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Does AFTA Create or Divert Trade?

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Helen Cabalu and Cristina Alfonso

Abstract

In this article the changes in trade patterns introduced by the ASEAN Free Trade Area (AFTA) are examined. Variation in growth trends and the shift-and-share methodology are used to identify the impact of trade liberalization under AFTA on intra- and extra-regional commodity trade. Data at the commodity level are used and the results indicate that AFTA had trade creation effects, with little evidence of trade diversion.

KEYWORDS: AFTA, trade creation, trade diversion

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INTRODUCTION

The ultimate aim of economic integration in Southeast Asia is the formation of an ASEAN (Association of South East Asian Nations) Economic Community (AEC) by 2015. The AEC is envisaged as a single market and production base where goods, services, investments and skilled labor are free to flow. Deeper economic integration through an economic community is a long term process and trade liberalization through the agreement to establish the ASEAN Free Trade Area (AFTA) is a step towards its realization.

AFTA was formed in January 1992 at the Fourth ASEAN Summit meeting. Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand (referred to as the ASEAN-6) signed the Singapore Declaration and Framework Agreement on Enhancing Economic Cooperation. The other ASEAN member countries later joined: Cambodia in 1999, Laos and Myanmar in 1997, and Viet Nam in 1995 (referred to as the CLMV countries).

The agreement involves the elimination of intra-regional tariffs and non-tariff barriers in the region. Its objectives are to expand trade among the more than 500 million people comprising the region, increase ASEAN's competitiveness by integrating the economies into a single production base and eventually, with economies of scale realized, attract more foreign direct investments into the region. For the ASEAN-6 members, the deadline for the comprehensive tariff reduction program was initially set for 2008 but this was moved forward to 2002. The CLMV countries were given longer time frames in which to complete the program: Viet Nam in 2006, Laos and Myanmar in 2008 and Cambodia in 2010. As the implementation of AFTA has only been completed by the ASEAN-6, it is necessary in this article that we focus on Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand.

This article examines changes in trade patterns of the ASEAN-6 before, after and during AFTA's implementation. It evaluates the extent the Agreement has achieved its goal of expanding trade in the region. To the extent that trade increased, the article identifies commodity groups that were significantly affected by the initiative and shows whether AFTA has resulted in trade diversion or trade creation.

There are a number of difficulties in evaluating the effects of AFTA. As there are a number of other things happening at the same time as its implementation, it is not easy to isolate its effects. For instance, the Asian financial crisis of 1997/98 may have influenced trade flows during the AFTA implementation. Although the agreement came into effect in January 1992, not all tariffs between the original six ASEAN members were removed on that date. Indeed, for most commodities, there was a schedule over a 10 to 15 year period during which tariffs would be phased out. Trade liberalization both under the World Trade Organization and

unilaterally by some countries are being undertaken at the same time as AFTA's implementation, and could have undoubtedly affected trade patterns.

This article is organized as follows. Section 2 reviews the potential effects of regional trade agreements (RTAs). Section 3 provides a general background of the AFTA agreement and its current status while Section 4 describes the general trends in ASEAN trade and examines the changes in trade patterns introduced by AFTA. Section 5 presents the shift-and-share analysis and results to identify the effects of AFTA and section 6 concludes.

THE EFFECTS OF RTAs

Prior to the 1950s, economists often assumed that a customs union would be welfare improving, since tariffs would fall and tariffs are, in general, considered welfare reducing. Any country involved in a regional trade agreement expects a welfare gain. Viner (1950) however, showed that a customs union will not necessarily improve welfare, since the tariff reductions occur only between partner countries within the union. Whether or not the increase in trade caused by the formation of a customs union would be welfare improving depends on the source of the increased trade. Viner proposed a way to assess the welfare effect of an RTA by developing the notions of trade creation and trade diversion.

Trade creation occurs when higher trade is generated among member countries as a result of their membership to a free trade area. The freeing up of trade barriers, tariffs in particular, lead countries to import commodities from lower-cost member countries away from high-cost domestic industry. In this way, economies in a free trade area produce more output by concentrating on commodities where their comparative advantage lies. Trade creation therefore, increases specialization in member countries, and economies of scale improve their productive efficiency. This is welfare improving (Viner, 1950; Clausing, 2001; Manzano and Mortel, 2003).

Trade diversion in contrast, occurs when member countries replace their imports from low-cost, more efficient non-member countries with imports from high-cost less efficient (partner) member countries. This is made possible by the discriminatory protection in place, as imports from non-members continue to face high tariff barriers effectively becoming more costly than tariff-free imports from less-efficient member countries. Welfare therefore depends on the extent of trade creation relative to trade diversion.

