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Intra-regional trade of ASEAN+3: Trends and issues for the economic integration of East Asia

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Abstract

This paper examined the structures and characteristics of ASEAN+3 intra-regional trade through an analysis of intra-regional trade share, the intra-regional trade intensity index, and the regional trade introversion index in terms of primary goods, intermediate goods, and final goods. We could see that the economic integration of ASEAN+3 would be enlarged and deepened through the progress and advancement of intra-regional trade. However, we found that although the volume and share of intra-regional trade has been growing, this may not indicate or guarantee the inherent advancement of the economic integration of the region. In particular, since the global financial economic crisis in 2008–2009 the introversion of the EU and NAFTA has grown, while that of ASEAN+3 has reduced. In this respect, it would be vital to make and practice innovative plans to develop intra-regional trade so that the foundation of the FTA among ASEAN+3 countries could be the catalyst for substantial development of intra-regional trade. Furthermore, in order for intra-regional trade to continue to develop, a more comprehensive and higher level of intra-regional economic integration is required. This can be realized through regulation, specific plans, and practical effort. Finally, to maximize the effect of intra-regional trade liberalization this needs to go beyond the boundary of intermediate goods and expand into final goods, especially consumption goods.

Keywords

Intra-regional trade of ASEAN+3, economic integration of ASEAN+3, intra-regional trade share, intra-regional trade intensity index, regional trade introversion index

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Introduction

International trade in East Asia has been growing and expanding rapidly and consistently with the spread of the open-door policy and the progress of market liberalization in the region over the past several decades (Pomfret, 2006; Stubbs, 2002). In this paper, any statistical analysis of China includes Taiwan and Hong Kong. Since the early 2000s, the boom in various free trade agreements (FTAs) among East Asian countries has also increased the volume and magnitude of intra-regional trade. For example, FTAs existing between ASEAN+3 countries (ASEAN 10 countries plus China, Japan, and South Korea) include Japan–Singapore (2002), China–ASEAN (2005), Japan–Malaysia (2006), South Korea–Singapore (2006), Japan–Thailand (2007), Japan–Vietnam (2007), South Korea–ASEAN (2007), Japan–ASEAN (2008), Japan–Brunei (2008), Japan–Indonesia (2008), Japan–the Philippines (2008), and China–Singapore (2009) (Regional Trade Agreements database of the World Trade Organisation (WTO)).

Furthermore, so called mega FTAs such as the Regional Comprehensive Economic Partnership (RCEP), the Trans-Pacific Partnership (TPP), the Free Trade Area of Asia Pacific (FTAAP), and the China-Japan-South Korea FTA in which regional countries will participate are emerging. In terms of geopolitics and international political economics, there have been ongoing debates and arguments about the form of FTAs, for example, the Asia Pacific FTAs, which are more Japan and US supportive—such as TPP or FTAAP—and the East Asian ones, which are ASEAN and China-supportive—such as RCEP or the East Asia Free Trade Area. However, we do not include the various arguments and debates on these issues, because the subject is beyond the remit of this article. Mega FTAs can include other countries outside the region. In this regard, the economic integration of ASEAN+3 would be a reasonable and realistic candidate for a regional economic bloc of East Asia. This would be similar to the European Union (EU), the North American Free Trade Area (NAFTA), and the Mercado Común del Sur, Common Market of South America (MERCOSUR), which represent Europe, North America, and South America, respectively (Katada, 2009; Kawai, 2006; Kawai and Ganeshan, 2010; Kim, 2011; Lee and Hyun, 2007; Munakata, 2006; Pempel, 2008). We follow the general view that East Asia is defined as the region covering Northeast Asia and Southeast Asia. Northeast Asia includes China, Japan, and South Korea, and Southeast Asia includes the ASEAN 10 countries.

As regional economic integration progresses, the share of intra-regional trade would naturally increase regardless of the characteristics and level of economic integration (Balassa, 1962; Hill and Menon, 2010; Mirus and Rylska, 2001). One of the commonly used indexes to measure the level or extent of economic integration is the intra-regional trade index. For example, the intra-regional trade share of ASEAN+3 was 49.5% in 2012, which is higher than MERCOSUR (13.2%) and NAFTA (39.3%), but significantly lower than the EU (59.1%). Such a gap may be a result of the difference in characteristics and levels of economic integration. In other words, while the intra-regional trade share of ASEAN+3 was lower than that of the EU where the level of economic integration has greatly advanced since the 1950s, it was higher than that of MERCOSUR, which has been seeking domestic consumption-oriented trading policies for a long time.

Also, since the establishment of the WTO in 1995, regional trade agreements including FTAs have increased dramatically. In addition, negotiations for large-scale mega FTAs, as mentioned above, are now in progress. It would be one of the signals that economic integration based on regionalism is expanding and strengthening. Furthermore, ASEAN+3 has intensified existing FTAs, and at the same time it needs to maximize intra-regional welfare by participating in mega FTA negotiations. But despite its extraordinary position in terms of economic development through

an open-door policy and international trade, ASEAN+3 seems to have reached the threshold of intra-regional trade advancement due to high extra-regional dependency, fiercer competition between intra-regional nations in the world market, and a low level of fragmented trade liberalization (Austria, 2012). Thus, we believe that the inherent development of intra-regional trade among ASEAN+3 is inevitable in order to reduce the excessive external dependency of the region, to mitigate external shocks such as the Asian financial and the global economic crises, and to meet the rapidly expanding purchasing power of the increasing middle- and higher-classes of the region.

This study examines current conditions and issues of economic integration of East Asia, focusing on the intra-regional trade of ASEAN+3. There are already several studies on the financial cooperation between ASEAN and China, Japan, and South Korea (Amyx, 2005; Chey, 2009; Dieter and Higgott, 2003; Eichengreen, 2000; Hayashi, 2006; Lee and Lee, 2012; MacIntyre et al., 2008).

The current conditions and characteristics of the structure of ASEAN+3 intra-regional trade will be analyzed to demonstrate that the increase and advancement in its intra-regional trade does not necessarily correspond to the enhancement or reinforcement of inherent economic integration. In addition, the characteristics and issues involved in intra-regional trade are examined by comparing them analytically with other major economic blocs, such as the EU, NAFTA, and MERCOSUR. With the imminent arrival of mega FTAs and the rapid change in international economic circumstances, the findings of this study are expected to present a guideline for the facilitation and qualitative development of intra-regional trade and economic integration of ASEAN+3. In fact, the potentiality and importance of the economic integration of ASEAN+3 has already been proposed and studied by East Asian Vision Group, South Korea (East Asia Study Group, 2002). After the process began in 1997, the cooperation of ASEAN+3 has broadened and deepened. For example, the Second Joint Statement on East Asia Cooperation and the ASEAN+3 Cooperation Work Plan (2007–2017) has been adopted and the guidelines to implement the Second Joint Statement on East Asia Cooperation and the ASEAN+3 Cooperation Work Plan (2007–2017) was endorsed at the 13th ASEAN+3 Directors-General Meeting on 3 July 2009 in Seoul, South Korea. The results of the recommendations of the mid-term review were revised within the new timeframe of 2013–2017 in 2014 (ASEAN Secretariat website). As one community, the progress of inter-regional trade would serve as the lynchpin to integrate the East Asian economy and link the region to the rest of the world.

This study consists of the following sections: The next section reviews the researches on ASEAN+3 intra-regional economic integration and presents the data and analysis methods of intra-regional trade. We then look at related factors of ASEAN+3 including its intra-regional trade volume, intra-regional trade share, intra-regional trade intensity index, and regional trade introversion index in order to examine the structure, characteristics, and changes in its intra-regional trade. The paper then analyzes the structures and characteristics of the EU, NAFTA, and MERCOSUR comparing them with those of ASEAN+3 as examined in the previous section. Finally we summarize the points and discuss the implications regarding the economic integration of ASEAN+3, highlighting the limitations of this study and suggesting the direction for future studies.

Method for analysis

To analyze ASEAN+3 intra-regional trade, this study examines such indicators as intra-regional trade share, intra-regional trade intensity index, and regional trade introversion index of 5 categories of goods over a 33-year period (1980–2012). First of all, intra-regional trade share indicates the weight of intra-regional trade of a certain economic bloc in the total trade. This is the most basic

indicator for evaluation and analysis of intra-regional trade. The intra-regional trade share is calculated using equation (1):

$$\text{Intra}-\text{regional trade share}(\text{X})=\text{A/B or }(\text{A/B})\times 100\ (\%) \tag{1}$$

A = A certain economic bloc's intra-regional exports + intra-regional imports
B = A certain economic bloc's exports to + imports from the world in total

To analyze the extent of orientedness of intra-regional trade, the intra-regional trade intensity index is utilized. This indicates the weight of a certain intra-regional trade in world trade and can be referred to for comparison. In other words, the intra-regional trade intensity index indicates the intensity of intra-regional trade more objectively and precisely than intra-regional trade share. The intra-regional trade intensity index is calculated using equation (2). A value larger than 1 indicates a higher level of intra-regional orientation; a value smaller than 1 indicates more extra-regional orientation.

$$\text{Intra}-\text{regional trade intensity index}(\text{Y})=(\text{A/B})/(\text{B/C})=\text{X}/(\text{B/C}) \tag{2}$$

X = A / B (Intra-regional trade share)
C = World's total exports + total imports

In addition, in order to analyze the extent of orientedness of intra-regional trade, the regional trade introversion index can be utilized as well. It is theoretically possible that, over time, the intra- and extra-regional trade intensity indexes move in the same direction and thus an increase in the intra-regional trade intensity index may not be sufficient evidence of the advancement in intra-regional trade. To overcome this problem, the regional trade introversion index may be utilized as it takes into consideration the intra-regional tendencies of a certain economic bloc as well as evaluating intra-regional trade more objectively. The regional trade introversion index is calculated using equation (3). If the value is close to 0, it is geographically neutral; if the value is larger than 0, it is more intra-regional oriented.

$$\text{Regional trade introversion index}(\text{Z})=(\text{R}i-\text{R}e)/(\text{R}i+\text{R}e) \tag{3}$$

Ri = (A/B) / (O/T)
Re = [1 − (A/B)] / [1 − (O/T)]
O = A certain economic bloc's extra-regional exports + extra-regional imports
T = Total exports + total imports of the extra-region of a certain economic bloc.

