Inter- and Intra-ASEAN Regional Trade

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11 March 2009

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Abstract

The CEPT scheme for the ASEAN Free Trade Area (AFTA) is established to promote regional economic growth by accelerating liberalization in intra-ASEAN trade and investment. This paper aims to analyze the major trade trends in the ASEAN region. The inter- and intra-regional trade analyses yield some conclusions. *First,* there have been changes in the geographic destinations for the ASEAN countries' exports. Although Japan, the EU and the NAFTA are still dominant trade partners, China (Mainland), Hong Kong and Taiwan have increasingly become important geographic destinations for the ASEAN countries' exports. *Second,* the five original ASEAN members have dominated the intra-ASEAN regional trade. *Third,* there are positive relationships between the size of country and the share of intra-regional trade in the region. *Fourth,* the intra-ASEAN regional trade has been larger (intense) than expected given the ASEAN's importance in world trade, except Cambodia. *Fifth,* Constant Market Share analysis shows that the exports performance of ASEAN countries are mainly determined by the general rise in the world market. The establishment of AFTA, however, could increase competitiveness of ASEAN countries' export and change the exports destinations for a while.

JEL classification: F10, F14, F17
Keywords: Inter- and Intra-regional trade, Trade Intensity, ASEAN.

I. Introduction

The Agreement on the Common Effective Preferential Tariff (CEPT) Scheme for the ASEAN Free Trade Area signed in Singapore on 28 January 1992 aims to promote further cooperation among the ASEAN members in the region's economic growth by accelerating the liberalization in intra-ASEAN trade and investment. The CEPT is a system of agreed effective tariffs, preferential to the ASEAN members, to be applied for goods originating inside the ASEAN region[1]. The article 1 of the Protocol to Amend the Agreement on the CEPT scheme for the AFTA for the elimination of Import Duties (2003) clearly stipulates:

1. Import duties on products in the Inclusion Lists of Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand shall be eliminated not later than 1 January 2010.
2. Import duties on products in the Inclusion Lists of Cambodia, Lao PDR, Myanmar and Viet Nam shall be eliminated not later than 1 January 2015, with flexibility however allowed for import duties on some sensitive products to be eliminated not later than 1 January 2018.

[1] In the Agreement on the CEPT for AFTA Article 2 point 4, it is clearly stated that a product will be deemed to be originating from ASEAN member states, if at least 40 percent of its content originates from any member states.

A question on whether the establishment of the AFTA through the CEPT scheme could intensify the intra-ASEAN trade has emerged. Elliott and Ikemoto (2002) find that trade flows were not considerably affected in the years soon after the signing of the AFTA agreement. In addition, the outward-looking policies pursued by the ASEAN countries were also not much affected but rather encouraged by the AFTA process. Hence, examining major trade trends in the ASEAN region becomes an interesting research topic. This paper is addressed to answer the following questions: (1) What are the geographic destinations of the ASEAN exports? (2) Does the country size matter in the intra-ASEAN trade? (3) Which countries are more dependent upon the intra-ASEAN trade? (4) How far have the geographic patterns of regional trade dependence changed? (5) How intense is the intra-ASEAN trade?

The remainder of this paper consists of nine sections. Section II describes the literature review on trade creation and trade diversion. Section III describes intra-regional trade in the ASEAN region. Section IV shows the changes in geographic destinations of ASEAN counties' exports. Section V examines the relationship between the country size and intra-regional trade. Section VI describes the dependence of the ASEAN countries upon intra-regional trade. Section VII represents the intensity of intra-regional trade and Section VIII exhibits the intensity of bilateral trade. Analysis on export performance using the Constant Market Shares (CMS) method is described in Section IX. Finally, several conclusions are presented in Section X.

II. Literature Review: Trade Creation and Trade Diversion

Since the beginning of multilateral trade system, many regional trade agreements and regional economic integrations have been established, such as the European Union (EU), the North American Free Trade Agreement (NAFTA), the *Mercado Común del Sur* (MERCOSUR, Southern Common Market), the Association of South East Asian Nations (ASEAN) - Free Trade Area (AFTA), etc. Regional trade agreements are basically the creation of trade or economic blocs. Theoretically, there are five stages of economic blocs, which are ordered by the progression toward increasing integration, i.e. Free Trade Area, Customs Union, Common Market, Economic Union, and Complete Economic Integration (Balassa, 1961; Lindert and Pugel, 1996; McCarthy, 2006). In Free Trade Area, tariffs (and other quantitative restrictions) among the participating countries are abolished. However, each country still maintains its own tariffs against the nonmembers. In the Customs Union, besides introduction of the free movements of commodities within the union, the common external tariffs in trade with the nonmember countries are set up. In Common Market, not only trade restrictions but also restrictions on factor movements are abolished.

In Economic Union, the countries combine the suppression of restrictions on commodity and factor movements with some degree of harmonization of national economic policies, in order to remove discrimination due to disparities in these policies. In Complete Economic Integration, unification of monetary, fiscal, social and countercyclical policies will be observed. It also requires the setting-up of a supra-national authority whose decisions are binding for the member states. The direction currently followed by the East Asia seems to be different from that of the EU (Fouquin *et al.*, 2006). The *de jure* economic integrations such as the EU and the NAFTA have given

much attention on institutional issues that are closely related to governmental roles. The only one *de jure* economic integration in the East Asia is the ASEAN Free Trade Area (AFTA).The ASEAN is sometimes referred to as the cornerstone for the further economic integration in East Asia. At least, this can be indicated from the establishments of the ASEAN-China Free Trade Agreement, ASEAN-Korea Free Trade Agreement and ASEAN-Japan Economic Partnership Agreement. Indeed, the *de facto* economic integration in the East Asia has been strongly supported by the private sectors such as domestic companies as well as multinational corporations (MNCs).

Figure 1 about here.

Theoretically, the achievements of trade blocs, to some extent, will bring positive as well as negative implications that might appear in the forms of trade creation and trade diversion for the member and non-member countries (Viner, 1950; McCarthy, 2006). Trade creation is the net volume of new trade generated by forming the trade bloc, while trade diversion is the volume of trade diverted from low-cost exporters to higher-cost bloc-member exporters. To explain the concepts of trade creation and trade diversion, let us consider three countries A, B and C. Figure 1 represents the trade creation and trade diversion in country A. Panel (a) shows domestic demand (D_X) and supply (S_X), while Panel (b) represents domestic demand for imports X (D_X^M) and supply for imports X (from countries B and C). To make a simple analysis, it is assumed that all the supply curves are perfectly horizontal. Country A faces an outside-world price P_C (the lowest cost of country C). Before forming a trade block, country A imposes a tariff t_0 on import such that the initial domestic price $P_0(=P_C+t_0)$. At this domestic price level, country A imports X for amount q_1q_2 in Panel (a), which corresponds with P_0E_0 or $0m_1$ in Panel (b). This amount of imports X is only supplied by country C. The county A's government will

get tariff revenue, the area m+n. Suppose countries A and B make free trade agreement (trade block), which removes tariff on good X for the members while leaving the same old tariff t_0 on good X from the outside block, country C. Hence, good X from country B would cost only P_B (instead of that plus the tariff t_0) and would take over the import of X into country A. Domestic buyers, seeing the price drop from P_0 to P_B, would buy more imported X (shifting from point E_0 to E_1), with all import now coming from country B, instead of from the cheapest outside source, country C. Consumer surplus increases by m+o, but the government revenue decreases by m. Country C ends with two welfare effects. In addition, the trade bloc also diverts imports m_1m_3 from the cheapest foreign supplier, country C, imposing extra cost (area n). *First,* a welfare gain from trade creation (area o). Area o represents two kinds of gain in country C's economy: gain on extra consumption of the product (consumption effect), and gains on replacement of higher cost country's C production by lower-cost country's C production (resources reallocation effect). *Secondly,* a welfare loss from trade diversion. This is represented by area n. Therefore, the net welfare effect, the trade-creation gain minus the trade-diversion loss, could be positive or negative.