Economists disagree on what is likely to happen in practice. Some believe that regional trade agreements are likely to be positive developments. While others think that they lead to trade diversion as international mechanisms to discipline it are too weak. Empirical analysis has also had difficulty reaching consensus regarding the effects of RTAs. In particular, past studies have been

unable to convincingly disentangle their effects from other effects occurring simultaneously. The recent literature on examining RTA trade impact shows that different studies come out with different trade effects for the same RTAs. This is due to the use of different estimation methods, different databases and time periods to measure these trade effects.

In the analysis of regional trade agreements, there are two empirical methods commonly used. One is simulation with a gravity model which is generally applied ex-post. This approach is used to search for effects of RTAs after they have been implemented. In contrast, the second technique, counterfactual simulation with partial or general equilibrium trade models is a way to analyze the implications of proposed RTAs.

THE AFTA AGREEMENT: BACKGROUND AND CURRENT STATUS

The ASEAN Free Trade Area (AFTA) was established in 1992 with a goal of achieving a free trade area by 2002 among the ASEAN-6 member countries, and to progressively include Vietnam by 2006, Laos and Myanmar by 2008, and Cambodia by 2010.¹ It is a target that tariffs be completely abolished among members for free flow of products within the region.

The main implementing instrument of AFTA is the Common Effective Preferential Tariff (CEPT) scheme which requires that tariffs levied on goods traded within the ASEAN region that meet a 40 per cent ASEAN content requirement be reduced to 0-5 per cent. The CEPT Scheme encompassed manufactured and semi-manufactured products, including capital goods and processed agricultural products. The liberalization process was carried out at different speeds depending on the product group: fast track and a normal track scheme.

The CEPT package has undergone several changes that included the phasing in of unprocessed agricultural products where it had been excluded in the 1992 CEPT Agreement. Under the CEPT, four lists are used as key instruments to determine the pace and scope of liberalization: the Inclusion List (IL), the Temporary Exclusion List (TEL), the Sensitive List (SL) and the General Exceptions List (GEL).

The IL consists of product items subject to tariff reductions immediately to be brought down to the range of 0-5 per cent by 2002 for the ASEAN-6. Of the total CEPT tariff lines, 43,675 tariff lines or 98.26 per cent are in the Inclusion List. In the accelerated schedule, it is required that 85 per cent of the items in the IL must be reduced to 0-5 per cent by 2000, 90 per cent by 2001 and 100 per cent in 2002

¹ The difference in time frames reflects difference in their accession dates, with the same time period provided for their tariff reductions. The original timeframe for the ASEAN-6 was scheduled for 2008 but this was accelerated to 2002 for most items.

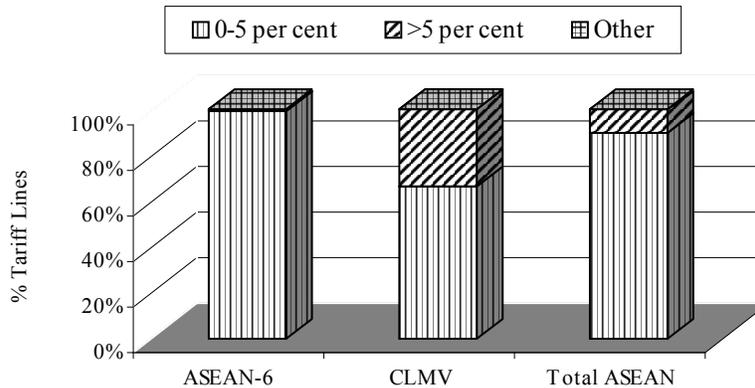
with some flexibility. Indeed, by 2002 around 47 per cent (or 20,527 tariff lines) of these already had zero duties. By 2006, products in the Inclusion List which continued to have tariffs above 5 per cent are only those which have been transferred from the TEL, SL and GEL in the previous year.

Products under the TEL are protected temporarily by a delay in tariff reductions. They account for 0.55 per cent of total CEPT tariff lines (or 245 tariff lines). Items in the TEL are transferred to the IL and then tariffs on these products will ultimately be lowered to a maximum of 5 per cent. There are three categories of products in the TEL, including manufactured products and processed agricultural products; unprocessed agricultural products; and unprocessed agricultural products covered by state trading enterprises notified to the World Trade Organization. At the start of the tariff reduction program in 1993, temporary exclusion was granted to machinery and electrical appliances in Brunei; chemicals in Indonesia, vehicles in Malaysia and Thailand; and textiles in the Philippines. Manufactured and processed agricultural products were gradually transferred to the inclusion list between 1996 and 2000. The implementation of the CEPT Scheme was significantly boosted in January 2005 with the full transfer of Malaysia's completely built up (CBUs) and completely knocked down (CKDs) automotive units into the Inclusion List resulting in the ASEAN-6 having no more products under the TEL (Cuyvers, *et. al.*, 2005; ASEAN Secretariat, 2006).