Further, for comparative investigation of ASEAN+3 and other economic blocs' intra-regional trade, the paper includes a correlation analysis to clarify whether each index of intra-regional trade is oriented in the same direction as those of other economic blocs. For example, when the correlation coefficient of the intra-regional trade share of ASEAN+3 and that of the EU are negative, it indicates that while the intra-regional trade share of ASEAN+3 increases, that of the EU decreases, or vice versa. By analyzing correlations between the indexes, it is possible to clarify the common factors and differences between the intra-regional trade of ASEAN+3 and those of the EU, NAFTA, and MERCOSUR. It is also possible to calculate the correlation coefficients of the intra-regional trade share and the intra-regional trade intensity index, and the correlation coefficients of the intra-regional trade and regional trade introversion indexes of ASEAN+3 and those of the EU, NAFTA, and MERCOSUR. In general, it would be assumed that the intra-regional trade share would have a correlation coefficient that is positive to the intra-regional trade intensity index and regional trade introversion index. Whether the intra-regional trade of ASEAN+3 and other economic blocs also corresponds to it could be confirmed as well.

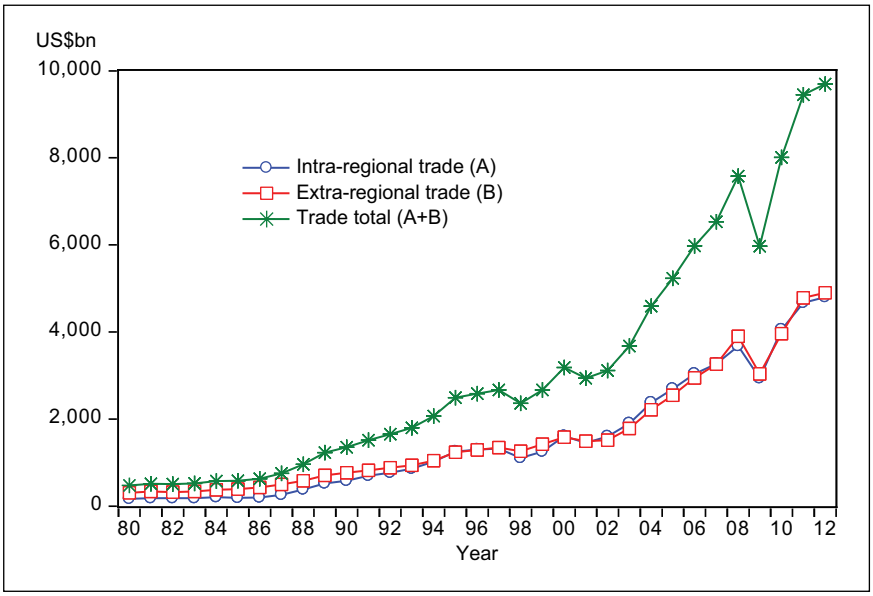

Figure 1. ASEAN+3 intra- and extra-regional trade (total).

For the data used in the analysis we used RIETI-TID (www.rieti-tid.com/), which is a database of trade industry statistics provided by the Research Institute of Economy, Trade and Industry in Japan. RIETI-TID is advantageous in that it is a database of trade statistics that reflect international specialization and is especially useful for the analysis of intra-regional trade. Based on CIF (Cost Insurance Freight) standards, RIETI-TID currently provides trade statistics for 59 countries from 1980 to 2012, which is appropriate for the analysis of East Asia economic integration. For Broad Economic Categories (BEC) and System of National Accounts (SNA), RIETI-TID classifies UN COMTRADE Standard International Trade Classification (SITC) statistics into three categories: primary goods, intermediate goods, and final goods. Intermediate goods are further divided into processed goods, and parts and components; final goods are further divided into capital goods and consumption goods. Including primary goods, there are five sub-categories in total.[1]

Analysis of intra-regional trade of ASEAN+3

Trend of intra-regional trade of ASEAN+3

As shown in Figure 1, the intra-regional trade of ASEAN+3 was US$4796.9bn in 2012. Intra-regional trade accounted for about 49.5% of the entire trade volume and increased 29 fold from the level of US$166.4bn in 1980. The average annual increase rate from 1980 to 2012 is 11.1%. Following the formation of the ASEAN Free Trade Area (AFTA) in 1993, the Asian financial crisis during 1997–1998, China's joining the WTO in 2001, and the boom in bilateral and multilateral FTAs in the region ASEAN+3 has accelerated its entry into the global economic system, expanding its trade liberalization and strengthening regional economic integration. ASEAN+3's economic liberalization and integration, both within and outside of the region, have accelerated more rapidly. Therefore, it is not surprising that the annual increase in the rate of intra-regional trade of ASEAN+3 from 1993 to 2012 was 9.3% on average. This is higher than the 6.4% in the period from 1980 to 1992. Hence, it is certain that the intra-regional trade of ASEAN+3 has advanced during the 1990s and 2000s.

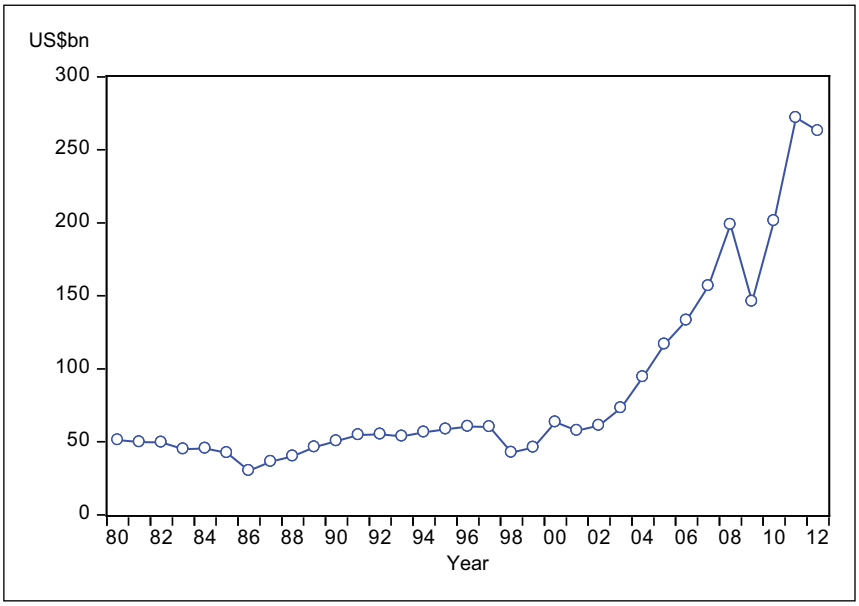

Figure 2. ASEAN+3 intra-regional trade (primary goods).

The intra-regional trade of primary goods was US$263bn in 2012, 5.1 times greater than the US$51.3bn traded in 1980. It is noteworthy that as shown in Figure 2, the average intra-regional trade increase of primary goods from 1980 to 2000 was 1.1%, almost in stasis. By contrast, the average in the period from 2001 to 2012 increased dramatically to 14.8%. This is because China joined the WTO and CLMV (Cambodia, Laos, Myanmar, and Vietnam) joined ASEAN, and these countries started playing a role as a new supplier of primary goods in the region. Furthermore, the economic growth and industrialization of China and ASEAN, including CLMV, resulted in a rapid increase in demand for intra-regional primary goods.

The intra-regional trade of intermediate goods was rapidly expanding from the early 2000s as well. As shown in Figure 3 within intermediate goods, processed goods accounted for as much as US$1674.8bn in 2012, 27 times greater than the US$62.0bn traded in 1980, giving an average annual increase of 13.0%. The average annual increase in intra-regional trade of processed goods prior to 2001 was 10.8% and 13.0% thereafter. The intra-regional trade of parts and components was US$1397.7bn in 2012, 122.6 times greater than the US$11.4bn traded in 1980. The average annual increase was 11.4%. The average annual increase of the intra-regional trade in parts and components, by contrast, was 20.7% prior to 2000 and 11.4% thereafter. This is probably because ASEAN+3, in particular China and ASEAN, went beyond the assembly and production of simple parts and components. Instead, ASEAN+3 expanded into the production of processed goods, which was advantageous in terms of added value creation and much more favorable in terms of economic performance.

Specialization among ASEAN+3 countries and the expansion of the regional supply chains facilitated intra-regional trade of intermediate goods. The intra-regional trade of processed goods in the 2000s was smaller than that of parts and components. Since the late 2000s, however, the intra-regional trade in processed goods exceeded that of parts and components in 2007. Thereafter, the gap has become large particularly in 2008, 2011, and 2012. Such changes indicate that the characteristics of intra-regional production of ASEAN+3 altered in the late 2000s. They moved

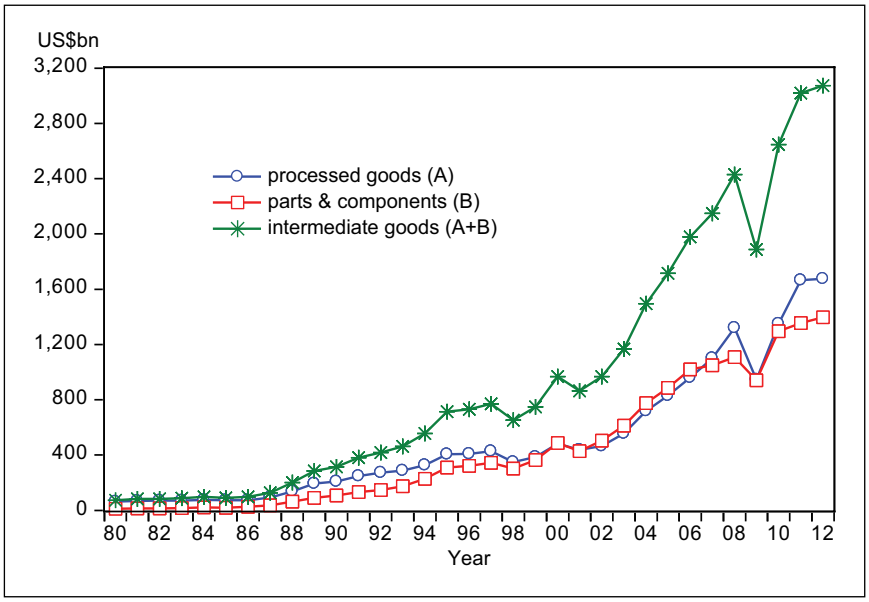

Figure 3. ASEAN+3 intra-regional trade (intermediate goods).

beyond simple production methods and developed more effective production and export methods, thereby improving value creation since the 2000s. In the 1990s the regional countries focused on the production and export of finished goods based on parts and components imported from overseas.

For final goods, as shown in Figure 4, intra-regional trade was US$1461.4bn in 2012, 35 times greater than the US$41.8bn traded in 1980. The average annual increase was 11.7%. The average annual increase in the intra-regional trade of capital goods was 14.8% to 2000 and 12.1% thereafter. Thus, it is certain that the reliance of ASEAN+3 on the extra-regional importation of capital goods increased. The intra-regional trade of consumption goods was US$553.2bn in 2012, 23.6 times greater than the US$23.4bn traded in 1980. The average annual increase was 10.4%. The average increase in the intra-regional trade of consumption goods was 13.2% to 2000 and 6.8% thereafter. Thus, it is certain that ASEAN+3 relied highly on the extra-regional importation of consumption goods as well.