Would the establishment of AFTA, as a trade bloc, also bring significant trade creation and trade diversion for the member and non-member countries? We would argue that trade creation and trade diversion will not strongly exist in the case of AFTA. The main reason for this is that the nature of inter-regional trade of ASEAN countries is dominated by "North-South" type, i.e. trade between developed countries (especially Japan, the EU and the US) and developing countries (here, ASEAN countries), while intra-regional trade is "South-South" one, i.e. trade among developing countries. In 1995, inter-regional trade between ASEAN and the Japan, the EU as well as the US all together

covered more than 47 percent of the ASEAN's total exports. This inter-regional trade was mostly dominated by inter-industry trade i.e. trade in the different industries. In 1995, the intra-regional trade in the ASEAN region reached 25.3 percent of the ASEAN's total exports. Meanwhile, intra-regional trade is significantly dominated by intra-industry trade, i.e. trade in the same industries. Since the "North-South" type is complementary and the "South-South" one is substitution, the establishment of AFTA might not cause trade creation and trade diversion significantly. Trung and Hashimoto (2005) find that the AFTA has only produced the trade creation among its members.

III. Intra-regional Trade in the ASEAN Region

Table 1 shows the values and growth rates of the intra-regional trade in the East Asia (including the ASEAN[2]), the European Union (EU) and the North American Free Trade Area (NAFTA) in 1995, 2000 and 2005. The values of intra-regional trade in those regions increased and that in the ASEAN region increased from US $ 81,711 million in 1995 to US $ 152,167 million in 2005. Meanwhile, the intra-regional trade in the ASEAN+3 region increased from US $ 367,872 million in 1995 to US $ 792,955 million in 2005. During 1995-2000, the NAFTA had a relatively higher growth rate in the intra-regional trade since the NAFTA came into effect on 1 January 1994 compared with that of the East Asia and the EU. However, the growth rate of intra regional trade in the

[2] In this paper, the ASEAN consists of all 10 members: Singapore, Malaysia, the Philippines, Thailand, Indonesia, Brunei Darussalam, Viet Nam, Lao PDR, Cambodia, and Myanmar. Ng and Yeats (2003: 81) find that Singapore failed to report any trade with Indonesia after 1964, mainly due to a high volume of illicit trade (smuggling) between the countries. We also find that there is very big discrepancy between the exports value of Singapore to Indonesia (US $ 22,109 million) and the imports value of Indonesia from Singapore (US $ 9,471 million) in 2005. Therefore, we use the imports value of Indonesia from Singapore to replace the exports value of Singapore to Indonesia since the former is much more consistent with the total export value of Singapore in 2005. This also applies for years 1995 and 2000.

NAFTA became lower for 2000-2005. Similarly, the establishment of the AFTA among the six original ASEAN members in 2002 also increased the intra regional trade. The growth rate of intra regional trade increased almost double from 24.6 percent for 1995-2000 to 49.4 percent for 2000-2005. It strongly supports the argument of trade creation and trade diversion in the early stage of economic integration.

Table 1 about here.

Japan, Korea and China have been the dominant trade partners of the ASEAN countries. It is shown by the high values of intra-regional trade among them. In 2005, the intra-regional trade in the ASEAN region was US $ 152,167 million, meanwhile intra-regional among Japan, China and Korea was US $ 331,839 million. The intra-regional trade in the ASEAN+3 region was US $ 792,955 million. It means there was US $ 309,949 million additional intra-regional trade between the ASEAN and the three (Japan, China and Korea). The three and other economies in the East Asia, especially Hong Kong and Taiwan, are very important trade partners for the ASEAN countries. Isogai *et al.* (2002) note three main features of trade in the East Asia. *First,* the East Asian economies are highly dependent on exports. Excepting Japan, the overall share of exports to Gross Domestic Product (GDP) was 41.1 percent over the period 1995-2000.

Second, the high export dependence of the East Asian economies is closely related to the increase of foreign direct investment flows into the region originating from Japan, the US and the other countries outside the region. While some investment may have been undertaken to serve domestic market in the region, the majority of investment appears to be export-oriented. Kojima (1995) finds that Japanese investment in the East Asian economies expanded and was generally of the pro-trade-oriented type. The East Asian countries have naturally become processing and production base for Japanese

multinational corporations, for example, in the Information Technology (IT) sector through production sharing or production fragmentation (Athukorala, 2003; Athukorala and Yamashita, 2006; Ng and Yeats, 2003). *Third,* the increasing role of East Asia as production base requires imports of intermediate and capital goods largely supplied by Japan.

IV. Geographic Destinations of Exports

An important question regarding the ASEAN countries' exports is whether the significant changes in the geographic destinations of exports have occurred. Hufbauer and O'Neill (1988) and Yeats (1990), among others, state that countries need to diversify the origins and destinations of their trade to avoid unfavorable monopoly effects associated with excessive concentration of their exports.

Table 2 about here.

Table 2 shows changes in the geographic destinations of the ASEAN's exports for 1995, 2000 and 2005. The ASEAN's intra-regional trade is compared with four major geographic exports destinations i.e. the three (Japan, Korea and China), the EU, the United States (US) and the rest of the world. The figures indicate that the significant changes occurred in the general geographic destinations of the ASEAN's exports for 1995-2000. Intra-regional trade within the ASEAN countries still covered a big portion on average about 24.5 percent of the ASEAN's total exports for 1995-2005. For years 1995 and 2000, the share of total exports destined for Japan, the EU and the US decreased from 12.4 percent to 11.6 percent, from 14.1 percent to 13.1 percent and from 18.5 percent to 14.8 percent, respectively. Meanwhile, the shares of total exports destined for China, Korea and the rest increased for the same years.

V. Intra-ASEAN Trade: Does the country size matter?

The ASEAN has big economic disparities among the members as depicted by the discrepancies in the GDP per capita. Theoretically, it might be argued that if countries engaged in regional trade vary significantly in their economic size, negative implications concerning the benefits of this exchange might rise. In such case, changes in international or macroeconomic (fiscal or monetary) policies of a dominant member will have major adverse effects on the smaller members. Ng and Yeats (2003) give a very good example on the *Mercado Común del Sur* (MERCOSUR). Brazil is the dominant member of the original Latin American MERCOSUR agreement (other original members are Argentina, Paraguay and Uruguay) with GDP two and one-half times larger than that of the three smaller members combined, and population almost four time greater. Brazil's major devaluation of the Real in the late 1990s resulted in significant exports losses for Argentina. Another example, China's major devaluation of RMB in 1994 had influenced the economic stability in the East Asia, which to some extent also contributed to the Asian crisis. Some researchers might argue that significant differences in the size of intra-regional trade flows can potentially have negative effects for some partners if resources are drawn disproportionately to areas where production for exports is relatively high (Jabar, 1971). More recently, Michaely (1994) demonstrates the lack of similarities between member countries' major imports and exports played an important role in the failure of regional trade agreement.

