_{ai} - \frac{X_{ai} + X_{bi}}{2} \right|$$

where X_{ai} is the share of commodity i in the total exports of country A in a given market, and X_{bi} is that share of country B in the same market.

All commodities are calculated and summed up to get the ES. This index is zero if the commodity composition of the exports of A and B are identical. On the contrary, if that composition is completely different, the index will be 1.

Figure 3 traces the ES of Thailand and China in major markets. The data used were Standard International Trade Classification (SITC) three-digit manufactured commodities. In the world market as a whole, the index has been quite low since the early 1990s. In the US, the biggest market for both countries, the index declined since the early 1990s and maintained low levels subsequently. These observations suggest that the two countries have competed intensely in world markets. In the Japanese market however, the index is relatively high. The reason for this may be the early entry, compared to that of China, of Thai machinery-related products into the Japanese market. With the sharp rise in the yen since the mid-1980s, Japanese firms have invested substantially in Thailand, particularly in machinery-related areas, such as electronics and auto parts. Substantial parts of these products have been exported to Japan, contributing to the rapid upgrade of the Thai export structure in the Japanese market since the early 1990s.⁶ Japanese firms from the same industries have also invested substantially in China in more recent years, so imports from the Chinese machinery-related products into the Japanese market have not been substantial in the period under

⁵ The significance of and the calculation method of the export similarity index were (probably) first indicated by Finger and Kreinin (1979). In this paper, we used the version index suggested by Lee (1997).

⁶ This point is well analyzed in Shinohara and Nishigatani (1996) and Aoki (2000).

review. However, the ES index of Thailand-China in the Japanese market has declined steadily, suggesting that Chinese export structure in the Japanese market has increasingly resembled that of Thailand. In fact, more recent data showed that Japan has increasingly imported machinery-related products from China (Mukoyama 2001).

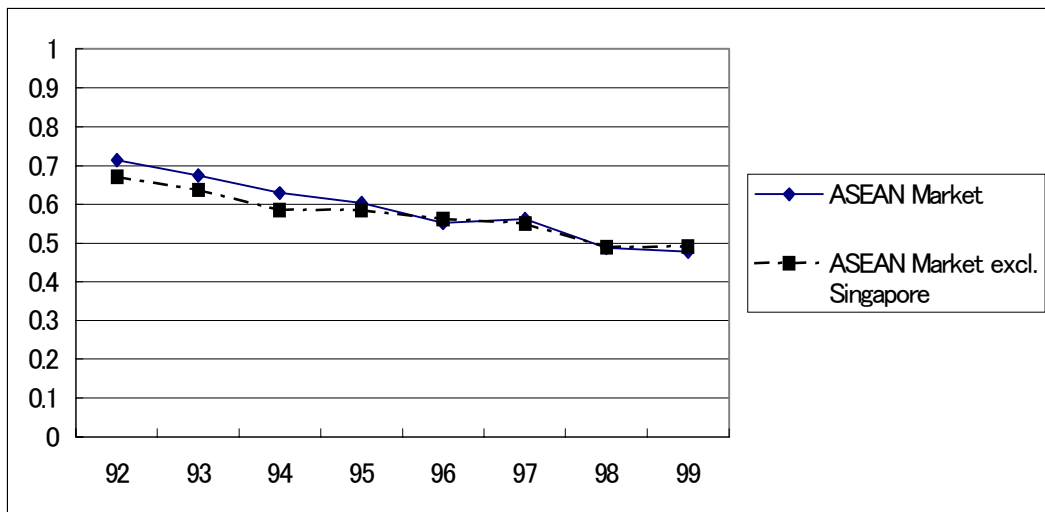
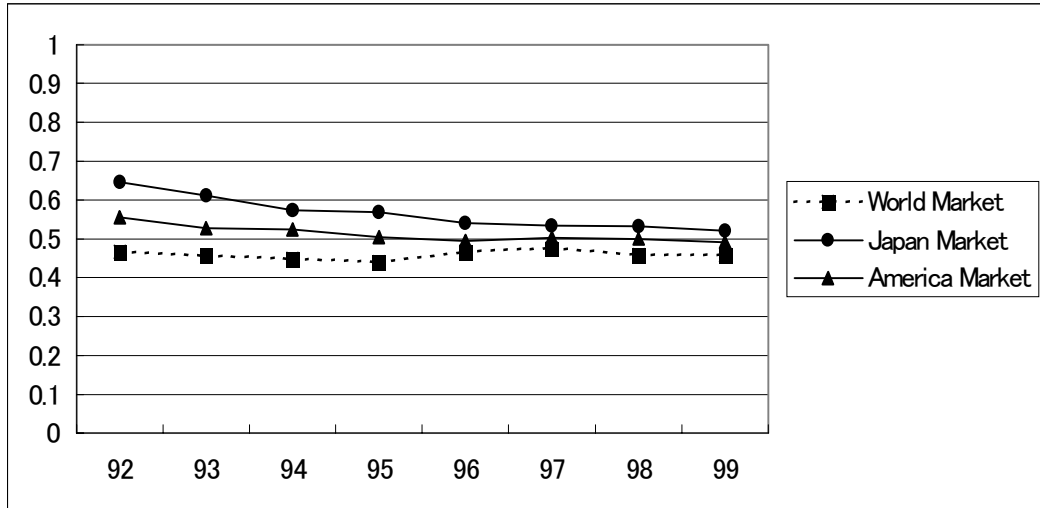
How about the ES index for Thailand-China in ASEAN markets? In Figure 3, both ASEAN market including Singapore and ASEAN market excluding this trade *entrepot* are examined.⁷ In both cases, the ES index for Thailand-China showed a steady decline. This suggests that the diversion effect generated by AFTA to China would be strong when the CEPT scheme is fully implemented.