Intra-regional trade share of ASEAN+3

Figure 5 shows that the intra-regional trade share of ASEAN+3 reached around 35% in the early 1980s and dropped to 31.6% in 1986. However, it increased dramatically from the late 1980s up to the middle of the 1990s and remained at around 50%, except for 1998 and 1999 when it dropped to around 46% due to the Asian financial crisis. The rapid increase in the intra-regional trade share in the early 1980s was due to the oil shock in 1979–1980 and the reduction in world trade, but this was temporary.

The increase in the intra-regional trade share of ASEAN+3 in the late 1980s up to the middle of the 1990s resulted mainly from an increase in intra-regional trade along with the expanding regional demands for intermediate goods after the region began to specialize in production. As for primary goods, Figure 6 shows that the intra-regional trade share accounted for 34.8% in 1980.

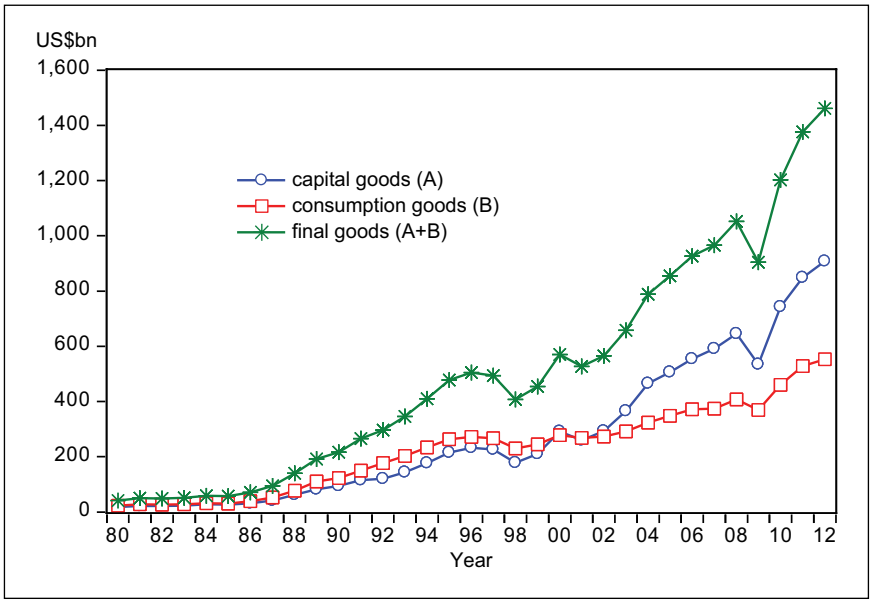

Figure 4. ASEAN+3 intra-regional trade (final goods).

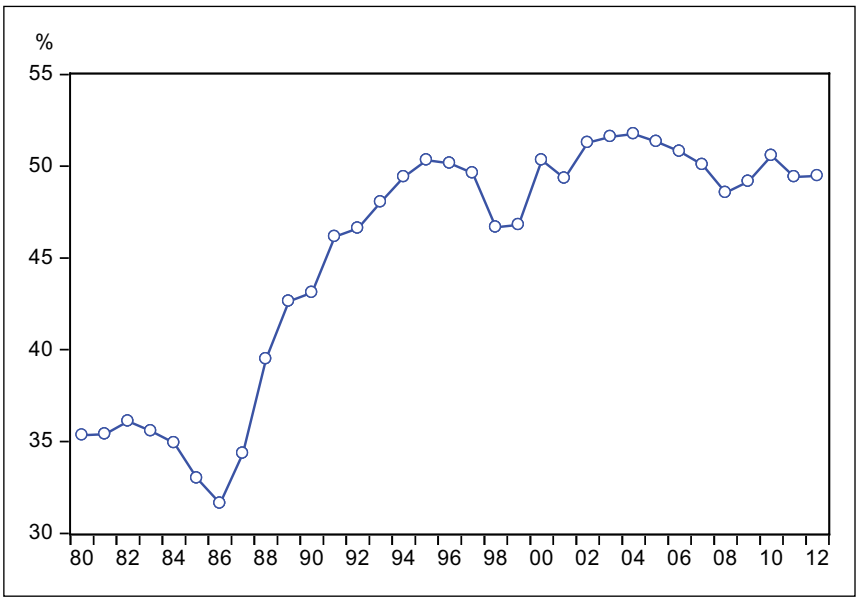

Figure 5. ASEAN+3 intra-regional trade share (total).

Thereafter, however, the number gradually decreased from the late 1990s onwards to 19.7% by 2012. As the demand for primary goods and reliance on primary goods imported from outside increased in line with the economic growth of ASEAN+3, the intra-regional trade share continued to decrease.

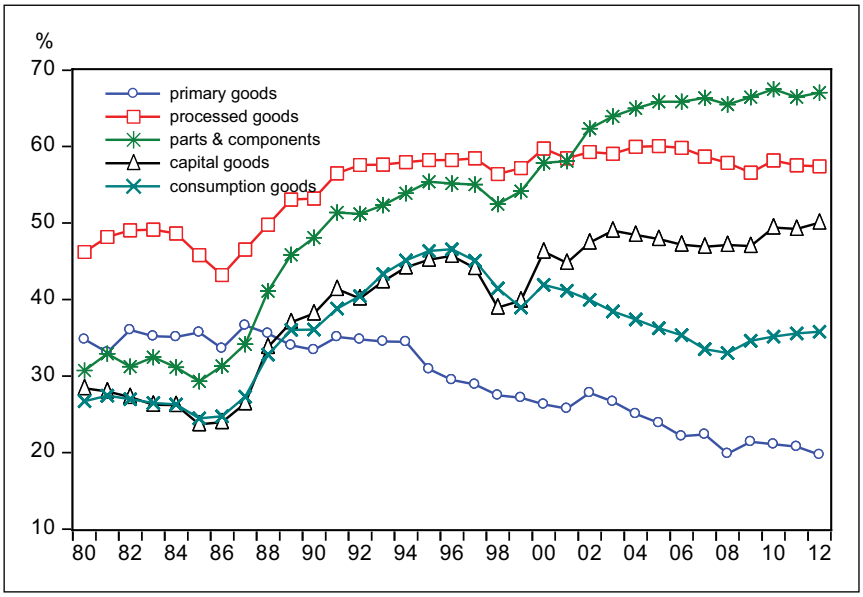

Figure 6. ASEAN+3 intra-regional trade share (five categories).

The intra-regional trade share of processed goods, included among intermediate goods, was less than 50% in the 1980s. It increased to around 57%–58% from the early 1990s and reached 57.4% in 2012. By contrast, that of parts and components increased steadily from 30.9% in 1980 to 67.1% in 2012. We can see that even though the intra-regional trade share of processed goods has increased, which is advantageous in terms of added value creation and might result in changes in the production methods of ASEAN+3, the intra-regional trade of parts and components is still crucial and a major factor for the supply chain of the region.

The intra-regional trade share of capital goods increased from 28.4% in 1980 to 50.1% in 2012 and that of consumption goods increased from 26.7% in 1980 to 35.8% in 2012. However, despite the two categories achieving very similar patterns of growth up to 1999, they show different a path since 2000s. The intra-regional trade share of capital goods remained at around 45%–47% in the 2000s and increased to 50% in the 2010s, whereas that of consumption goods decreased in the 2000s to around 33%–35%. It would imply that in terms of consumption goods ASEAN+3's dependency on the outside world increased after the 2000s.

Intra-regional trade intensity index of ASEAN+3

As shown in Figure 7, the intra-regional trade intensity index of ASEAN+3 is high—between 1.5 and 2.5—which indicates that ASEAN+3 is intra-region oriented. The intra-regional trade intensity index of ASEAN+3 decreased from 2.4 in 1980 to 2.0 in the 1980s, and remained around 2.0 up to the early 2000s. However, it decreased again to 1.7 by 2012. In general, such a decreasing trend in the intra-regional trade intensity index is somewhat different from the consistent increase in the intra-regional trade share. It would mean that although the intra-regional trade share increased, the weight of ASEAN+3 in terms of overall world trade increased more rapidly. For example, the volume of trade over ASEAN+3 countries accounted for 14.6% of world trade in 1980 and had increased to 29.6% in 2012.

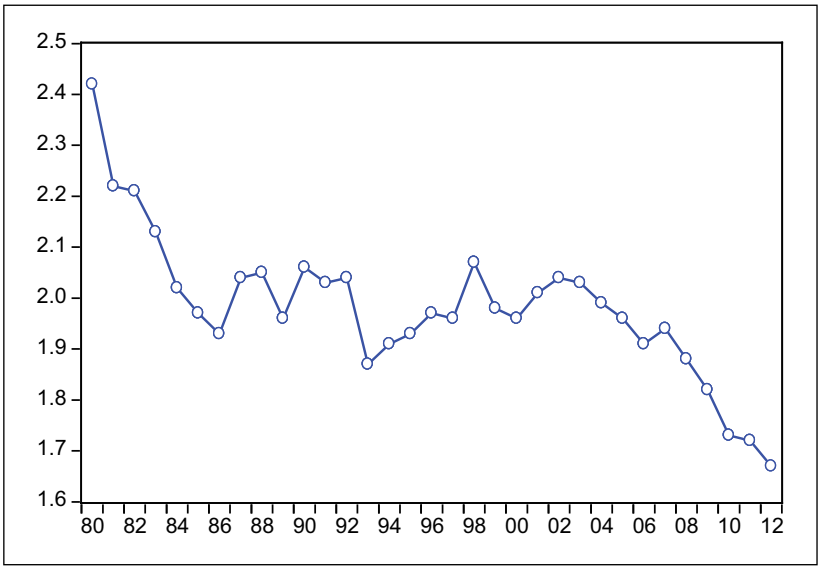

Figure 7. ASEAN+3 intra-regional trade intensity index (total).

ASEAN+3 showed a relatively high level of intra-region orientedness in the 1980s but, in general, the level decreased thereafter (although there were some exceptions during the period). It is especially noteworthy that despite the consistent increase in the intra-regional trade share, the intra-regional orientedness either decreased or remained static. As ASEAN+3 has held fast to the actively opening and export-oriented strategies for growth since the 1990s, intra-regional trade did not catch up with the increasing weight in world trade. As a result, the weight of extra-regional trading in the entire trade of ASEAN+3 increased accordingly.