Figure 2 about here

Figure 2 describes the shares of intra-regional trade (IRT as shown by the bar chart) and Gross Domestic Product (GDP as shown by the line graph) of the ASEAN countries in 1995, 2000 and 2005. The intra-regional trade in the ASEAN region was

dominated by Singapore, followed by Malaysia, Thailand, Indonesia and the Philippines. Around 40 percent of the intra-regional trade in the region was covered by Singapore. Meanwhile, the combined GDP was dominated by Indonesia. However, Indonesia's GDP per capita was relatively low if compared with Singapore, Malaysia and Thailand, due to large number of population. It is clearly shown that there is positive relationship between the intra-regional trade and size of country (represented by the share of GDP). The bigger the country size becomes, the bigger shares of intra-regional trade the country obtains[3].

Table 3 shows the shares of intra-regional trade for the individual ASEAN member countries. It is clear that the ASEAN original members (Singapore, Malaysia, Thailand, Indonesia and the Philippines, commonly abbreviated as the ASEAN5) dominated the intra-regional trade in the ASEAN region. The original members all together covered more than 95 percent of the intra-regional trade.

Table 3 about here.

VI. Dependence upon Intra-regional Trade

The previous section shows that the size of country has a positive relationship with the intra-regional trade in the ASEAN region. It might be commonly believed that larger countries are often able to export broader range of products that, in turn, help them enlarge the geographic direction of their trade. Khalaf (1974), Stanley and Bunnag (2001) and Ng and Yeats (2003), among others, find that smaller countries' exports are generally less diversified and often able to maintain relatively fewer trade contacts. In contrast,

[3] The analysis of Pearson correlation using panel data (cross section: Singapore, Indonesia, Malaysia, Thailand, the Philippines, Brunei, Cambodia, Myanmar, Vietnam and Lao PDR; and time series: 1995, 2000, 2005) shows that the correlation coefficient between the share of intra regional trade and the share of Gross Domestic Product is 0.47. It is statistically significant at 1 percent level of significance.

bigger countries have a larger trade base; therefore, they might have more capacity to develop required logistic infrastructure to maintain commercial relationship with a greater number of trading partners. If it is the case, it might be presumed that the smaller ASEAN countries might be more dependent on geographically nearer regional markets (intra-regional trade).

Table 4 about here.

Table 4 shows the individual ASEAN country' exports destined for the other ASEAN countries, Japan, China (Mainland, Hong Kong and Taiwan), Korea, the EU, the US and the rest of the world. All countries had relatively high proportion of exports destined for the other ASEAN countries as intra-regional trade, excepting Cambodia. However, it decreased for some countries such as Singapore and Malaysia, which had relatively high dependence on intra-regional trade. In 2005, Myanmar and Lao PDR had relatively high proportion exports destined for the other ASEAN countries i.e. 51.4 percent and 43.8 percent, respectively.

VII. The Intensity of Intra-regional Trade

How 'intense' is the intra-regional trade in the ASEAN region is the crucial question since the dominance of the three (Japan, China, and Korea), the EU and the US as major trading partners of the ASEAN countries exists. This paper applies a measure called trade intensity (TI) index to examine whether the value of trade between two countries is greater or smaller, than it might be expected, based on their relative importance in world trade. For example, IMF-DOTS (2006) data shows that approximately 28.6 percent of Singapore's exports went to the other ASEAN countries in

2005. The question is whether this figure is above or below than what should be expected based on the partner's relative size in the global trade. Trade intensity (TI) index is formulated as follows (Drysdale and Garnout, 1982):

$$TI_{jk} = \frac{\left[\frac{x_{jk}}{X_j}\right]}{\left[\frac{x_{wk}}{X_w}\right]_t} \quad (1)$$

where TI_{jk} is trade intensity index of country j for exports destination k, x_{jk} and x_{wk} country j's and world's exports to k, respectively. X is total exports. Therefore, the index reflects the ratio of the share of country j's exports going to country j, relative to the share of world trade destined for county j (Drysdale and Garnout, 1982; Frankel, 1997). An index of more (less) than unity is interpreted as indicating a bilateral trade flow is larger (smaller) than expected, given the partner country's importance in the world trade.

Many researches have combined both imports and exports statistics to calculate the index. These data could produce somewhat different results if a country's trade (that is, exports versus imports) was seriously out of balance. In addition, some modified versions of equation TI_{jk} have subtracted country j's imports from the world trade total (X_{wk}) to account for the fact that a country cannot trade with itself (Ng and Yeats, 2003). However, given relatively small size of the ASEAN countries, this adjustment would have produced somewhat similar result.

Figure 3 about here.

Figure 3 shows the trade intensity index for each ASEAN countries in 1995, 2000 and 2005. In this figure, the index shows how 'intense' a specific ASEAN country's exports destined for the other ASEAN countries. In equation (1), k is the other ASEAN

countries. It is clearly shown that the index is more than unity indicating that trade flow is larger than expected, given the ASEAN's importance in world trade, excepting Cambodia in 2005. In other words, all countries have relatively 'intense' exports destined to the ASEAN market for 1995, 2000 and 2005, excepting Cambodia in 2005. Comparing the index in 1995 and 2005, all the ASEAN members had positive trend in the index, except Cambodia. The original members and Viet Nam had a steady increase in the index. Meanwhile, Myanmar and Lao PDR had similar pattern. Since two countries very much depend on the intra-regional trade, the Asian economic crisis had impacts on their exports destined to the ASEAN countries especially Indonesia, Thailand and Malaysia. As a result, the intensity index slightly decreased in 2000. However, it increased in 2005.

Cambodia is the only member of the ASEAN with decrease in the intensity index. In 1995, the index was still high; however, it decreased drastically in 2000 and 2005. The reason for it is the higher engagement in international relation between Cambodia and the US. In Table 6, it clearly shown that the share of Cambodian's exports destined for the US increased drastically from 1.4 percent in 1995 to 65.9 percent in 2000 and to 48.6 percent in 2005. The US is the largest overseas market for Cambodian products, mostly textiles and apparel. Cambodia's garment industry contributes one-third of the country's gross national product and 80 percent of its exports earnings. In 1996, the Clinton Administration signed a trade agreement with Cambodia, and the 104th Congress extended normal trade relations (NTR) status (Lum, 2005). In addition, in 1997 President Clinton designated Cambodia a Least Developed Country under the US Generalized System of Preferences (GSP). As a result, Cambodian exports to the US, mostly textiles and apparel, increased drastically from US $ 3.7 million in 1996 US $ 1.4 billion in 2004. With the end of quotas on textiles for WTO member states in 2005, the market for textile

and apparel exports has become more competitive. India and China, has several comparative and competitive advantages compared with Cambodia and many other small textile-producing countries.