The Sensitive List (SL) included 150 tariff lines (or 0.34 per cent) of unprocessed (raw) agricultural products considered sensitive by ASEAN member countries. Products in this list were phased into the CEPT scheme between 2001 and 2003 and are expected to have a 0-5 per cent tariff rate by 2010 (2013 for Vietnam, 2015 for Laos and Myanmar, and 2017 for Cambodia). All member countries have included a number of products in this category and only a small number of unprocessed agricultural products are actually excluded from the CEPT. Rice remains excluded from the CEPT Scheme.

Finally, under the General Exceptions List (GEL), products that a country considers necessary for the protection of national security, public morals, the protection of human, animal or plant life and health, and protection of articles of artistic, historic, or archaeological value are permanently excluded from the CEPT. The GEL covers 377 tariff lines representing 0.85 per cent of all tariff lines in ASEAN.

Fig. 1. AFTA’s achievement: percentage of tariff lines by tariff bands, 2006



Source: <http://www.aseansec.org/>

Most of Southeast Asia is now close to full realization of free trade. The first six country-signatories to AFTA have 99.77 per cent of their products in the CEPT Inclusion List with tariffs in the range of 0-5 per cent tariffs. Indeed, tariffs on 65.09 per cent of the products in the IL have been eliminated. The CLMV countries are not far behind the original signatories as 90.96 per cent of the products they trade in the region have been moved into the IL and tariffs on 76.86 per cent of these items have been reduced to the 0-5 per cent tariff band (Fig. 1). In addition, the average tariff in the ASEAN-6 under the CEPT Scheme has continued to decline. The average tariff in the ASEAN-6 in 2006 was 1.74 per cent, down from 12.76 per cent in 1993 when tariff cuts began (Fig. 2).

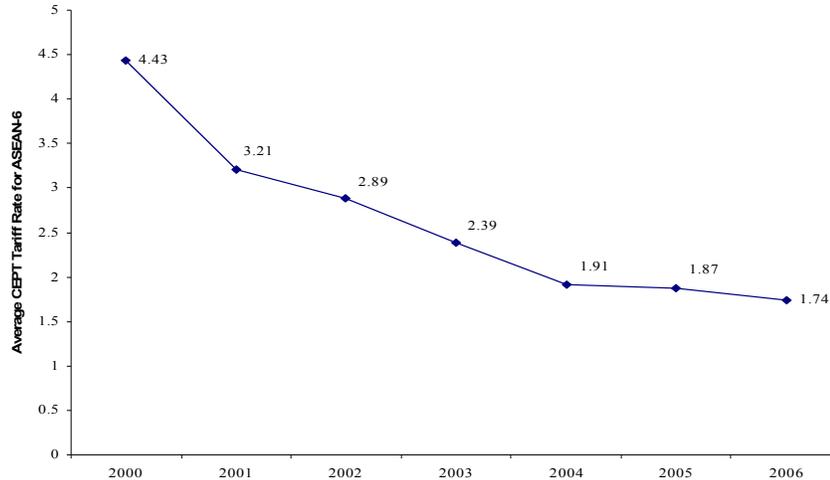
TRENDS IN ASEAN-6 TRADE

Intra-ASEAN trade grew by an annual average rate of 8.9 per cent in real terms between 1980 and 2005. In particular, the period 1987 to 1996 witnessed the strongest intra-ASEAN trade growth at 15.5 per cent per annum on average, before the financial crisis in 1997 temporarily derailed the upward trend.² Since then, growth in intra-ASEAN trade has moderated to an average of 6.8 per cent in the period 1997-2005, despite experiencing a negative growth in 2001-2002 as a consequence of the global economic slowdown. Interestingly, the real average annual growth rates in intra-ASEAN trade during the pre-AFTA years (1980 to 1991) at 4.3 per cent and during the years of implementation (1992 to 2002) at 8.2

² Intra-ASEAN trade is defined as imports plus exports of ASEAN-6 with ASEAN-6.

per cent demonstrate AFTA's positive impact on intra-ASEAN trade. Indeed, three years beyond its implementation, intra-ASEAN trade continued to register high positive growth rates between 2003 and 2005 (Fig. 3).