For the five categories of goods, Figure 8 shows that the intra-regional trade intensity index of primary goods was 2.1 in 1980 and thereafter, as a whole, it continued to decrease until it reached the lowest point—0.9—in 2012. That of processed goods shows a similar pattern—3.4 in 1980—and thereafter, as a whole, it continued to decrease until it reached the lowest point—2.1—in 2012. The decrease in the index of parts and components is not as distinctive as processed goods and shows a decreasing trend, recording 2.5 in 1982 and 1.6 in 2012. That of capital goods and consumption goods remained stable up to the 1990s but decreased in the 2000s down to 1.4 and 1.5 respectively by 2012. In brief, the intra-regional trade intensity index of ASEAN+3 was relatively high in the 1980s, decreasing up to the mid-1990s, increasing again to some degree and remaining stable, and then decreasing again rapidly since the late 2000s. It may imply that despite the increase in intra-regional trade in ASEAN+3, the increase of the extra-regional trade was more significant.

Regional trade introversion index of ASEAN+3

The regional trade introversion index of ASEAN+3 intra-regional trade fluctuated as shown in Figure 9. It decreased to 0.5 in 1986. It bounced back in the late 1980s and maintained the level of 0.64–0.66 during the 1990s. It reached the peak—0.69—in 2003, but turned back to decrease after 2004 down to 0.57 by 2012. In general, together with the extent of concentration on intra-regional trade, the regional trade introversion index rises up to the mid-2000s and then falls again. In other words, the intra-regional orientedness of ASEAN+3 has strengthened since the mid-1980s, but has

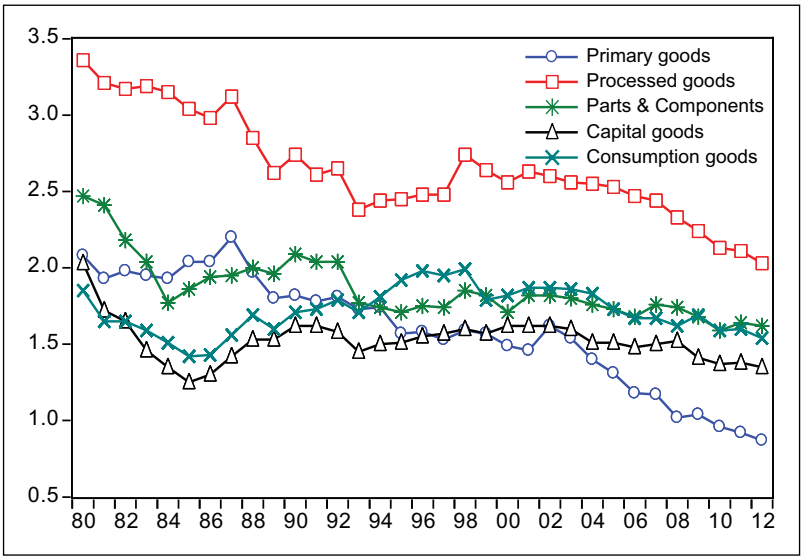

Figure 8. ASEAN+3 intra-regional trade intensity index (five categories).

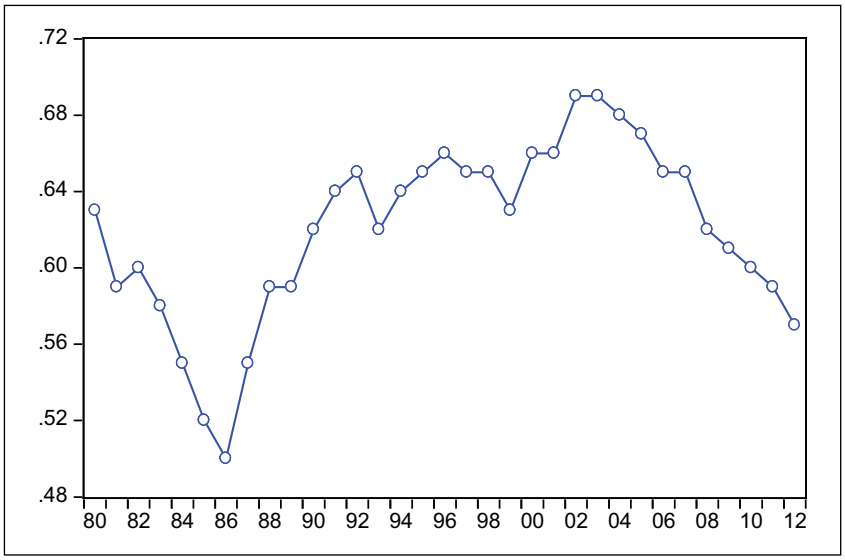

Figure 9. ASEAN+3 regional trade introversion index (total).

weakened after the middle of the 2000s. This is a different pattern in contrast to the consistent increase in the intra-regional trade share. It means that the weight of ASEAN+3's extra-regional trade in the entire trade volume among extra-regional countries, excluding ASEAN+3, has increased as well; its growth was greater than that of the entire trade volume among the extra-regional countries. For example, the percentage of ASEAN+3's extra-regional trade in the entire trade volume among extra-regional countries, excluding ASEAN+3, increased from 13.5% in 1980 to 26.0% in 2012.

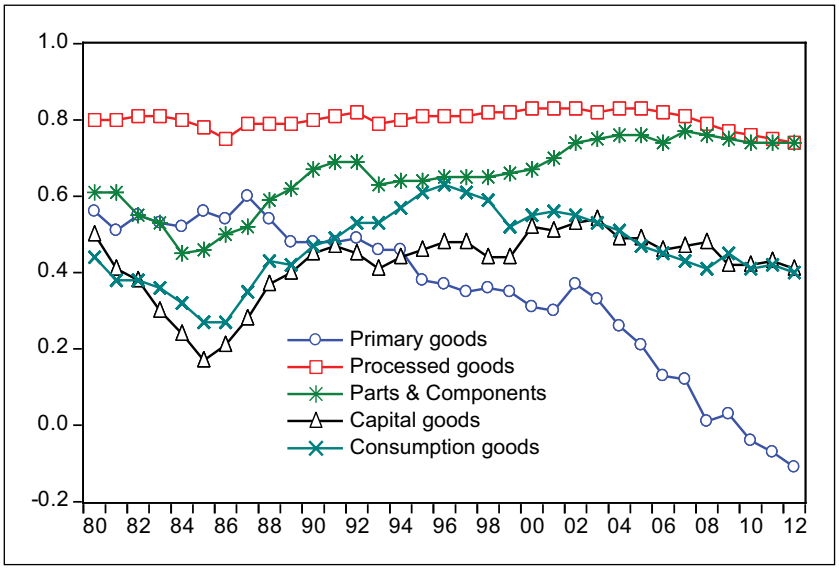

Figure 10. ASEAN+3 regional trade introversion index (five categories).

In terms of the regional trade introversion index, ASEAN+3 showed a comparatively high level of intra-region orientedness in the 1990s and the early 2000s, but thereafter it has decreased in general. In Figure 10 the regional trade introversion index of processed goods does not change much, remaining at around 0.8 until 2005. Thereafter, it continued to decrease to 0.74 by 2012, which was its lowest point. The number of parts and components showed a more distinct increasing pattern. After its trough—0.45—in 1984, the index continued to increase, as a whole, up to 0.74 by 2012. That of capital goods and consumption goods show similar patterns. They increased in the 1990s but decreased again in the 2000s. In short, the regional trade introversion index of ASEAN+3 was relatively high and remained stable in the 1990s, but decreased in the 2000s especially in the late 2000s. This means that, in particular, the intra-regional trade in capital goods and consumption goods has failed to catch up with the increase in the trade volume between extra-regional countries since 2000s.

Comparison with EU, NAFTA, and MERCOSUR

Intra-regional trade volume and share

This section compares ASEAN+3 with other major economic blocs—the EU, NAFTA, and MERCOSUR—evaluating the intra-regional trade of ASEAN+3. Table 1 summarizes the changes in the intra-regional trade of ASEAN+3, the EU, NAFTA, and MERCOSUR. During the same period of time (1980–2012), the volumes increased 29 times, 6.2 times, 10.3 times, and 35.6 times respectively, and the rates of average annual increase are 11.1%, 5.9%, 7.6%, and 11.8% respectively. Intra-regional trade of ASEAN+3 recorded a higher rate of increase than those of the EU and NAFTA, which are advanced countries' economic blocs, but a lower rate of increase than MERCOSUR, which is a developing countries' economic bloc.

In addition, the intra-regional trade share of ASEAN+3 is around 50%, which is lower than that of the EU, but higher than those of NAFTA and MERCOSUR as shown in Figure 11. The intra-regional

Table 1. Description of intra-regional trade of four economic blocs.

	Intra-regional trade (US$bn)		2012/1980	Average annual growth rate
	1980	2012		(1980–2012)
ASEAN+3	166.4	4796.9	28.8	11.1
EU	973.6	6058.2	6.2	5.9
NAFTA	196.2	2019.7	10.3	7.6
MERCOSUR	2.7	96.0	36.6	11.8

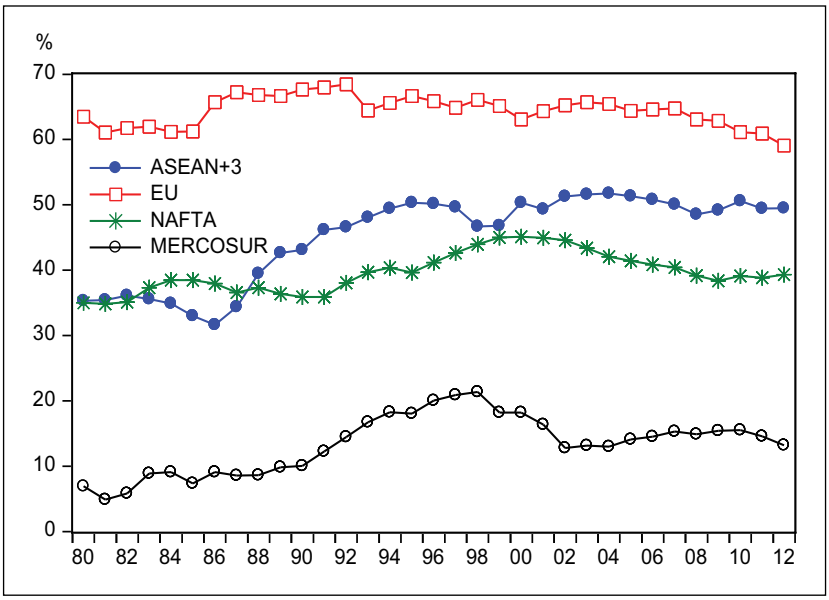

Figure 11. Intra-regional trade share of the four economic blocs (total).

trade of ASEAN+3 was US$4796.9bn (49.5% of total trade) in 2012. The intra-regional trade of the EU and NAFTA are about US$6.06tn (59.1% of total trade) and US$2.02tn (39.3% of total trade) respectively. It may be worthy of note that the intra-regional trade share of ASEAN+3 has increased gradually from 35.3% in 1980 to 49.5% in 2012. By contrast, in total, those of the other economic blocs have been reducing, especially since the early 2000s.