VIII. The Intensity of Bilateral Trade

There is one important shortcoming of the standard trade intensity index described in equation (1). It is that the index does not consider distances between individual countries. With all other things being equal, countries close to each other might be expected to have more 'intense' trade relations than those geographically far away. This consideration has been supported by the gravity model of international trade (Tinbergen, 1962). For example, IMF-DOTS (2006) reported that approximately 15.6 percent of Malaysia's exports went to Singapore and 5.4 percent of her exports went to Thailand in 2005. The question is whether these figures are above or below than what should be expected based on the partner's relative size in global trade and on the distance between Malaysia and Singapore, as well as Malaysia and Thailand.

In recognition of the geographic distances among countries in the ASEAN region, a modified application of the standard TI index is employed to analyze the intensity of bilateral trade. This research uses the research finding of Ng and Yeats (2003). Applying a simple regression model and bilateral statistics from randomly drawn sample of both East Asian countries and non-East Asian countries, they find significant negative relationship between trade intensity and geographic distance as follows:

$$\begin{aligned} \text{Log}(TI_{jk}) &= 0.6245 - 0.00015\ (\text{Dist}) \\ &\quad (6.72) \quad (9.971) \\ &\quad R^2 = 0.672 \end{aligned} \qquad (2)$$

where $\text{Log}(TI_{jk})$ is logarithm form of trade index of country j for exports destination k, Dist is distance between the capitals of exporting and importing countries (in miles). Figures in parentheses are critical t values (which are all statistically significant at 1 percent level of significance). Ng and Yeats (2003) then uses the estimated equation to project the "expected" trade intensity (TI^{*}_{jk}) given the geographic distance between two countries. The ratio of the actual to expected trade intensity is expressed as:

$$R_{jk} = \frac{TI_{jk}}{TI^{*}_{jk}} \qquad (3)$$

If the ratio is greater than unity, the bilateral trade intensity between the two countries is higher than expected given the distance that separates them. In contrast, if the ratio is less than unity, trade intensity is lower than expected. Finally, the actual value of the expected adjusted trade intensity index can be derived from:

$$TI^{*}_{jk} = \frac{TI_{jk}}{R_{jk}} \qquad (4)$$

If the value of the traditional trade intensity (equation 1) index fails to exceed (TI^{*}_{jk}) (equation 4), the intensity of bilateral trade must be considered as lower than expected even if the former exceeds unity.

By using data on distance taken from the CEPII (2005)[4] and applying equation (2), we calculate the expected trade intensity for all the ASEAN members. Table 5 reports values for the expected distance adjusted trade intensity indices between the ASEAN

[4] CEPII stands for the *Centre d'Etudes Prospectives et d'Informations Internationales.* The CEPII has calculated and made available different measures of bilateral distances (in km) for most countries across the world (225 countries in 2006). Data is available online: http://www.cepii.fr/angalisgraph/bdd/distances.htm.

countries in 2005. Since the distance remains constant, the expected trade intensity is also fixed. The value of indices can be considered as the criteria of trade intensity with geographic distance consideration. Therefore, the standard trade intensity index exceeding unity is only necessary condition for being said 'intense' in bilateral trade. The standard trade intensity index exceeding the expected trade intensity index is sufficient condition for being said 'intense' in bilateral trade with geographic distance consideration.

Table 5 about here.

Table 6 shows the standard intensity index. In the case of the value of standard intensity index exceeding unity, but still falling below the critical value of the distance adjusted (expected index in Table 5), the value is marked with an asterisk. The purpose here is to quickly identify situations where the standard index might be improperly lead the conclusion that trade between two the ASEAN members was more intense than expected. For example, there were 11 bilateral trade flows where the standard trade intensity index exceeded unity, but which fell short of the expected distance adjusted index in 2005. In general, it can be stated that intra-trade in the ASEAN region might be classified as highly intense in 2005. It follows the fact that trade intensity indices for 48 (60 percent) out of 90 possible bilateral trade flows among the ASEAN countries exceed their critical expected value which is distance adjusted.

Table 6 about here.

The intra-regional trade within the five original members of the ASEAN (Singapore, Indonesia, Malaysia, Thailand and Philippines, commonly abbreviated as ASEAN5) can be categorized as highly intense since there were 19 (95 percent) out of 20 possible bilateral trades exceed their critical expected value which is distance adjusted. Furthermore, the evidence strongly suggests that the intensity of trade between the

ASEAN5 countries has been increased significantly for 1995-2005. In contrast, the intra-regional trade within the new members of the ASEAN was low in intensity. In addition, the intra-regional trade between the original and new members was also low in intensity. It seems that only Thailand and Viet Nam can raise their intensity of trade between original and new members of the ASEAN, because both countries have comparative advantage in agriculture products.

IX. Export Performance: Constant Market Share Analysis

Export performance of a country changes dynamically. Theoretically, it can be explained by the demand and supply sides. The demand side relates with the economic development of the country's exports destinations or markets. For example if the income per capita and the number of population in the markets increase, hopefully, the country's exports will consequently also increase. Meanwhile, the supply side closely relates with how the country could compete with other sources of supply. The country's relative factor endowments including natural resources, capital, human resources, infrastructures and technology create its comparative as well as competitive advantages. To analyze the dynamic export performance of the ASEAN countries, we apply the Constant Market Share analysis (CMS) method by Leamer and Stern (1970:174), which is formulated as follows[5]:

$$V'_{\bullet\bullet} - V_{\bullet\bullet} \equiv \sum_i \sum_j r_{ij} V_{ij} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij})$$

$$\equiv r V_{\bullet\bullet} + \sum_i (r_i - r) V_{i\bullet} + \sum_i \sum_j (r_{ij} - r_i) V_{ij} + \sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij} V_{ij}) \qquad (5)$$

(a) (b) (c) (d)

Where:

[5] See Tyszynski (1951), Richardson (1971a, 1971b), Fagerberg and Sollie (1987) and Widodo (2008) for other versions of the CMS method.

$V_{i\bullet}$ = value of country A's exports of commodity i in Period 1

$V'_{i\bullet}$ = value of country A's exports of commodity i in Period 2

$V_{\bullet j}$ = value of country A's exports to country j in Period 1

$V'_{\bullet j}$ = value of country A's exports to country j in Period 2

V_{ij} = value of country A's exports of commodity i to country j in Period 1

V'_{ij} = value of country A's exports of commodity i to country j in Period 2

r = percentage increase in total world exports from Period 1 to Period 2

r_i = percentage increase in world exports of commodity from Period 1 to Period 2

r_{ij} = percentage increase in world exports of commodity i to country j from Period 1 to Period 2

The change in country A's exports $\left(V'_{\bullet\bullet} - V_{\bullet\bullet}\right)$ can be divided into four components associated with:

(a) The general rise in world exports, $\left(rV_{\bullet\bullet}\right)$;

(b) The commodity composition of country A's exports, $\left(\sum_i (r_i - r)V_{i\bullet}\right)$. The commodity composition will be positive if A has concentrated on the export of commodities whose markets are growing relatively faster and will be negative if A has concentrated in slowly growing commodity markets.