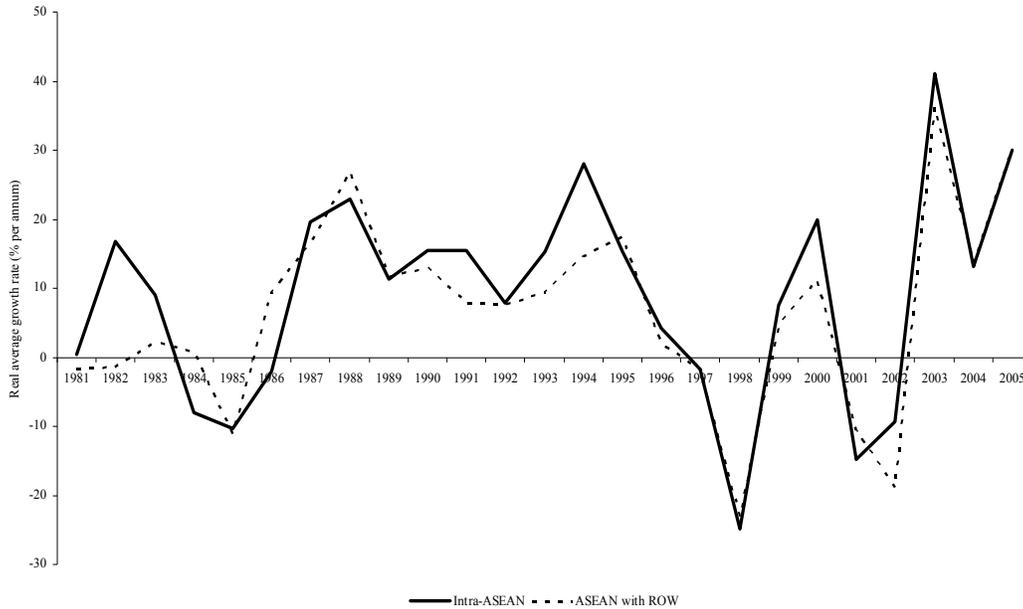
Fig. 2. Average tariff rate for the ASEAN-6 under the CEPT, 2000-2006



Source: <http://www.aseansec.org/>

In terms of ASEAN's trade relationship with the rest of the world (ROW), we can see a similar pattern. ASEAN's trade with the rest of the world grew by an average rate of 6.7 per cent per annum in real terms between 1980 and 2005. Prior to AFTA being implemented (1980-1991), growth of ASEAN trade with the rest of the world was steady at this pace only to take a dip when AFTA was introduced and implemented (1992-2002) to an average annual growth of 1.1 per cent. This positive growth was achieved despite a slump between 1997 and 1998. In the period between 1980 and 2002 (pre- and AFTA years), the strongest growth in ASEAN trade with the rest of the world was an average real annual growth rate of 12.4 per cent posted between 1986 and 1996.

Fig. 3 ASEAN trade: intra-ASEAN and trade with the rest of the world, 1980-2005 (real annual growth, %)



Source: United Nations Commodity Trade Statistics Database

Table 1. ASEAN-6 exports, 1980-2005 (US\$ billion, percentage shares)

Year	Total ASEAN-6 exports (US\$b)	Intra-ASEAN-6 exports (US\$b)	ASEAN-6 exports to the ROW (US\$b)	% share of intra-ASEAN-6 exports in total ASEAN exports	% share of exports to the ROW in total ASEAN exports
1980	70.8	11.9	58.9	16.8	83.2
1985	71.7	13.2	58.5	18.4	81.6
1990	140.9	26.2	114.7	18.6	81.4
1995	310.4	71.5	238.9	23.0	77.0
2000	404.0	87.2	316.8	21.6	78.4
2001	365.6	76.2	289.4	20.8	79.2
2002	313.4	69.7	243.7	22.2	77.8
2003	444.8	104.2	340.6	23.4	76.6
2004	524.0	124.2	399.8	23.7	76.3
2005	606.4	142.5	463.9	23.5	76.5

Source: United Nations Commodity Trade Statistics Database

Intra-ASEAN exports as a share of total ASEAN exports increased from an average of 18.2 per cent in the years preceding AFTA to 22.2 per cent in 2002 when tariff reduction targets have been achieved and to 23.5 per cent in 2005. Consequently, the share of ASEAN’s exports to the rest of the world declined proportionately (Table 1). The same upward trend is evident in the percentage share of ASEAN’s imports in the region’s total imports, from 14.1 per cent in 1980 to 22.3 per cent in 2005. On the other hand, ASEAN’s imports from the rest of the world accounting for 83.2 per cent of its total imports in 1980 declined to 76.5 per cent in 2005 (Table 2). Despite the declining share of trade accounted for by the rest of the world, ASEAN’s largest markets remain outside its region.