Figure 12 shows that the intra-regional trade share of primary goods for ASEAN+3 was 19.7% in 2012, lower than the 35.7% of the EU and the 42.7% of NAFTA and higher than the 4.3% of MERCOSUR. Having been at around 30% up to the mid-1990s, the intra-regional trade share of primary goods for NAFTA exceeded 40% in 1998, higher than that of the EU, and the level is the highest among all until now. This is because the three member countries of NAFTA—the US, Canada, and Mexico—produce crude oil, which accounts for a large proportion of primary goods, and the percentage of primary goods exported from Canada and Mexico to the US is high. In the case of the EU, the share was high—up to 46.0%—in 1988 and then consistently decreased to around 30% by the late 2000s. The intra-regional trade share of primary goods for ASEAN+3 has

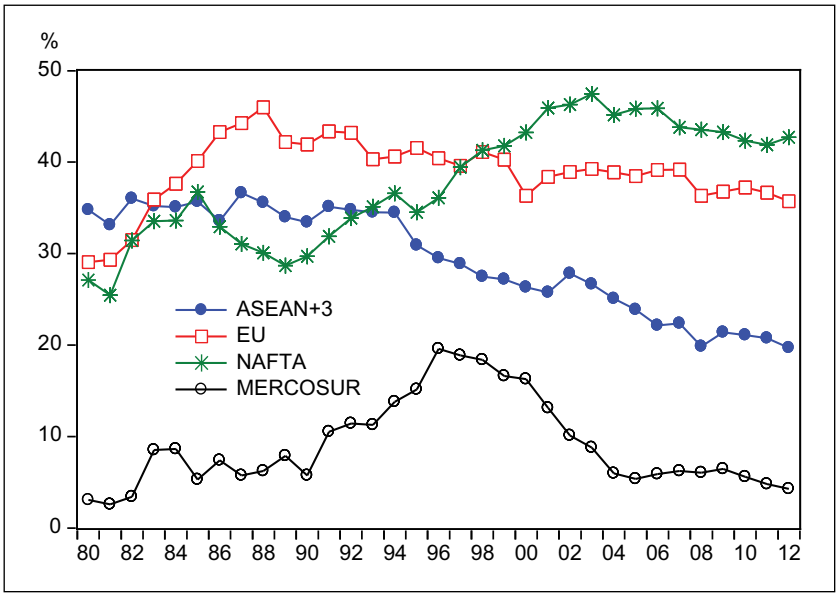

Figure 12. Intra-regional trade share of the four economic blocs (primary goods).

continued to decrease, probably because the reliance on extra-regional countries for primary goods increased due to the rapid industrialization of ASEAN+3 countries. For MERCOSUR, as the tariff elimination and mutual opening policies were initiated in 1995, the trade diversion effects increased the intra-regional trade share of primary goods, although this has decreased consistently since the late 1990s. Currently, the number is the lowest among the economic blocs.

Among intermediate goods, as shown in Figure 13, the intra-regional trade share of processed goods for ASEAN+3 was 57.4% in 2012, which is lower than the 64.9% of the EU but higher than the 41.5% of NAFTA and 13.1% of MERCOSUR. That of the EU was high—up to 72.5%—in 1992 and has gradually decreased since then. That of NAFTA was high—up to 48.8%—in 2002 and has decreased since then. In contrast, the intra-regional trade share of ASEAN+3 was 46.2% in 1980 and, as a whole, it has gradually increased up to the early 2000s. This is because of the increasing demand for intra-regional processed goods along with the progress of free trade and intra-regional specialization among ASEAN+3. Thereafter, it decreased from the peak—60.1—in 2005 down to 56.6 by 2012. The increase in the intra-regional trade share of processed goods was outstanding in a sense that the added value creation of processed goods would be greater than that for parts and components. MERCOSUR showed a relatively quick increase in the case of intermediate goods, owing to the trade diversion of the tariff elimination and the mutual opening up in the 1990s, as described above. Since the mid-2000s, the number has somewhat decreased to around 15%, the lowest among the four economic blocs.

As to parts and components, Figure 14 shows that the intra-regional trade share of ASEAN+3 was 67.1% in 2012, higher than those of other economic blocs: 62.4% for the EU and 40.5% for NAFTA, and 17.9% for MERCOSUR. The EU has been stable at around 60%, while that of NAFTA reached the peak—47.0%—in 2002, and continued to decrease for a while before bouncing back recently. That of ASEAN+3 has steadily increased from 30.7% and exceeded that of the EU in 2009. It may imply that the intra-regional trade of parts and components in ASEAN+3 has expanded and is a major trading item between ASEAN+3 countries, even though the added value

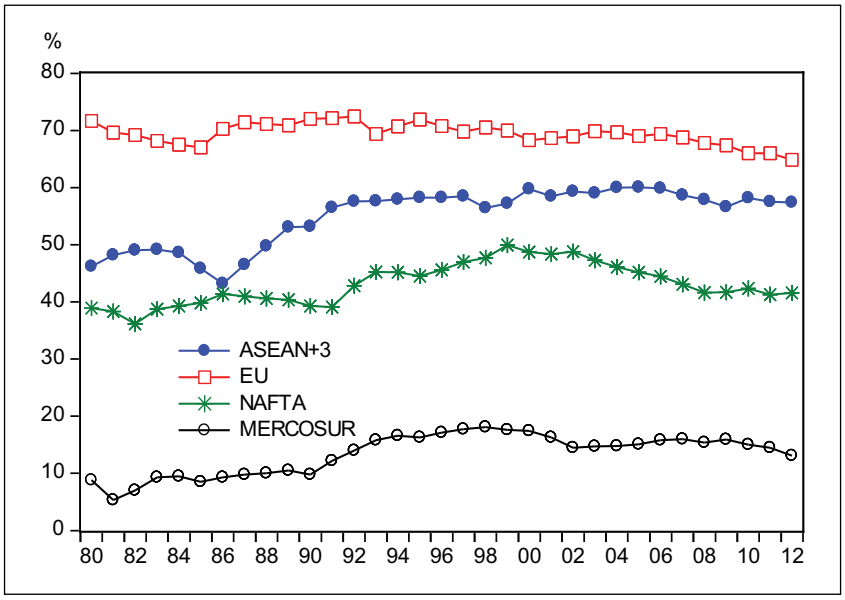

Figure 13. Intra-regional trade share of the four economic blocs (processed goods).

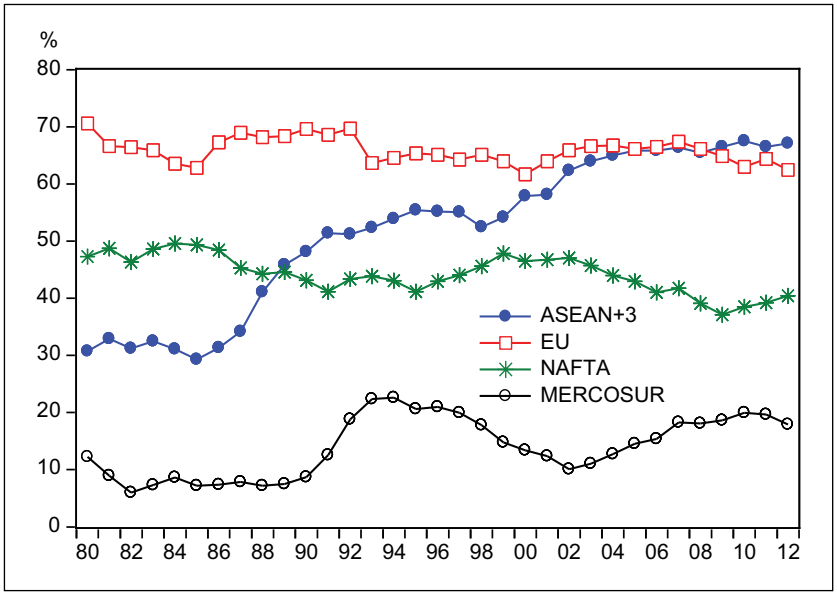

Figure 14. Intra-regional trade share of the four economic blocs (parts and components).

creation of parts and components is not as great as that of processed goods. That of MERCOSUR is increasing after the lowest point—10.1%—in 2001, but it is still the lowest among the four economic blocs.

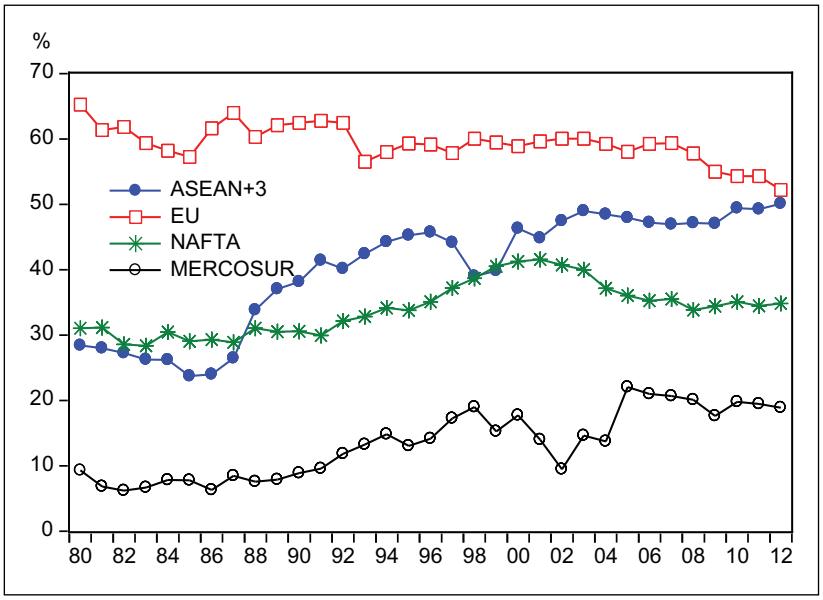

Figure 15. Intra-regional trade share of the four economic blocs (capital goods).