(c) The market distribution of country A's exports, $\left(\sum_i \sum_j (r_{ij} - r_i)V_{ij}\right)$. The market distribution effect $\sum_i \sum_j (r_{ij} - r_i)V_{ij}^{A0}$ will be positive if country A has concentrated its exports in markets with relatively rapid growth.

(d) The unexplained residual (the competitiveness effect), $\left(\sum_i \sum_j (V'_{ij} - V_{ij} - r_{ij}V_{ij})\right)$.

This paper uses data on exports 3-digit SITC Revision 2 by products and destinations published by the United Nations (UN) namely United Nations Commodity Trade Statistics Database (UN-COMTRADE). It applies the definitions of products by the

Empirical Trade Analysis (ETA)[6]. On the basis of the United Nations Conference on Trade and Development (UNCTAD) / World Trade Organization (WTO) classification using the SITC Rev. 3, the ETA distinguished the following products: (a) Primary products (83 SITC), (b) Natural resource-intensive products (21 SITC), (c) Unskilled labor-intensive products (26 SITC), (d) Technology-intensive products (62 SITC), (e) Human-capital intensive products (43 SITC), (f) Others (5 SITC). This paper defines the export destinations consisting of the ASEAN, the North East Asia, the EU and the NAFTA and the rest of the world (Rest).

Table 7 about here.

Table 7 shows the results of calculation for the ASEAN5 for the periods of observation 1985-1990, 1990-1995, 1995-2001 and 2001-2006. The second column row represents the changes in values of exports, and the next four columns show the four effects (in percent) contributed to the changes. In general, we can say that the ASEAN5 countries' exports are affected dominantly by the world trend (the general rise in the world exports effect). The constant norm share strongly applies in the case of ASEAN countries since 1985. It means that export performance of ASEAN countries only follows the general trend in world exports.

Massive proliferation of regionalization and economic integration in the early 1990s caused the changes in direction of trade. It might be believed that regionalism and economic integration increases the intra-regional trade. The EU was established in 1993 under the Maastricht Treaty, the NAFTA came into effect in 1994. The ASEAN Free Trade Area (AFTA) was started in 1992 through the Common Effective Preferential Tariff (CEPT). Through trade creation and trade diversion, the establishments of

[6] See Empirical Trade Analysis (ETA) at http://people.few.eur.nl/vanmarrewijk/eta/ for further information.

economic integration – the AFTA in the case of ASEAN- have changed exports destinations, which intra-regional trade may take place in the larger portion. As results during the period 1990-1995, the general rise in world exports had smaller portion in affecting regions' export performance compared with the previous period 1985-1990. In general, the decreasing portion of the effect of general rise in world exports was followed by the increasing portion of the competitiveness and market distribution effects.

However, the general rise in world export have again had greater portion since 1995 for all ASEAN countries, except the Philippines, which seems to be closely related with the establishment of the NAFTA market. Whether the establishment of the AFTA through the Agreement on the Common Effective Preferential Tariff (CEPT) scheme has intensified the intra-ASEAN trades is still questionable. Elliott and Ikemoto (2002) find that trade flows were not considerably affected in the years soon after the signing of the AFTA agreement. In addition, the outward-looking policies conducted by the ASEAN countries were also not significantly affected but rather encouraged by the AFTA process.

X. Conclusions

The geographic destinations of the ASEAN's exports have slightly changed. Although Japan, the EU and the NAFTA are still dominant trade partners, the share of the ASEAN's exports to those trade partners decreased for 1995-2005. China (Mainland, Hong Kong and Taiwan) significantly has become important geographic destinations of ASEAN's exports. The ASEAN5 countries have dominated the intra-regional trade in the ASEAN region. They covered more than 95 percent of the intra-regional trade. There is a positive relationship between the size of country and the share of intra-regional trade in

the region. The intra-regional trade in the region has been larger (intense) than expected given the ASEAN's importance in world trade, except Cambodia, which is much engaged in the US market. There have been positive trends in intensity of the intra-regional trade, which is mainly supported by the original members. In general, only Thailand and Viet Nam have increased intensity in trade with the new members of the ASEAN. The value and growth rate of intra-regional trade in the ASEAN region are relatively low, compared with in the North-East Asia (Japan-Korea-China). The North-East Asian countries have increasingly become important as trade partners of the ASEAN countries. Put the general rise in the world effect aside, the Constant Market Share analysis shows that the market distribution effect and the competitiveness effect have greater contributions to the increasing exports than the commodity composition effect in the case of ASEAN5. Therefore, the ASEAN-China Free Trade Agreement (ACFTA), ASEAN-Korea Free Trade Agreement (AKFTA) and ASEAN-Japan Economic Partnership Agreement (AJEPA) are expected to have greater impact on inter- and intra-regional trade in the region.