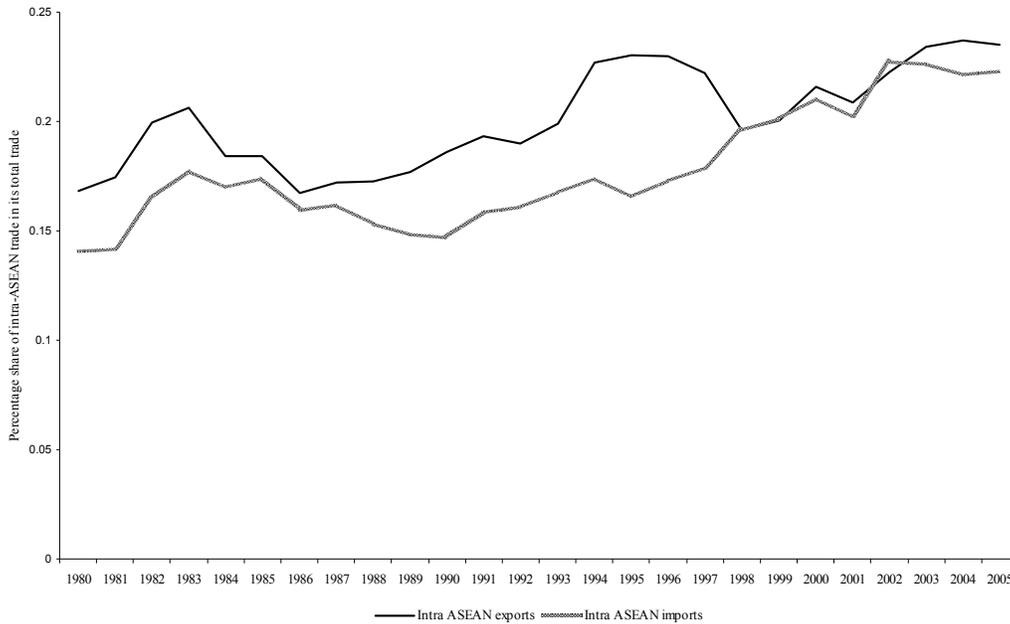
Table 2. ASEAN-6 imports, 1980-2005 (US\$ billion, percentage shares)

Year	Total ASEAN-6 imports (US\$b)	Intra-ASEAN-6 imports (US\$b)	ASEAN-6 imports from the ROW (US\$b)	% share of intra-ASEAN-6 imports in total ASEAN imports	% share of imports from the ROW in total ASEAN imports
1980	63.9	9.0	54.9	14.1	85.9
1985	64.3	11.2	53.1	17.4	82.6
1990	157.5	23.2	134.3	14.7	85.3
1995	338.8	56.2	282.6	16.6	83.4
2000	342.6	72.2	270.4	21.1	78.9
2001	312.4	63.3	249.1	20.3	79.7
2002	262.8	59.7	203.1	22.7	77.3
2003	368.6	83.4	285.2	22.6	77.4
2004	458.0	101.4	356.6	22.1	77.9
2005	537.6	120.0	417.6	22.3	77.7

Source: United Nations Commodity Trade Statistics Database

Unlike intra-ASEAN exports, intra-ASEAN imports as a share of the total has been declining in the pre-AFTA years and did not recover from its 1985 level until 1999 when it reached 20.2 per cent. Thus, the Asian economic crisis of 1997/98 may have worked to support AFTA rather than derail it by creating a stronger desire to source imports from within the region. During the time of the financial crisis, perceived problems of credibility and confidence in the region by the industrialized world, comprising most of ASEAN’s principal export markets, forced the ASEAN countries to turn inwards and to focus on their local markets (Fig 4).

Fig. 4 Percentage share of intra-ASEAN exports and imports in total ASEAN trade with the world



Source: United Nations Commodity Trade Statistics Database

Overall, the aggregate data convey a reasonably clear picture: intra-ASEAN shares and growth rates for both exports and imports increased significantly, thus, indicating that trade ties among the ASEAN partners intensified in the 1990s and beyond, after the implementation of AFTA. There exists increased dependency on regional trade as reflected in these trends.

At a disaggregated level, trade data at the SITC one-digit level demonstrate notable trends, particularly for two commodity groups namely mineral fuels, lubricants and related materials (SITC 3) and machinery and transport equipment (SITC 7). Mineral fuels, lubricants and related materials initially started as a significant commodity group in intra-ASEAN trade. It accounted for approximately 40 per cent of ASEAN's trade with the region in 1980 but progressively declined to around 17 per cent in 2005. It experienced a big dip at 9 per cent in 1995. In contrast, machinery and transport equipment showed the opposite trend of gaining importance as a commodity category as early as 1995 when it accounted for more than half of ASEAN's trade with the region from about 14 per cent share in 1980 (Table 3). This commodity has maintained its share through to 2005.