The ES indices for Thailand-Korea are relatively different, compared to that of Thailand-China, in most markets (Fig. 4). In particular, in ASEAN markets, the indices have not changed much and their levels were in the range of 0.6 to 0.7, higher than the levels for Thailand-China in the same markets. This reflects the different development stage, and thus the different comparative advantage structure of Thailand and Korea. In the Japanese market, the steady decline and the relatively low index for Thailand-Korea are surprising. This may however also be explained by the above-mentioned new trends in the exports from Thailand to Japan since the early 1990s. These trends made the export structure of Thailand different from that of China but approaching that of Korea in the Japanese market.

The ES index for Thailand-Japan is, as expected, higher than that of Thailand-China and Thailand-Korea in most markets. However, the declining trend is seen in all markets under observation (Fig. 5). This reflects the upgrading in Thai export structure.

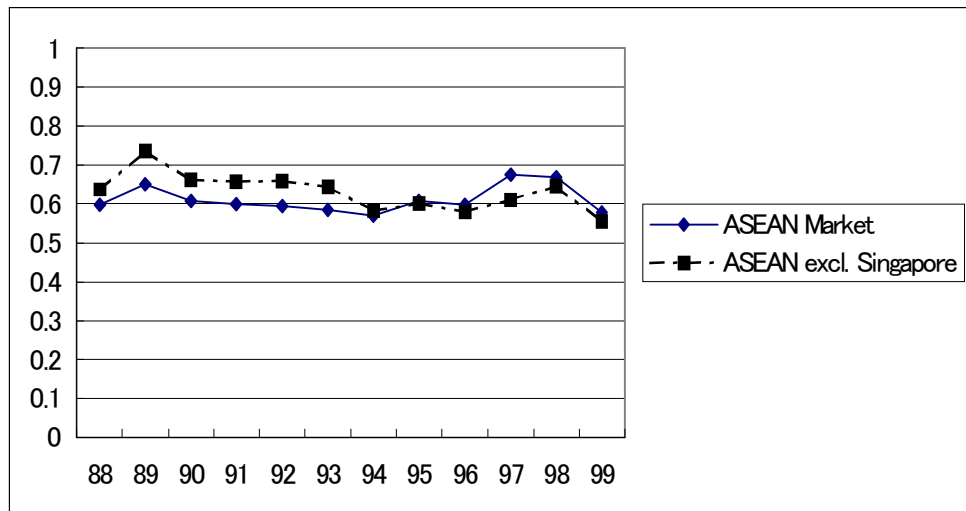
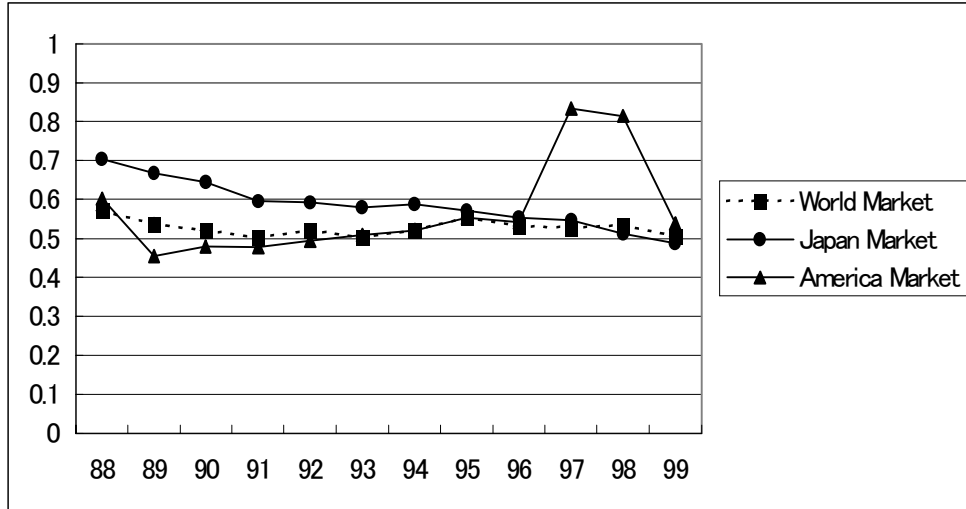
⁷ In both cases of course Thailand is excluded.