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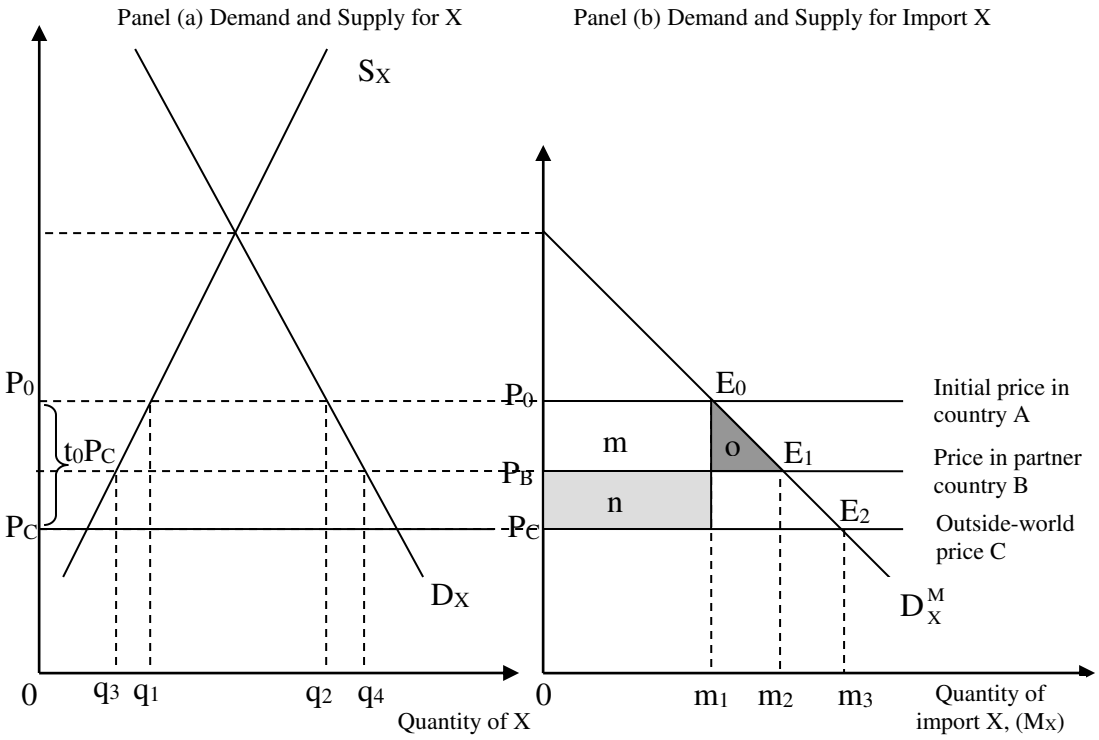
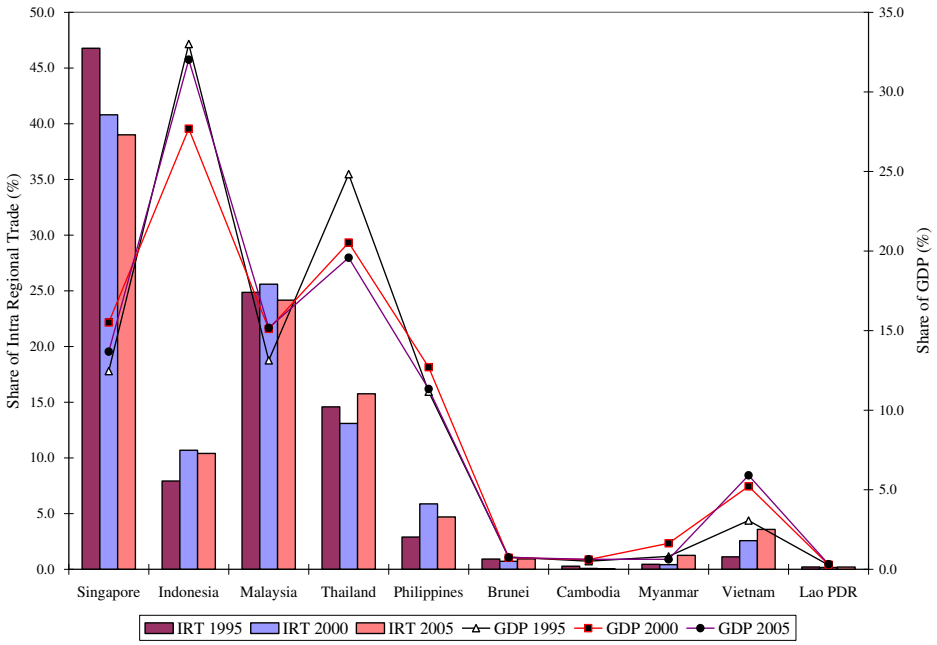
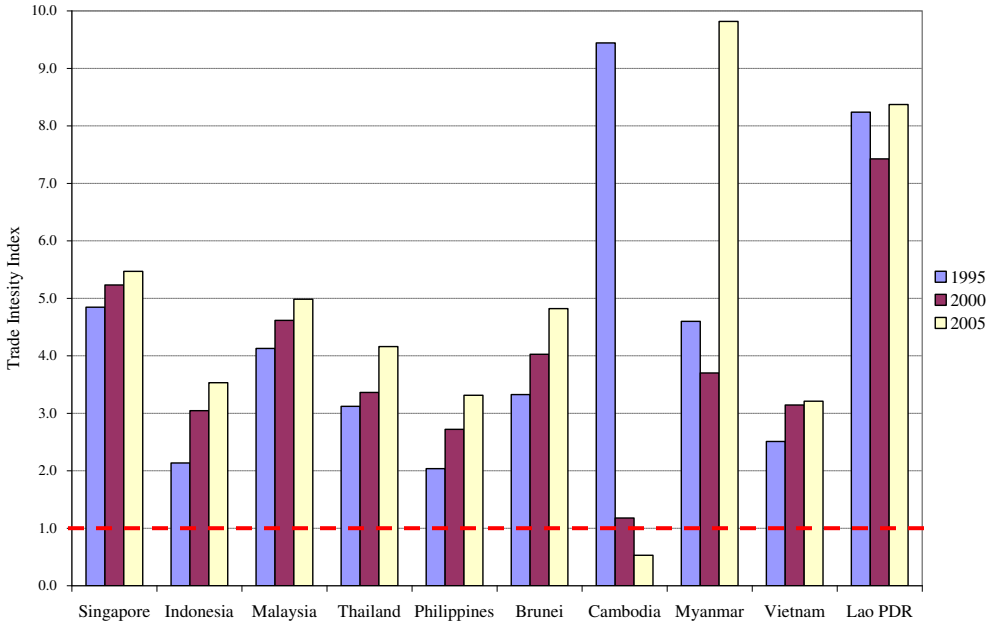


Figure 1. Trade Creation and Trade Diversion



Source: DOTS-IMF (1998, 2006) and ASEAN-Japan centre (2006), *author's calculation.*

Figure 2. The ASEAN Countries' Shares of Intra-regional Trade and GDP: 1995, 2000 and 2005



Source: DOTS-IMF (1998, 2006), *author's calculation.*

Figure 3. Trade Intensity Indices of the ASEAN Countries: 1995, 2000 and 2005

Table 1. Intra-regional Trade: Values and Growth

Regions	Value (Millions US $)			Growth (%)	
	1995	2000	2005	1995-2000	2000-2005
1. East Asia	592,763.0	729,504.5	1,282,905.4	23.1	75.9
ASEAN	81,711	101,848	152,167	24.6	49.4
Japan, China, Korea	114,660	152,927	331,839	33.4	117.0
ASEAN+3	367,872	449,779	792,955	22.3	76.3
2. EU	1,259,700	1,618,920	2,653,180	28.5	63.9
3. NAFTA	394,472	676,142	824,550	71.4	21.9
World	5,068,200	6,386,400	10,334,700	26.0	61.8

Note: ASEAN+3 consists of all the ten ASEAN member countries, Japan, China and Korea
Source: DOTS-IMF (1998, 2006), *author's calculation.*

Table 2 Geographic Destinations of the ASEAN's Exports: 1995, 2000 and 2005

Year	Total Exports (US $ Million)	Share of Total Exports Destined for (%)								
		Intra-ASEAN Trade	Japan	China			Korea	EU	USA	Rest
				Mainland	Hong Kong	Taiwan				
1995	322,602	25.3	14.4	2.7	6.1	2.7	3.2	14.1	18.5	13.0
2000	426,633	23.9	13.4	3.8	5.3	4.8	3.6	14.7	19.0	11.5
2005	629,091	24.2	11.6	8.3	6.6	3.3	4.0	13.1	14.8	14.1
Average (1995-2005)		24.5	13.1	5.0	6.0	3.6	3.6	14.0	17.4	12.9

Source: DOTS-IMF (1998, 2006), *author's calculation.*

Table 3. Shares of Intra-ASEAN Trade: 1995, 2000 and 2005 (in %)