Table 3. Percentage distribution of intra-ASEAN trade, by one-digit SITC commodity group, 1980-2005

Commodity (SITC)	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
0 Food & live animals	12.1	9.6	7.4	4.7	3.3	4.1	3.6	4.1	3.6	3.2
1 Beverages & tobacco	0.4	0.4	0.5	0.4	0.7	0.9	0.9	0.7	0.7	0.6
2 Crude materials, inedible except fuels	14.9	6.1	5.3	3.4	1.9	2.0	1.7	1.9	2.1	2.0
3 Mineral fuels, lubricants, & related materials	38.1	39.6	22.5	9.0	9.8	9.7	10.7	10.5	12.0	16.6
4 Animal & vegetable oils, fats & waxes	4.5	5.1	1.6	1.2	0.5	0.6	0.9	0.8	1.0	0.8
5 Chemicals & related products	3.6	5.5	6.7	5.8	6.8	7.2	6.8	8.1	9.2	8.5
6 Manufactured goods	8.2	7.9	11.8	10.0	7.8	8.0	7.4	7.5	8.1	8.3
7 Machinery & transport equipment	14.2	19.2	33.7	51.8	61.3	59.1	56.6	57.5	55.3	52.3
8 Miscellaneous manufactured articles	2.5	3.6	9.1	11.4	7.0	7.1	7.1	7.8	6.9	6.5
9 Commodities & transactions, nec	1.5	3.0	1.4	2.4	0.9	1.3	4.3	1.1	1.1	1.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: United Nations Commodity Trade Statistics Database

The increasing pace of industrial restructuring in ASEAN countries led to the growing share of heavy equipment trade. It also became a national policy that ASEAN countries promoted their respective national car programs which may have accounted for this trend. Moreover, under the tariff reduction program of the CEPT, heavy machinery and transport were gradually transferred from the Temporary Exclusion List to the Inclusion List which meant that heavy equipment trade became more liberalized. The increasing reliance of the manufacturing sector on intra-regional production networks where parts, components and other intermediate goods are produced across the ASEAN region and brought together in one location for final assembly has also contributed to this trade pattern.

Table 4. Average real annual growth in ASEAN's imports from ASEAN and the rest of the world by one-digit SITC commodity group, 1992-2002 (per cent)

Commodity Group	Growth in intra-ASEAN imports	Growth in ASEAN imports from ROW
TOTAL	3.9	0.1
SITC-0 Food & live animals	-0.4	-0.3
SITC-1 Beverages & tobacco	14.8	-2.8
SITC-2 Crude materials, inedible, except fuels	-2.1	-4.2
SITC-3 Mineral fuels, lubricants & related materials	-0.1	4.0
SITC-4 Animal & vegetable oils, fats & waxes	-2.9	-1.2
SITC-5 Chemicals & related products	5.8	-1.5
SITC-6 Manufactured goods	0.6	-4.7
SITC-7 Machinery & transport equipment	7.9	1.3
SITC-8 Miscellaneous manufactured articles	0.6	-0.3
SITC-9 Commodities & transactions, nec	44.9	34.4

Source: United Nations Commodity Trade Statistics Database

Table 4 shows growth trends in imports to ascertain whether there are commodity categories in which the level of imports from the rest of the world fell as intra-ASEAN imports increased. To the extent that declines in import from third countries were associated with increasing imports from ASEAN countries, there would be a strong presumption of trade diversion. At the one-digit SITC level, there are four out of ten commodity categories in which imports of ASEAN countries from the rest of the world fell while rising within ASEAN during the period of AFTA implementation. Imports of beverages & tobacco (SITC 1), chemicals & related products (SITC 5), manufactured goods (SITC 6) and miscellaneous manufactured articles (SITC 8) grew at the expense of ASEAN's imports from the rest of the world. For total trade and some of the other commodity categories, there was just too much growth in global trade during this period that imports from both sources grew. However, for other commodity groups, imports declined from both sources. Hence, on the basis of this, one certainly cannot infer a strong evidence of trade diversion.

IS AFTA TRADE CREATING OR TRADE DIVERTING?

One way of further testing the existence of trade diversion is to examine the changes in values and patterns between commodity groups among AFTA countries and the rest of the world (ROW). This method compares the extent of trade that member countries have with each other and with the rest of the world

before and after the establishment of AFTA. It provides indication that AFTA is either trade creating or trade diverting.

Table 5 presents results from shift-and-share analysis on imports into the ASEAN and into the rest of the world. Using the average of 1985-1986 as a base, the shares of ASEAN exports in the imports of the ASEAN and the rest of the world were calculated for all the commodity groups. The shares so calculated were then applied to ASEAN and rest of the world imports in 1988, 1990, 1995, 2000, 2002 and 2005 to estimate what ASEAN's exports would have been had its share of the two markets been unaltered. The difference between that number and the actual ASEAN exports to each market was then taken as the "shift" in ASEAN exports in the two markets. This was done for total trade and for one-digit SITC commodity groups.