Figure 3: Export Similarity Indices of Thailand – China
(Manufactured Products, 3-Digit SITC)



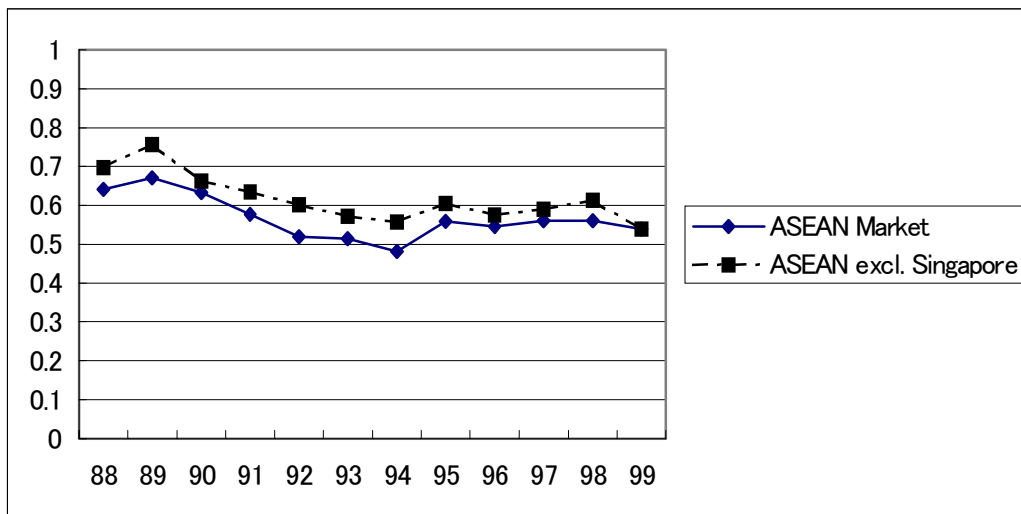
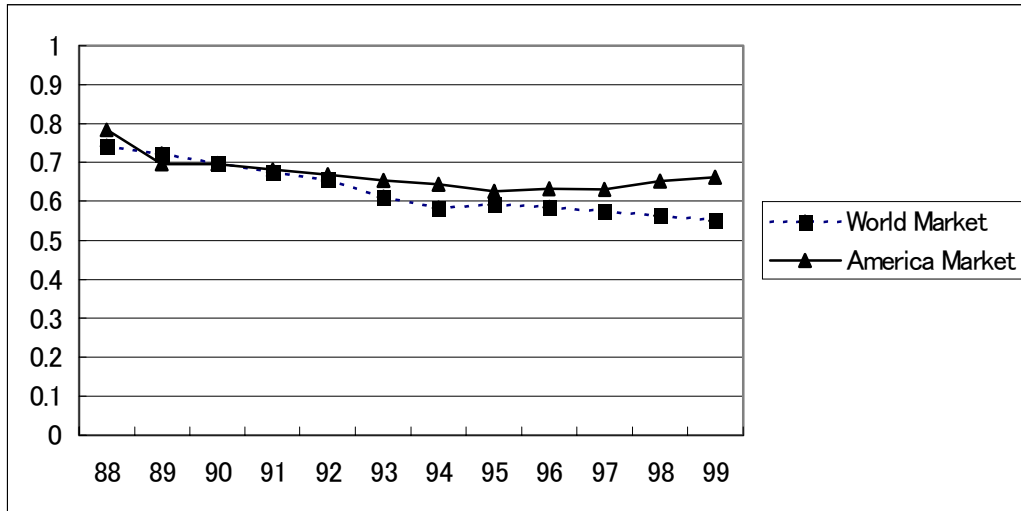
Source: Calculated from UN Trade Statistics.