The intra-regional trade share of capital goods in ASEAN+3 was 50.1% in 2012, as shown in Figure 15. This is lower than the EU's 52.2%, but higher than the 34.8% of NAFTA, and the 18.9% of MERCOSUR. The intra-regional trade share of capital goods in the EU was high—up to 60.0—in 1998 and has since gradually decreased. After the peak in 2001—41.6%—that of NAFTA has gradually decreased. In contrast, that of ASEAN+3 was 28.4% in 1980 and gradually increased and exceeded that of NAFTA in 1988. In MERCOSUR the intra-regional trade share of capital goods rapidly increased due to the trade diversion through tariff elimination and the mutual opening up policies in the mid-1990s. After reaching the peak—19.0%—in 1998, its share drastically decreased to 9.4% by 2002 but has increased thereafter. The intra-regional trade share of capital goods for ASEAN+3 was third among the four regions in the 1980s but has place second since the 1990s and has almost caught up that of the EU in the late of 2000s, which indicates that the reliance of ASEAN+3 on capital goods from within its borders strengthened as time went on.

As shown in Figure 16, the intra-regional trade share of consumption goods for ASEAN+3 was 35.8% in 2012, which was lower than the 63.6% of the EU and the 37.1% of NAFTA, but higher than the 26.1% of MERCOSUR. That of the EU reached a peak—73.1%—in 1992 and has since gradually decreased. That of NAFTA reached its peak—44.1%—in 2000 and has also since gradually decreased. By contrast, that of ASEAN+3 was 26.7% in 1980 and has increased gradually. It reached the peak—43.6%—in 1996 but has gradually decreased since then. The intra-regional trade share of consumption goods in ASEAN+3 increased probably because of the increasing demand for intra-regional consumption goods along with the growth of the ASEAN economy and the purchasing power of its people. However, after the Asian financial crisis in 1997–1998 the demand for extra-regional consumption goods increased, with the integration of ASEAN+3 in the world trade system. The intra-regional trade share of consumption goods in MERCOSUR increased rapidly due to the trade diversion through tariff elimination and the mutual opening up policies of the mid-1990s. After it reached its peak of 33.7% in 1998, the share drastically decreased to 16.7% in 2003 and then bounced back. Among the four regions, the intra-regional trade share of consumption

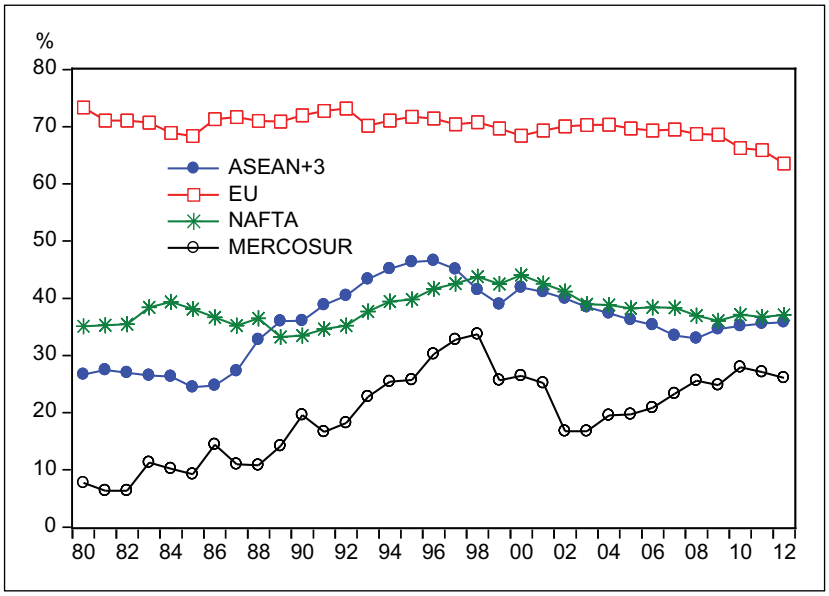

Figure 16. Intra-regional trade share of the four economic blocs (consumption goods).

goods in ASEAN was placed third, which may imply a heavy reliance of ASEAN+3 on consumption goods from outside the region as compared to intermediate goods and capital goods.

Intra-regional trade intensity index

Figure 17 shows the intra-regional trade intensity index of the four economic blocs. In 2012 the intra-regional trade intensity index of MERCOSUR was the highest, followed by NAFTA, the EU, and ASEAN+3 in the order, which indicates that MERCOSUR is most intra-region oriented and ASEAN+3 is most extra-region oriented. This is not surprising because the share of world trade of NAFTA, the EU, and ASEAN+3 is far superior to that of MERCOSUR; thus, the trade volumes of NAFTA, the EU, and ASEAN+3 in comparison with the total world trade volume, which is the denominator of the calculating formula of the intra-regional trade intensity index, were greater than that of MERCOSUR. For instance, the trade volumes of the EU, ASEAN+3, and NAFTA in 2012 were as large as 31.3%, 29.6%, and 15.7%, respectively, of world trade volume, while that of MERCOSUR was just 2.2%.

It is noteworthy that the intra-regional trade intensity index of ASEAN+3, which was 2.4 in 1980, has gradually decreased since then to 1.7 in 2012, while those of the EU and NAFTA have gradually increased, from 1.3 and 2.0 in 1980 to 1.9 and 2.5 in 2012, respectively. That of MERCOSUR reached its peak—10.7—in 1999, but continued to decrease thereafter to 6.0 in 2012. While the intra-regional trade share of ASEAN+3 increased, the intra-regional trade intensity index decreased. In contrast, the intra-regional trade share of the EU and NAFTA decreased, while their intra-regional trade intensity index increased. Such contrasting phases of ASEAN+3 and EU/NAFTA indicate that while the intra-regional trade of ASEAN+3 increased, extra-regional trade also increased but by a greater amount, and that the weight of ASEAN+3 in world trade figures has increased resulting in a decrease in the intra-regional trade intensity index accordingly.

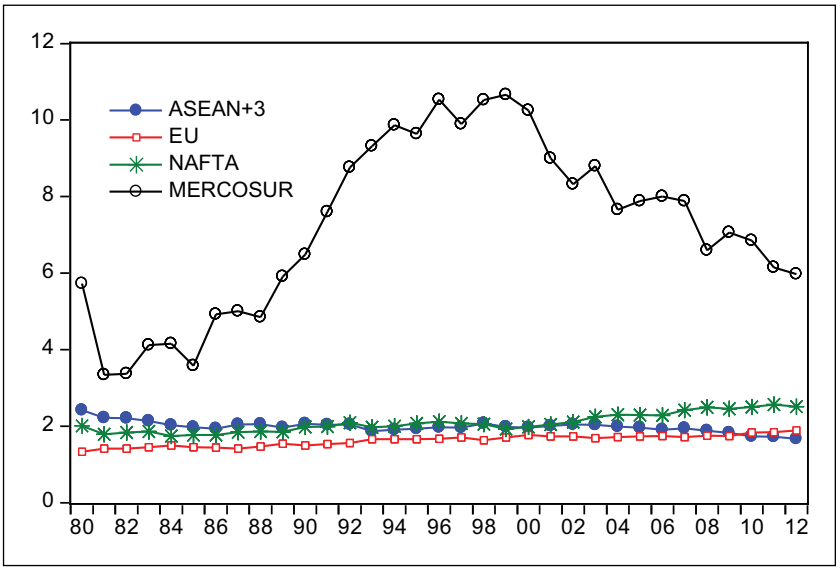

Figure 17. Intra-regional trade intensity index (total).

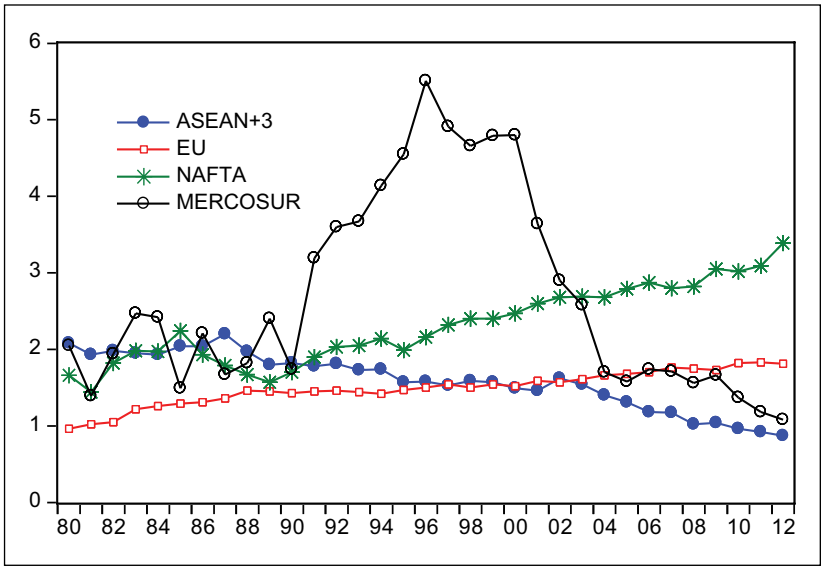

Figure 18. Intra-regional trade intensity index (primary goods).

As for primary goods, Figure 18 shows that the index of ASEAN+3 was 2.1 in 1980, decreasing to 0.9 by 2012. In contrast, those of primary goods in the EU and NAFTA were 1.8 and 3.4, respectively, in 2012 and then gradually increased. That of MERCOSUR reached its peak—5.5—in 1996 and then decreased to 1.1 in 2012. As the intra-regional trade share of ASEAN+3 decreased, the intra-regional trade intensity index decreased as well. By contrast, the intra-regional trade shares

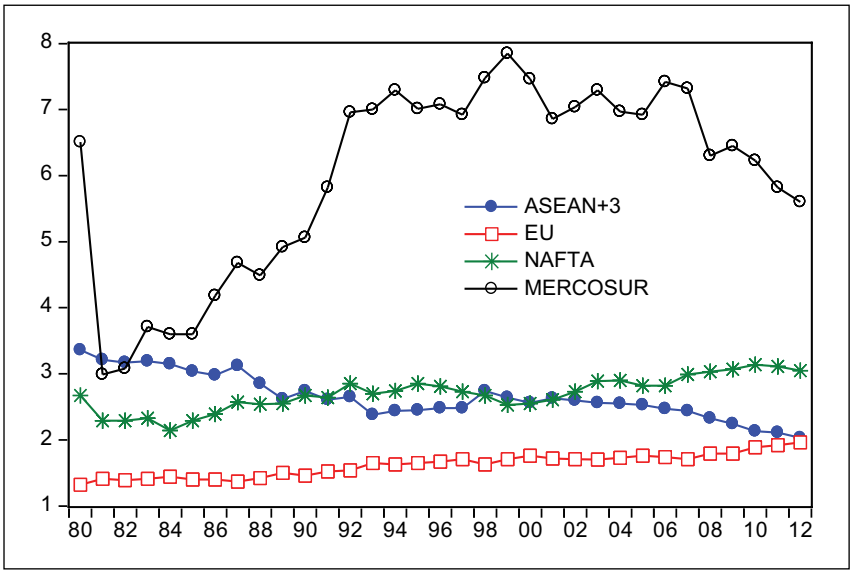

Figure 19. Intra-regional trade intensity index (processed goods).

of the EU and NAFTA are decreasing while their intra-regional trade intensity indexes are increasing. Such contrasting phases show that while the intra-regional trade of primary goods for ASEAN+3 increased, the increasing demand for extra-regional primary goods together with industrialization had a greater effect and thus the weight of the ASEAN+3 primary goods trade in the world trade volume increased in relative terms.