(a) 1995

Importers / Exporters	Singapore	Indonesia	Malaysia	Thailand	Philippines	Brunei	Cambodia	Myanmar	Vietnam	Lao PDR	Total
Singapore		2.90	27.74	8.35	2.36	1.79	0.61	0.78	2.19	0.05	46.77
Indonesia	4.61		1.21	0.86	0.72	0.00	0.10	0.07	0.35	0.00	7.92
Malaysia	18.31	1.19		3.51	0.80	0.35	0.10	0.28	0.33	0.00	24.86
Thailand	9.69	0.99	1.90		0.51	0.08	0.41	0.00	0.57	0.43	14.58
Philippines	1.22	0.15	0.38	0.98		0.00	0.00	0.00	0.15	0.00	2.89
Brunei	0.38	0.02	0.04	0.46	0.03		0.00	0.00	0.00	0.00	0.92
Cambodia	0.05	0.00	0.02	0.18	0.00	0.00		0.00	0.03	0.00	0.28
Myanmar	0.23	0.12	0.05	0.05	0.00	0.00	0.00		0.00	0.00	0.45
Vietnam	0.84	0.07	0.01	0.00	0.05	0.00	0.12	0.00		0.03	1.12
Lao PDR	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.11		0.21
Total	35.33	5.43	31.35	14.48	4.46	2.23	1.33	1.14	3.73	0.51	100.00

(b) 2000

Importers / Exporters	Singapore	Indonesia	Malaysia	Thailand	Philippines	Brunei	Cambodia	Myanmar	Vietnam	Lao PDR	Total
Singapore		3.72	24.59	5.77	3.33	0.48	0.42	0.43	2.05	0.03	40.80
Indonesia	6.44		1.94	1.01	0.81	0.03	0.05	0.06	0.35	0.00	10.69
Malaysia	17.72	1.68		3.49	1.70	0.25	0.07	0.23	0.47	0.00	25.59
Thailand	5.89	1.31	2.76		1.06	0.04	0.34	0.49	0.82	0.37	13.10
Philippines	3.07	0.18	1.35	1.18		0.00	0.00	0.01	0.07	0.00	5.87
Brunei	0.23	0.03	0.01	0.45	0.00		0.00	0.00	0.00	0.00	0.72
Cambodia	0.02	0.00	0.01	0.02	0.00	0.00		0.00	0.02	0.00	0.07
Myanmar	0.10	0.02	0.06	0.23	0.00	0.00	0.00		0.00	0.00	0.41
Vietnam	0.87	0.24	0.41	0.37	0.47	0.00	0.14	0.01		0.07	2.57
Lao PDR	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.09		0.16
Total	34.34	7.18	31.12	12.58	7.36	0.80	1.02	1.23	3.89	0.48	100.00

(c) 2005

Importers / Exporters	Singapore	Indonesia	Malaysia	Thailand	Philippines	Brunei	Cambodia	Myanmar	Vietnam	Lao PDR	Total
Singapore		6.22	19.98	6.20	2.75	0.33	0.20	0.39	2.91	0.03	39.00
Indonesia	5.15		2.25	1.48	0.93	0.03	0.06	0.05	0.45	0.00	10.40
Malaysia	14.46	2.18		4.98	1.30	0.23	0.07	0.16	0.76	0.00	24.16
Thailand	4.90	2.61	3.74		1.35	0.04	0.60	0.46	1.55	0.51	15.75
Philippines	1.78	0.31	1.61	0.77		0.01	0.01	0.01	0.21	0.00	4.70
Brunei	0.09	0.72	0.01	0.12	0.00		0.00	0.00	0.00	0.00	0.93
Cambodia	0.00	0.00	0.00	0.01	0.00	0.00		0.00	0.01	0.00	0.02
Myanmar	0.06	0.01	0.08	1.07	0.00	0.00	0.00		0.03	0.00	1.25
Vietnam	1.19	0.31	0.62	0.51	0.54	0.00	0.35	0.01		0.04	3.58
Lao PDR	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.06		0.20
Total	27.64	12.36	28.31	15.27	6.87	0.63	1.29	1.08	5.96	0.58	100.00

Source: DOTS-IMF (1998, 2006), *author's calculation.*

Table 4. The ASEAN Countries' Shares of Exports by Geographic Destinations

(a) 1995

Country*		Total Exports (US $ Million)	Share of Total Exports Destined for (%)								
			Intra-ASEAN Trade	Japan	China			Korea	EU	USA	Rest
					Mainland	Hong Kong	Taiwan				
Singapore	(12.5)	45,428	32.3	7.8	2.3	8.6	3.3	2.7	13.4	18.3	11.3
Indonesia	(33.0)	73,724	14.3	27.0	3.8	3.6	0.0	6.4	14.9	13.9	16.0
Malaysia	(13.1)	57,201	27.6	12.5	2.6	5.3	3.1	2.7	14.2	20.8	11.3
Thailand	(24.8)	17,370	20.8	16.6	2.9	5.1	2.4	1.4	14.9	17.6	18.4
Philippines	(11.2)	3,388	13.6	15.8	1.2	4.7	3.3	2.5	17.6	35.8	5.5
Brunei	(0.8)	357	22.2	55.6	0.0	0.1	2.5	15.7	0.8	2.0	1.2
Cambodia	(0.5)	1,186	63.0	2.0	1.4	3.1	2.5	0.0	14.6	1.4	12.0
Myanmar	(0.8)	5,450	30.7	7.3	11.5	4.9	3.2	0.0	6.1	6.7	29.8
Vietnam	(3.1)	311	16.8	26.8	6.6	4.7	8.1	4.3	11.9	3.1	17.7
Lao PDR	(0.3)	311	55.0	1.6	2.9	0.0	1.6	0.0	10.9	1.6	26.4

(b) 2000

Country*		Total Exports (US $ Million)	Share of Total Exports Destined for (%)								
			Intra-ASEAN Trade	Japan	China			Korea	EU	USA	Rest
					Mainland	Hong Kong	Taiwan				
Singapore	(15.5)	138,046	30.1	7.5	3.9	7.9	6.0	3.6	14.0	17.3	9.8
Indonesia	(27.7)	62,118	17.5	23.2	4.5	2.5	3.8	7.0	12.8	13.7	15.0
Malaysia	(15.1)	98,154	26.6	13.0	3.1	4.5	3.8	3.3	14.0	20.5	11.2
Thailand	(20.5)	68,963	19.3	14.7	4.1	5.0	3.5	1.8	16.3	21.3	13.9
Philippines	(12.7)	38,216	15.7	14.7	1.7	5.0	7.5	3.1	18.1	29.8	4.4
Brunei	(0.7)	3,161	23.2	40.7	1.8	0.0	0.0	0.0	3.6	12.0	18.8
Cambodia	(0.6)	1,123	6.8	1.0	2.1	0.7	0.9	0.0	20.6	65.9	2.1
Myanmar	(1.6)	1,979	21.3	5.5	5.7	1.5	1.6	1.0	16.7	22.4	24.3
Vietnam	(5.2)	14,482	18.1	17.8	10.6	2.2	5.2	2.4	20.5	5.1	18.1
Lao PDR	(0.3)	391	42.7	2.8	1.5	0.1	0.7	0.1	26.2	2.3	23.6