Figure 4: Export Similarity Indices of Thailand – Korea
(Manufactured Product, 3-Digit SITC)



Source: Calculated from UN Trade Statistics.

Figure 5: Export Similarity Indices of Thailand – Japan
(Manufactured Products, 3-Digit SITC)



Source: Calculated from UN Trade Statistics.

In a word, AFTA members and major non-partner countries in East Asia have expanded trade to each other. This expansion has been much substantial than that of intra-ASEAN trade. The AFTA trade creation has not been as important as trade with other countries in the wider dynamic region in Asia. Also, the trade diversion effect did not appear to be strong except for the relation of Thailand and China in ASEAN market.

5. AFTA and Incoming Foreign Direct Investment (FDI)

Section 2 discussed FDI as a dynamic effect of a free trade area. It suggested that a free trade area would induce an expansion of FDI. How about the case of AFTA?

Since the mid-1980s, a new wave of FDI has been flowing into ASEAN. Under the pressure of a sharp rise in the value of the yen against the US dollar since September 1985, Japanese firms have expanded FDI first in NIEs and then in ASEAN. Substantial investment from Korea, Taiwan and other NIEs was also undertaken in ASEAN since the mid-1980s, particularly in the labor-intensive industries, under the pressure of rising labor costs in home economies as well as a trade conflict with the US.⁸

Since the early 1990s, firms in Japan and NIEs seemed to show more interest in FDI in China, a rapidly emerging market. The survey by JETRO conducted in April 1993 for example, showed that Japanese firms in all 18 industries covered in the survey selected China as their new FDI site. ASEAN managed to keep second position as favorite host countries for Japanese FDI in six industries including textiles, electronics, and transport machines (Aoki 2001).

Another sharp rise in the value of the yen in 1994-1995 created another wave of Japanese FDI to ASEAN in the mid-1990s. However, this wave did not last long due to the financial crisis in 1997.

According to Table 6, which records the FDI flows (on a balance of payment basis) into Asian countries, in the 1986-91 period, average annual flows into ASEAN were greater than the flows into China. However, the reverse happened in 1992 and since then, the gap between the two flows has expanded. In 1999, FDI flows into China were four times greater than those directed to ASEAN. Thus, in the 1990s, FDI has concentrated on China. However, even if the flows into ASEAN were much smaller than China, except for Indonesia after the financial crisis, FDI in ASEAN has not been stagnant. This suggests that even if China is emerging as a big market, FDI may increase in both ASEAN and China so long as economic, social and political stability is maintained.

⁸ Tran (1993) discussed factors of new waves of FDI in ASEAN since the mid-1980s and their implications for the division of labor in Asia.

Table 6: FDI Inflows to Asian Countries

(US \$ millions)

	Country	1986-1991	1992	1993	1994	1995	1996	1997	1998	1999
1	Korea	863	727	588	991	1,357	2,308	3,088	5,215	10,340
2	Taiwan	1,034	879	917	1,375	1,559	1,864	2,248	222	2,962
3	Hong Kong	1,711	2,051	1,667	7,828	6,213	10,460	11,368	14,776	23,068
4	Singapore	3,592	2,204	4,686	8,550	7,206	8,984	8,085	5,493	6,984
5	NIEs	7,200	5,861	7,858	18,744	16,335	23,616	24,789	25,706	43,354
6	Malaysia	1,605	5,183	5,006	4,581	5,816	7,296	6,513	2,700	3,532
7	Thailand	1,325	2,114	1,804	1,343	2,000	2,405	3,732	7,449	6,078
8	Philippines	501	228	1,238	1,591	1,459	1,520	1,249	1,752	737
9	Indonesia	746	1,777	2,004	2,109	4,346	6,194	4,677	-356	-3,270
10	Vietnam	68	385	523	1,936	2,349	2,455	2,745	1,972	1,609
11	Cambodia	-	33	54	69	151	294	168	121	135
12	Laos	3	8	30	59	88	128	86	45	79
13	Myanmar	68	171	149	126	277	310	387	315	300
14	ASEAN8	4,316	9,899	10,808	11,814	16,486	20,602	19,557	13,998	9,200
15	China	3,105	11,156	27,515	33,787	35,849	40,180	44,236	43,751	40,400
16	East Asia	14,621	26,916	46,181	64,345	68,670	84,398	88,582	83,455	92,954
17	Asia	15,135	27,863	47,348	65,954	71,654	87,952	93,518	87,158	96,148
		(52)	(55)	(65)	(63)	(64)	(61)	(52)	(49)	(46)
18	Developing Countries	29,090	51,108	72,528	104,920	111,884	145,030	178,789	179,481	207,619