As shown in Figure 19, the intra-regional trade intensity index of processed goods in ASEAN+3 was 3.4 in 1980 and then continued to decrease to 2.0 by 2012. In contrast, the EU gradually increased from 1.3 in 1980 to 2.0 in 2012, while that of NAFTA rapidly increased in the 2000s from 2.5 in 1999 to 3.1 in 2012.

Also, as illustrated in Figure 20, parts and components showed a similar phase to processed goods: the intra-regional trade intensity index of ASEAN+3 was 2.5 in 1980, decreasing gradually to 1.6 in 2012. In contrast, the EU gradually increased from 1.4 in 1980 to 2.0 in 2012, while that of NAFTA reached its peak—1.5—in 1984 and then continued to increase to 2.3 in 2012.

The intra-regional trade intensity index of capital goods in ASEAN+3 was 1.9 in 1980 as shown in Figure 21, and then decreased again to 1.5 in 2012. In contrast, the EU gradually increased from 1.2 in 1980 to 1.8 in 2012, while that of NAFTA rapidly increased in the 2000s, after having reached the lowest point—1.2—in 1985. NAFTA continued to increase thereafter up to 1.9 in 2012.

Consumption goods showed similar phases with capital goods as shown in Figure 22. The intra-regional trade intensity index of consumption goods in ASEAN+3 was 1.9 in 1980, and then decreased again to 1.2 in 2012. That of the EU gradually and consistently increased from 1.2 in 1985 to 1.8 in 2012, while that of NAFTA reached a peak—1.6—in 1985 and then continued to increase up to 2.1 by 2012.

In analyzing the intra-regional trade intensity index as above, the expansion of ASEAN+3 intra-regional trade and the increase of the intra-regional trade share overwhelmed those of the EU and NAFTA, but the intra-regional orientedness rather decreased by contrast. This is because the increase in intra-regional trade share did not catch up with the increasing weight of ASEAN+3 in the world trade volume, due to the expansion of extra-regional trade. The volume of extra-regional

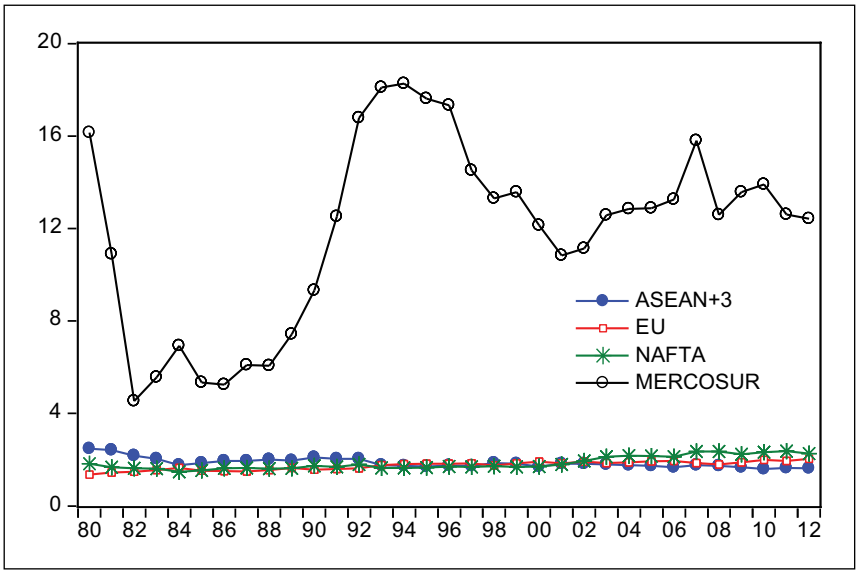

Figure 20. Intra-regional trade intensity index (parts and components).

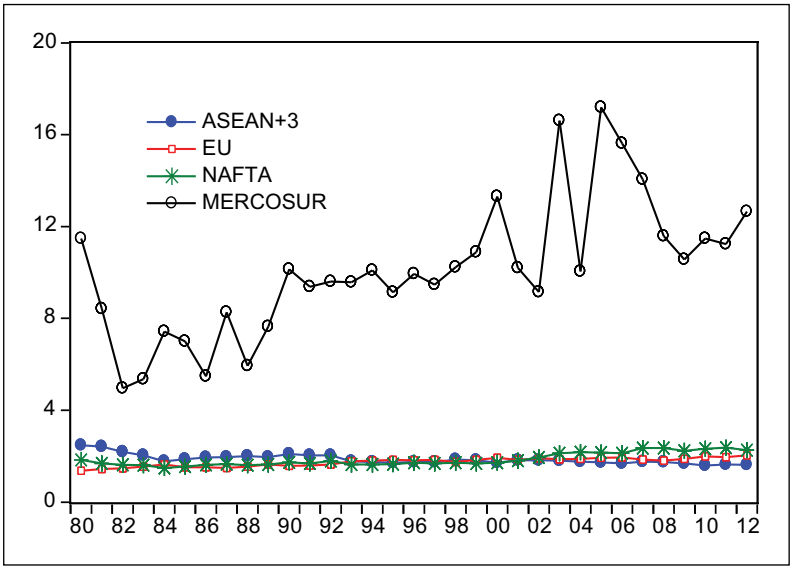

Figure 21. Intra-regional trade intensity index (capital goods).

trade increased faster than that of intra-regional trade in the entire trade of ASEAN+3. As the intra-regional economic integration of ASEAN+3 progressed, the reliance on the extra-regional market grew. In contrast, as the weights of the EU and NAFTA in the world trade are gradually decreasing, the volume of intra-regional trade is decreasing to a smaller degree with the concentration on intra-regional trade remaining high.

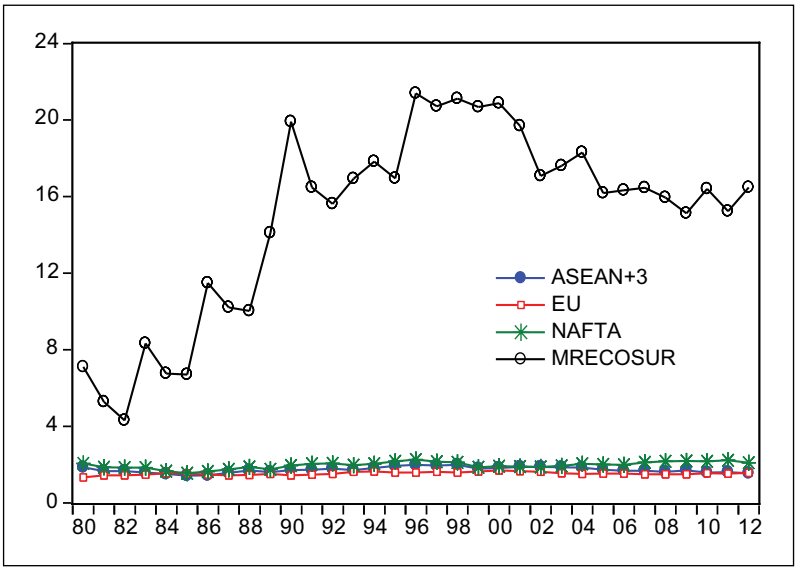

Figure 22. Intra-regional trade intensity index (consumption goods).

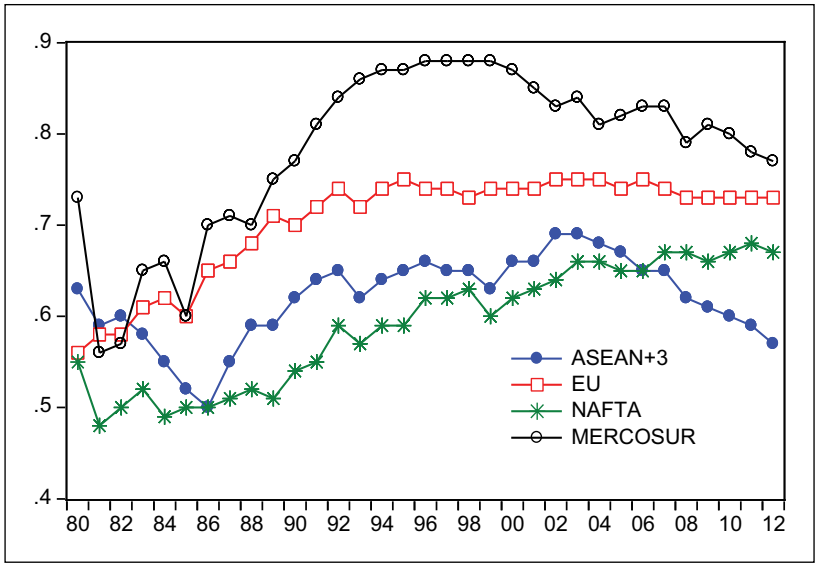

Figure 23. Regional trade introversion index (total).