(c) 2005

Country*		Total Exports (US $ Million)	Share of Total Exports Destined for (%)								
			Intra-ASEAN Trade	Japan	China			Korea	EU	USA	Rest
					Mainland	Hong Kong	Taiwan				
Singapore	(13.7)	207,338	28.6	6.0	9.5	10.4	4.3	3.9	13.3	11.5	12.3
Indonesia	(32.0)	85,623	18.5	21.1	7.8	1.7	2.9	8.3	12.0	11.5	16.2
Malaysia	(15.2)	140,977	26.1	9.3	6.6	5.8	2.8	3.4	11.7	19.7	14.5
Thailand	(19.6)	110,104	21.8	13.7	8.3	5.6	2.4	2.0	13.5	15.5	17.3
Philippines	(11.3)	41,215	17.3	17.5	9.9	8.1	4.6	3.4	17.0	18.0	4.2
Brunei	(0.7)	5,633	25.2	36.8	3.4	0.0	0.0	12.7	1.1	9.5	11.3
Cambodia	(0.6)	1,369	2.8	3.5	0.6	24.4	0.1	0.1	14.3	48.6	5.7
Myanmar	(0.6)	3,696	51.4	5.0	6.8	1.2	1.3	1.4	8.5	0.0	24.6
Vietnam	(5.9)	32,442	16.8	13.6	9.0	1.1	2.9	1.9	16.9	18.3	19.5
Lao PDR	(0.3)	695	43.8	1.1	3.3	0.0	1.2	0.3	19.8	0.6	30.0

Note: *Statistics in parentheses represents 2005 share of each economy in the regional Gross Domestic Product (GDP).
Source: DOTS-IMF (1998, 2006), *author's calculation.*

Table 5. Expected Trade Intensity Indices of Bilateral Trades in the ASEAN region: 1995-2005

Importers / Exporters	Singapore	Indonesia	Malaysia	Thailand	Philippines	Brunei	Cambodia	Myanmar	Vietnam	Lao PDR
Singapore		3.5	3.9	3.1	2.5	3.2	3.3	2.8	2.6	2.8
Indonesia	3.5		3.3	2.6	2.3	3.0	2.8	2.3	2.2	2.3
Malaysia	3.9	3.3		3.3	2.5	3.1	3.4	3.0	2.7	3.0
Thailand	3.1	2.6	3.3		2.6	2.8	3.8	3.7	3.4	3.8
Philippines	2.5	2.3	2.5	2.6		3.2	2.9	2.4	2.9	2.7
Brunei	3.2	3.0	3.1	2.8	3.2		3.2	2.5	2.7	2.8
Cambodia	3.3	2.8	3.4	3.8	2.9	3.2		3.3	3.4	3.6
Myanmar	2.8	2.3	3.0	3.7	2.4	2.5	3.3		3.3	3.6
Vietnam	2.6	2.2	2.7	3.4	2.9	2.7	3.4	3.6		3.8
Lao PDR	2.8	2.3	3.0	3.8	2.7	2.8	3.6	3.6	3.8	

Source: estimated equation is adopted from Ng and Yeats (2003), data on distance between countries is taken from CEPII (2005)

Table 6. Standard Trade Intensity Indices of Bilateral Trades in the ASEAN region: 1995-2005

Importers	Singapore		Indonesia		Malaysia		Thailand		Philippines		Brunei		Cambodia		Myanmar		Vietnam		Lao PDR	
Exporters	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005
Singapore			2.8*	8.2	12.8	13.9	4.5	4.5	2.8	4.0	20.5	16.4	15.0	3.9	13.4	9.2	7.7	6.4	3.0	1.8*
Indonesia	3.7	5.4			1.4*	3.8	1.2*	2.6	2.3	3.3	0.0	3.1	6.2	2.9	3.3	2.9	3.2	2.4	0.0	0.2
Malaysia	9.0	9.3	1.8*	4.2			3.0*	5.4	1.5*	2.8	6.5	17.1	3.7	2.1*	7.7	5.6	1.9*	2.5*	0.1	0.4
Thailand	6.1	4.0	2.0*	6.5	1.8*	4.9			1.3*	3.7	1.8*	4.2	20.7	22.1	0.0	20.5	4.2	6.4	52.9	64.0
Philippines	2.5	3.9	1.0*	2.1*	1.2*	5.6	3.5	2.8			0.3	1.5*	0.0	0.5	0.3	0.7	3.6	2.3*	0.0	0.2
Brunei	4.1	1.4*	0.5	34.7	0.6	0.2	8.5	3.3	1.1*	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cambodia	4.7	0.3	1.6*	0.1	2.4*	0.3	31.6	0.6	0.0	0.1	0.0	0.1			0.0	0.1	30.0	4.0	71.8	0.3
Myanmar	7.2	1.6*	11.3	0.6	2.1*	3.1	2.4*	43.7	0.1	0.1	1.4*	0.3	0.0	0.0			0.0	3.4	0.0	0.0
Vietnam	5.6	3.3	1.4*	2.6	0.1	2.8	0.0	2.4*	1.3*	5.0	0.0	0.0	61.8	44.0	0.0	1.2*			32.9	18.9
Lao PDR	0.0	0.1	0.0	0.0	0.0	1.6*	20.6	29.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	144.4	37.6		

Note: *Although the standard trade intensity index exceeds unity, it is less then the expected distance adjusted index for the two trading partners. As such, the intensity to trade is lower than expected given the geographic distance between the two trading partners (Ng and Yeats 2003).

Source: IMF-DOTS (1999, 2006), *author's calculation.*

Table 7. Constant Market Share Analysis: ASEAN5, 1980-2006 (in percent)

Countries / Periods	Change in Exports ($ US)	General rise in the world exports effect	Commodity composition effect	Market distribution effect	Competitiveness effect	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Singapore						
1985-1990	29,870,082,224	74.6	-4.0	236.2	-206.8	100
1990-1995	65,547,210,386	41.2	1.1	11.5	46.2	100
1995-2001	3,490,635,025	804.9	102.5	-189.1	-618.3	100
2001-2006	150,047,157,087	70.5	0.2	8.0	21.2	100
Indonesia						
1985-1990	7,088,612,816	255.8	-96.8	1055.6	-1114.5	100
1990-1995	19,742,639,595	66.7	-19.4	18.8	34.0	100
1995-2001	10,898,869,340	99.0	-2.6	-23.9	27.4	100
2001-2006	44,481,783,995	110.0	-0.1	11.2	-21.1	100
Malaysia						
1985-1990	13,815,331,786	110.4	-27.6	527.3	-510.1	100
1990-1995	44,324,940,200	34.1	-4.4	15.5	54.8	100
1995-2001	14,226,337,763	123.2	8.8	-24.9	-7.1	100
2001-2006	72,664,743,931	105.3	-1.2	8.3	-12.4	100
Thailand						
1985-1990	15,947,077,204	43.6	-7.4	445.8	-382.0	100
1990-1995	33,370,621,437	35.4	-3.5	8.0	60.1	100
1995-2001	8,479,712,660	158.1	3.2	-26.2	-35.1	100
2001-2006	65,660,993,411	85.9	-0.6	11.4	3.3	100
the Philippines						
1985-1990	3,557,071,857	127.0	-1.0	1991.3	-2017.2	100
1990-1995	9,261,155,978	45.3	15.9	4.1	34.7	100
1995-2001	14,703,023,842	28.2	-4.6	3.7	72.7	100
2001-2006	15,259,914,748	183.1	-11.8	52.5	-123.9	100

Source: UN-COMTRADE, *author's calculation.*