Note: Asia here does not include Central Asia and West Asia. The Figures in parentheses are the shares of Asia .

to all developing countries

Source: Compiled from UNCTAD, *World Investment Report* 1998, 2000.

The trade data showed the interdependence between ASEAN and other economies in East Asia. As for FDI, we may expect that multinational corporations (MNCs) may consider ASEAN as one integral part of a dynamic East Asia. Therefore, AFTA cannot be the single factor which determines FDI flows. In fact, FDI expanded in ASEAN before the establishment of AFTA and turned out to be stagnant in the late 1990s, the period characterized by both substantial implementation of the CEPT scheme and by the financial crisis.

Let us have a closer look at the behavior of Japanese firms who are major investors in ASEAN. Most recent surveys showed that the response of Japanese firms to the full implementation of CEPT was generally passive. For example, according to the survey by JETRO in November and December 2000, recorded in Aoki (2001), only 5.1% of firms surveyed are underway in reorganizing their affiliates in ASEAN to exploit the benefits brought about by CEPT, and only 20.4% of firms have such a plan. The survey by the Japan

Center for Economic Research (JCER) conducted in September 2001, showed that only 30% of firms surveyed are preparing for a new ASEAN market under the full implementation of CEPT. Even among firms which have undertaken investment in ASEAN, only 30% plan to reorganize their existing operations.⁹

Results of those surveys suggest that AFTA has not strongly affected the behavior of Japanese firms, which have undertaken (or will undertake) FDI in ASEAN. This can be explained by the following reasons:

First, Japanese manufacturing firms started to invest in ASEAN in the early 1960s. The projects, which were undertaken until the 1970s are import substitution and concentrated on textiles, electronic home appliances and automobile assembly. Most textiles-related FDI projects have retreated from ASEAN (as well as from other Asian host countries), due to the diversification of activities of investing firms away from textiles towards pharmaceuticals, chemicals and other areas. Import substitution FDI projects in electronic home appliances by the end of the 1990s had been almost completed in the process of reorganization under the CEPT scheme, since most ASEAN countries put these products on the CEPT implementation fast track. The automobile assembly case is special. Most countries still protect this industry and appear to be continuing to keep it on the temporary exclusion list (TEL) of the AFTA scheme.

On the other hand, the projects undertaken since the 1980s have been export-oriented, and concentrated on electronics and other machinery related industries. Due to the export-oriented purposes, imports of parts and other inputs have been exempted from tariffs. Their operations therefore have little relation with the AFTA scheme.

Second, there are two types of Japanese firms investing in ASEAN. One is that of small and medium-sized firms. Each firm has only one or two affiliates (or subsidiaries) in ASEAN so that there is little room for them to reorganize the operations.¹⁰ The other type is that of large firms which are undertaking operations in a wider region in East Asia. Due to this feature, and combined with the export orientation of most projects, the

⁹ Other surveys, such as that of Fuji Research Institute (2001), also showed the same results.

¹⁰ According to Aoki (1997), p. 100, more than half of Japanese small and medium-sized firms that invest in ASEAN have less than two affiliates (subsidiaries) in that region.

reorganization of Japanese MNCs is built throughout the East Asian region. AFTA is just one of many factors affecting their reorganizing strategy.

6. Concluding remarks and implications

Let us summarize major points emerging from the fore above analysis.

First, the trade and FDI effects of AFTA have not been as strong as the theory of a free trade area predicts. Intra-ASEAN trade has indeed expanded, but ASEAN trade with non-partner countries in East Asia has expanded at a higher rate. Moreover, major non-partner countries in East Asia such as Japan, Korea and China have also expanded their manufactured exports to the ASEAN market at a faster rate than to the world as a whole. The effect of AFTA on FDI inflows also has not been recognized so far. Apart from the reorganization of import substitution projects, the reaction of MNCs to the implementation of AFTA has not been substantially positive.