Some interesting patterns emerge. Total ASEAN exports have gained shares in both the ASEAN and ROW markets through time. From the late 1980s to the early 1990s, ASEAN exports lost share in the region but gained share in the rest of the world. By the latter half of the 1990s through to the first five years of the following decade, ASEAN exports have posted positive shares in both markets. However, gains in shares are most pronounced in the rest of the world. This pattern is similar to the growth trend for total imports in Table 4 where the average real annual growth rates of trade with ASEAN and the rest of the world were both positive during the 1990s to the early 2000s. This confirms that AFTA had been trade creating rather than trade diverting. The gains in shares are most pronounced in machinery and transport equipment (SITC 7), as was earlier observed. If there was the slightest hint of trade diversion, this can be seen in commodities and transactions not elsewhere classified (SITC 9) where ASEAN exports gained shares in the region at the expense of trade with the rest of the world.

It would appear that the general increase in ASEAN exports to both ASEAN partners and the rest of the world after the AFTA implementation suggests that ASEAN has improved its competitiveness and has therefore become more attractive as a source of imports for the world in general. The currency devaluation during the Asian crisis have made ASEAN exports less expensive and have further contributed to the increase in the competitiveness of their products with the rest of the world. At the same time, the crisis also forced ASEAN to turn inward and focus on their local markets.

Table 5. Shifts in shares at the one-digit SITC commodity group, ASEAN's exports to ASEAN and rest of the world (in US\$ billion)

Commodity Group and Year	Total ASEAN imports	ASEAN exports to ASEAN	ASEAN exports if constant share of Total ASEAN imports	Change due to change in ASEAN share	Total imports of ROW	ASEAN exports to ROW	ASEAN exports to ROW at constant share	Change due to change in ROW share
TOTAL								
1988	102.9	17.9	19.6	-1.7	2514.5	85.9	77.9	8.0
1990	157.5	26.2	30.2	-4.0	3093.5	114.7	95.9	18.8
1995	338.8	71.5	65.1	6.4	4424.6	238.9	137.2	101.7
2000	342.6	87.2	65.8	21.4	5911.9	316.8	183.3	133.5
2002	262.8	69.7	50.5	19.2	5999.9	243.7	186.0	57.7
2005	537.6	142.5	103.2	39.3	9455.8	463.9	293.1	170.8
SITC-0 (Food & live animals)								
1988	6.4	1.6	1.7	-0.1	209.5	9.6	9.0	0.6
1990	7.7	1.9	2.1	-0.2	240.7	10.7	10.4	0.3
1995	14.1	3.3	3.8	-0.5	331	16.6	14.2	2.4
2000	13.1	3.0	3.5	-0.5	333.2	14.9	14.3	0.6
2002	11.5	2.2	3.1	-0.9	360.1	6.4	15.5	-9.1
2005	19.4	4.1	5.2	-1.1	494.4	19.6	21.3	-1.7
SITC-1 (Beverages & tobacco)								
1988	0.7	0.1	0.1	0.0	25.2	0.4	0.4	0.0
1990	1.3	0.2	0.3	-0.1	32.2	0.9	0.5	0.4
1995	2.3	0.4	0.5	-0.1	43.8	1.7	0.6	1.1
2000	1.9	0.7	0.4	0.3	51.6	1.1	0.7	0.4
2002	1.8	0.8	0.4	0.4	58.5	0.9	0.8	0.1
2005	2.5	1.0	0.5	0.5	78.8	1.4	1.1	0.3
SITC-2 (Crude materials, inedible, except fuels)								
1988	5.3	1.3	1.3	0.0	154.7	10.3	9.1	1.2
1990	6.6	1.3	1.6	-0.3	165.1	8.4	9.7	-1.3
1995	11.6	2.1	2.9	-0.8	208.6	13.2	12.3	0.9
2000	9.7	1.3	2.4	-1.1	202.7	9.9	12.0	-2.1
2002	6.0	0.9	1.5	-0.6	196.4	7.0	11.6	-4.6
2005	12.5	2.5	3.1	-0.6	335.7	17.9	19.8	-1.9
SITC-3 (Mineral fuels, lubricants & related materials)								
1988	10.7	3.4	3.7	-0.3	223.8	14.2	14.5	-0.3
1990	18.1	5.8	6.3	-0.5	337.5	22.8	21.9	0.9
1995	22.3	5.3	7.8	-2.5	332.7	20.1	21.6	-1.5
2000	37.9	7.7	13.2	-5.5	611.2	33.4	39.7	-6.3
2002	28.9	6.8	10.1	-3.3	567.1	28.3	36.9	-8.6
2005	89.6	19.5	31.2	-11.7	1288.9	55.6	83.8	-28.2
SITC-4 (Animal & vegetable oils, fats & waxes)								
1988	0.8	0.5	0.6	-0.1	10.3	3.1	2.7	0.4
1990	0.6	0.4	0.5	-0.1	11.6	3.0	3.0	0.0
1995	0.9	0.8	0.7	0.1	23.3	7.0	6.0	1.0

Table 5. Shifts in shares at the one-digit SITC commodity group, ASEAN's exports to ASEAN and rest of the world (in US\$ billion) (cont'd)