The relatively weak trade and FDI effects of AFTA stem from the unique economic feature of ASEAN. Unlike the EU or NAFTA, intra-ASEAN trade is relatively unimportant and instead, interdependence between ASEAN and the rest of the wider East Asian region is strong. This feature is so strong that it likely will not change in the foreseeable future, even if the CEPT scheme in AFTA is fully implemented.

Nevertheless, the establishment of AFTA is not meaningless. Liberalization of trade results in a more efficient allocation of resources in each ASEAN country. Commitment by each country to liberalize trade and enhance the necessary industrial adjustment brought about by trade liberalization, has certainly contributed to the maintenance of a stable and market-friendly policy environment. This is essential for keeping ASEAN (as a whole and for each member) together which is less risky and less uncertain than the alternative. This point is essential for ASEAN to continue to be an integral part of the dynamic division of labor in East Asia.

Second, along with the financial crisis in 1997, the emergence of China may be the most important event for the Asian economy in the last decade. From the mid-1990s, Chinese manufactured exports have surpassed ASEAN-4 exports (Table 3). From 1992 to 1999, manufactured exports from China to the world market expanded 2.6 times, compared to 2.2 times for the ASEAN-5, 1.8 times for Korea and 1.16 times for Japan (Table 4). FDI

inflows into China also expanded rapidly. Moreover, the development process and the comparative advantage structure in China have also resembled those of most ASEAN countries, typically Thailand (Figures 1 and 2). What are the implications of this Chinese emergence for ASEAN?

We have seen that, in the 1990s, ASEAN also expanded manufactured exports to most major markets even if the performance was not comparable to that of China. The same trend was seen for FDI inflows. Moreover, the expansion of manufactured exports from ASEAN to China was also noteworthy, even though that should be discounted by the low levels of the base year. In this respect, the development of China and ASEAN is not a zero-sum game.

Nevertheless, since China is not only a giant but also a giant in a rapid development process, it may generate a disturbance in the Asian economy. There are two policy implications here. One is for the development of ASEAN and the other is for the wider region including ASEAN plus 3.

Regarding the implication for ASEAN countries, which have almost the same development stage and factor endowments as China, it is necessary for the former to speed up the upgrading of its industrial structure to promote a new division of labor with the latter. Some analysts have attributed the cause of the financial crisis in Thailand in July 1997 to the slow response of the country to handle the sudden impact of China devaluing the Renminbi by 35% in 1994.¹¹ This factor may be one of the causes, since Thailand exports declined markedly after the mid-1990s, in contrast to the expansion of Chinese exports, and brought about a difficulty for Thailand's balance of payments.

The related issue is the implication of the Chinese accession into the WTO. The effect of this event is to open the Chinese market to foreign products. However, most products would be highly skilled labor and technology-intensive ones, for which China does not have a comparative advantage. In the meantime, those countries which have a higher development stage compared to China like Japan, Korea and the US, will be major benefactors of increasing imports into China. The manufactured export value for ASEAN in the Chinese market is still small (Table 4). There will be much room for ASEAN countries to reap the opportunity generated by

¹¹ See, for example, Harada (2001) among others.

China, if their industrial structure is quickly upgraded. One of the obstacles for further upgrading the industrial structure is the shortage of supply of highly skilled labor such as engineers, technicians, and management administrators. Cooperation from Japan, Korea and other advanced countries is essential. Thus, in this respect as well, the interdependence between members of AFTA and non-partner countries in East Asia continues to be significant for the development of ASEAN.

Regarding the implication for the East Asian region as a whole, a cooperation scheme for region-wide industrial adjustment seems necessary. With the rapid growth of China as a “world factory”¹², excessive investment and production in the region may happen, and in fact, such a phenomenon has been seen. Activities of a region-wide cooperation scheme may include the exchange of information on the industrial development of each country, collective support for smoothing industrial adjustments (transfer of resources from comparatively disadvantaged industries to growing sectors), providing a social safety net in each country, and so on. Recently, the idea of cooperation on the basis of the ASEAN+3 has been increasingly put forth, particularly in the field of monetary and financial stability in the region. This idea should be expanded to cover the area of industrial development and adjustment.

In summary, while AFTA is contributing to the increasing confidence and stability of ASEAN countries, its effects on the development of these countries are not as important as the interdependence and dynamic division of labor between ASEAN and other economies in East Asia.

¹² According to the estimates of *Nihon Keizai Shinbun* (July 27, 2001), China already accounted for 38% of world production of VTD players, 39% of air conditioners, 25% of color television, 23% of VCRs, and 15% of the steel..

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