Commodity Group and Year	Total ASEAN imports	ASEAN exports to ASEAN	ASEAN exports if constant share of Total ASEAN imports	Change due to change in ASEAN share	Total imports of ROW	ASEAN exports to ROW	ASEAN exports to ROW at constant share	Change due to change in ROW share
2000	0.6	0.5	0.5	0.0	19.1	5.4	4.9	0.5
2002	0.7	0.7	0.6	0.1	23.3	7.3	6.0	1.3
2005	1.2	1.2	1.0	0.2	35.0	11.5	9.1	2.4
SITC-5 (Chemicals & related products)								
1988	11.1	1.3	1.2	0.1	237.8	3.0	2.6	0.4
1990	15.6	1.8	1.7	0.1	280.8	3.4	3.1	0.3
1995	29.4	4.4	3.2	1.2	448.5	8.8	4.9	3.9
2000	28.6	5.6	3.1	2.5	570.3	15.3	6.3	9.0
2002	20.4	4.7	2.2	2.5	663.3	14.7	7.3	7.4
2005	45.0	12.3	4.9	7.4	1059.8	36.1	11.7	24.4
SITC-6 (Basic manufactures)								
1988	16.6	2.5	2.4	0.1	435.9	9.7	7.8	1.9
1990	25.3	3.4	3.7	-0.3	513.7	12.2	9.2	3.0
1995	49.0	7.9	7.2	0.7	730.2	24.4	13.1	11.3
2000	37.7	7.1	5.6	1.5	834.1	27.0	15.0	12.0
2002	24.7	5.5	3.6	1.9	843.9	18.0	15.2	2.8
2005	61.2	12.6	9.0	3.6	1288.6	37.8	23.2	14.6
SITC-7 (Machinery & transport equipment)								
1988	40.8	5.5	5.0	0.5	844.2	21.8	15.2	6.6
1990	66.6	8.6	8.2	0.4	1035.4	32.2	18.6	13.6
1995	172.4	36.5	21.2	15.3	1596.6	98.5	28.7	69.8
2000	184.5	54.3	22.7	31.6	2307.9	162.7	41.5	121.2
2002	138.4	39.3	17.0	22.3	2314.6	114.7	41.7	73.0
2005	263.5	77.5	32.4	45.1	3413.8	221.0	61.4	159.6
SITC-8 (Miscellaneous manufactured articles)								
1988	7.2	1.2	1.0	0.2	329.9	10.5	6.9	3.6
1990	12.1	2.3	1.7	0.6	424.8	18.2	8.9	9.3
1995	27.2	8.7	3.9	4.8	625	40.1	13.1	27.0
2000	25.8	6.0	3.7	2.3	807.3	44.4	17.0	27.4
2002	18.6	4.9	2.7	2.2	848.8	29.9	17.8	12.1
2005	35.5	9.6	5.1	4.5	1221	52.4	25.6	26.8
SITC-9 (Commodities & transactions, nec)								
1988	3.4	0.3	0.7	-0.4	44.1	3.4	3.7	-0.3
1990	3.6	0.5	0.7	-0.2	56.7	3.0	4.7	-1.7
1995	9.6	2.0	1.9	0.1	105.8	8.5	8.8	-0.3
2000	2.8	1.0	0.5	0.5	174.3	2.5	14.5	-12.0
2002	11.8	4.0	2.3	1.7	125.3	16.5	10.4	6.1
2005	7.2	2.2	1.4	0.8	239.9	10.6	19.9	-9.3

Source: United Nations Commodity Trade Statistics Database and authors' calculations.

The result of this study is consistent with previous research, which does not support trade diversion in AFTA. There are several reasons to believe this. First, the share of intra-ASEAN trade in the total trade of ASEAN remains very small. This indicates that major import sources for ASEAN member countries are outside the region (pre- and post-AFTA). Second, the absence of trade diversion may be due to ASEAN countries having similar production and trade structures and would source most of their diverse imports from the rest of the world.

CONCLUSION

Using recent trade data to analyse shifts and shares, this article has shown that the ASEAN Free Trade Agreement for the ASEAN-6 was trade creating rather than trade diverting. It was able to invigorate the trading environment in the region and intensify the economic linkages between economies in the region. The composition of trade evolved from the simple processed items of mineral fuels and the like to machinery and transport equipment, which involved more elaborate processes. Industrial restructuring such as this has strengthened the establishment of linkages in production between the ASEAN-6 member countries which is in keeping with AFTA's goal of turning the region into a single production base.

There was no evidence of trade diversion largely because ASEAN members' major trade partners remained outside the region after the AFTA. Hence, this suggests that trade liberalization on a multilateral basis would produce greater benefits to ASEAN economies. The efficiency and productivity of the region would be enhanced further under multilateral trade arrangements.

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