Regional trade introversion index

Figure 23 shows the regional trade introversion index of the four economic blocs. The regional trade introversion index of MERCOSUR was the greatest in 2012, followed by the EU, NAFTA, and ASEAN+3 in that order, which indicates that in this case MERCOSUR was the most intra-region oriented while ASEAN+3 was the most extra-region oriented. It is noteworthy here that the

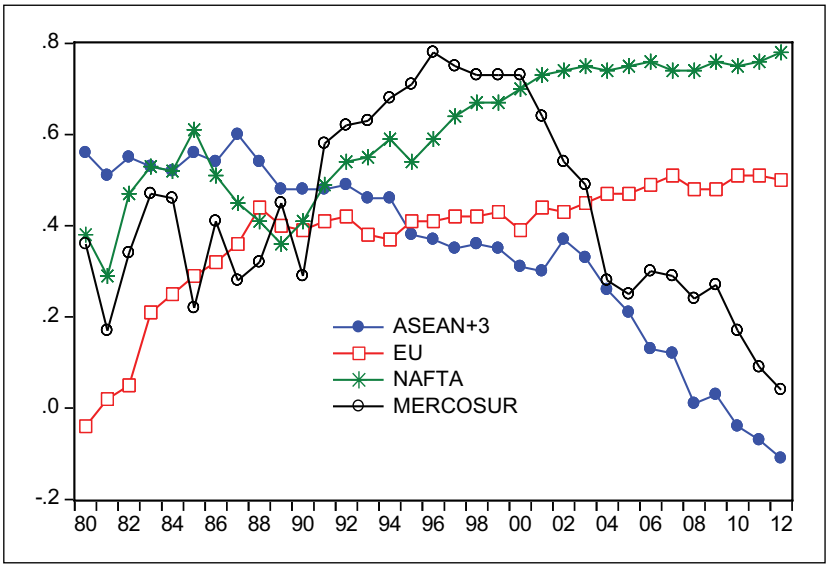

Figure 24. Regional trade introversion index (primary goods).

regional trade introversion index of ASEAN+3, which reached its peak—0.69—in 2002 and 2003, then decreased to 0.57 in 2012 while those of the EU and NAFTA have gradually increased or remained stable. That of MERCOSUR reached the peak—0.69—in the late of 1990s, but thereafter it continued to decrease to 0.77 by 2012. The intra-regional trade share of ASEAN+3 is increasing, but the regional trade introversion index is lower than those of other three economic blocs. In contrast, the intra-regional trade shares of the EU and NAFTA are decreasing, but the regional trade introversion indexes are stable or increasing. This result indicates that while the intra-regional trade share of ASEAN+3 increased, the regional trade introversion index is actually lower than that of the EU, NAFTA, and MERCOSUR. It would imply that while the intra-regional orientedness of the EU and NAFTA strengthened, that of ASEAN+3 was weakening.

As shown in Figure 24, the regional trade introversion index of primary goods for ASEAN+3 was most intra-region oriented in 1980, but it has decreased steadily and become most extra-region oriented in 2012. Those of primary goods for the EU and NAFTA were 0.04 and 0.38 in 1980, respectively, and increased gradually thereafter up to 0.50 and 0.78, respectively in 2012. The regional trade introversion index of primary goods for MERCOSUR showed a drastic change: after the peak—0.75—in 1997, the number rapidly decreased to 0.04 by 2012. The intra-regional trade share of primary goods for ASEAN+3 showed a decreasing tone and the regional trade introversion index gradually decreased as well. In contrast, the intra-regional trade shares of the EU and NAFTA are decreasing, while their regional trade introversion indexes are increasing.

As for processed goods, the regional trade introversion index of ASEAN+3, as shown in Figure 25, has increased or remained stable at around 0.82 in the late 1990s and 2000s. However, it decreased to 0.74 in 2012, which is the lowest among the four economic blocs.

In the case of parts and components, as shown in Figure 26, the regional trade introversion index of ASEAN+3 has steadily increased from 0.61 in 1980 to 0.77 in 2007, but decreased to 0.74 in 2012. This index has been decreasing since 2008, but those of the EU and NAFTA have been increasing. The regional trade introversion index of MERCOSUR drastically increased in the 1980s, and from 1990 onwards that of processed goods was 0.8 and that of parts and components

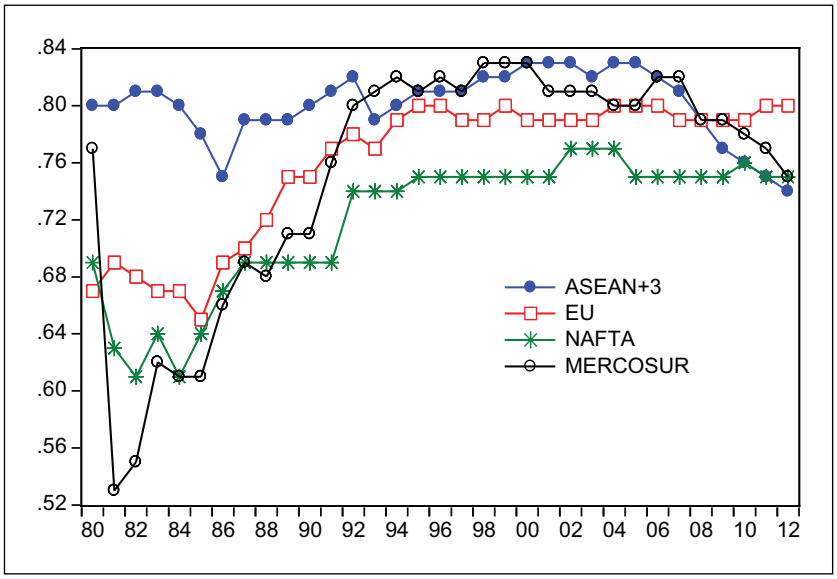

Figure 25. Regional trade introversion index (processed goods).

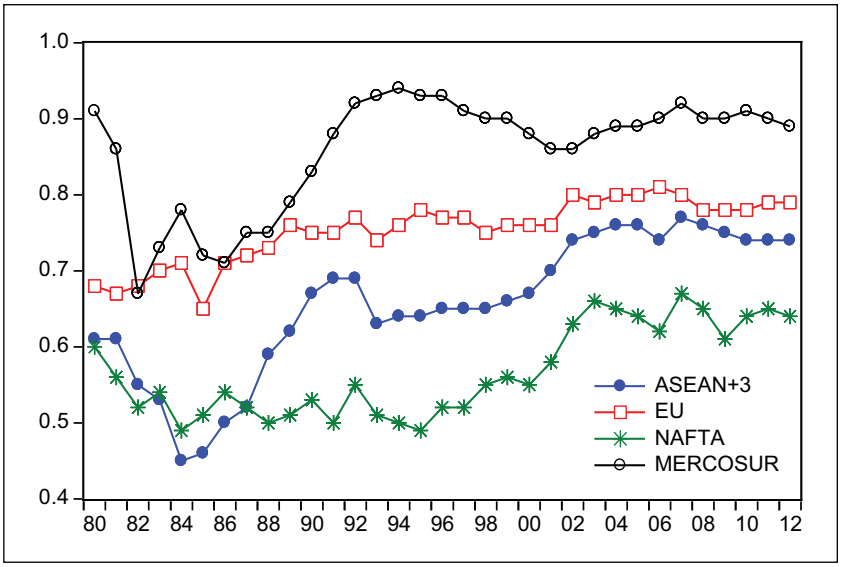

Figure 26. Regional trade introversion index (parts and components).

was 0.9, which indicates the highest level among the economic blocs. The index of processed goods decreased somewhat from 2008 while that of parts and components remained stable. While the intra-regional orientedness of the EU and NAFTA develops or remains stable, that of ASEAN+3 is weakening. This indicates that the increase of the intra-regional trade share of ASEAN+3 regarding processed goods and parts and components does not guarantee the development of intra-region orientedness.

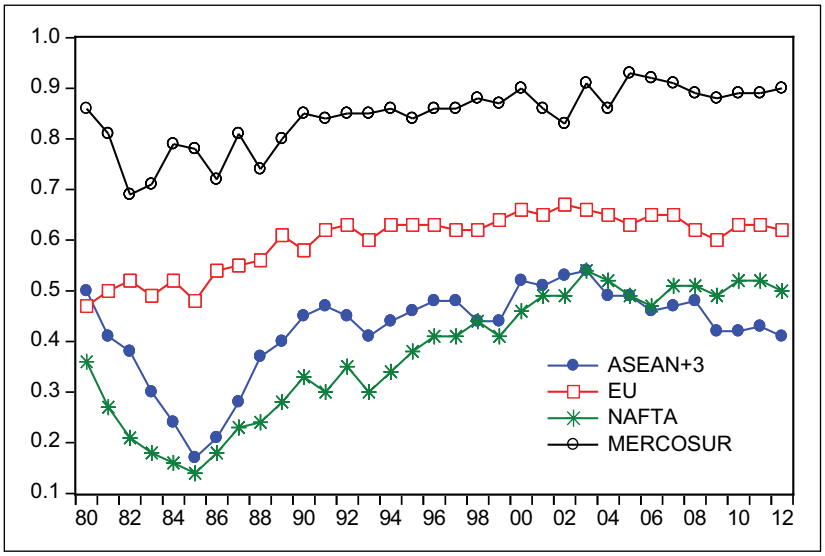

Figure 27. Regional trade introversion index (capital goods).

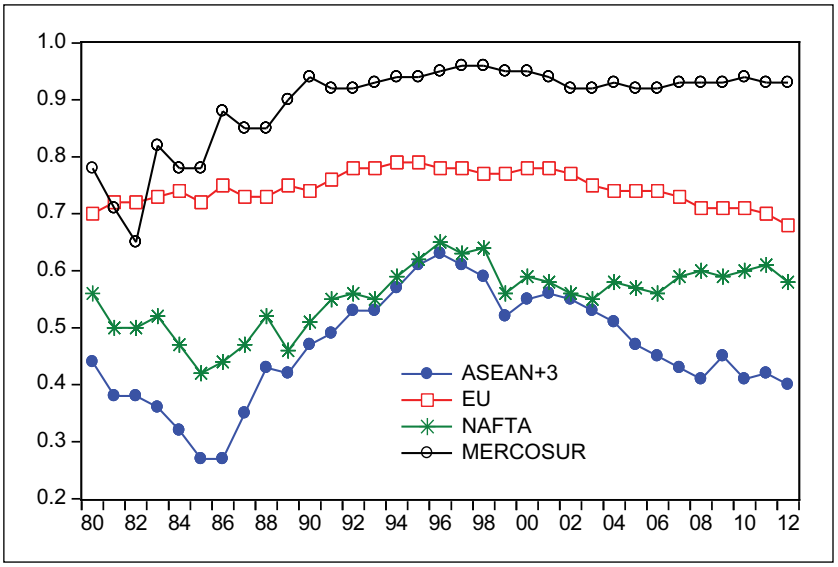

Figure 28. Regional trade introversion index (consumption goods).

As shown in Figures 27 and 28, the regional trade introversion index of ASEAN+3 regarding capital goods and consumption goods is the lowest among the four blocs. The regional trade introversion index of ASEAN+3 regarding capital goods and consumption goods has been decreasing since the early 2000s, while those of the EU and NAFTA have been increasing. That of MERCOSUR drastically increased in the 1980s and has maintained a higher level than other economic blocs from 1990 onwards: 0.8 for capital goods and 0.9 for consumption goods. That of final goods has been somewhat decreasing since 2008, while that of consumption goods is stable. While the

Table 2. Correlation between intra-regional trade share of ASEAN+3 and other economic blocs.

	Total	Primary goods	Processed goods	Parts and components	Capital goods	Consumption goods
EU	−0.15	−0.21	−0.13	−0.29	−0.53	0.04
NAFTA	0.65	−0.83	−0.70	−0.73	0.72	0.52
MERCOSUR	0.79	0.04	0.87	0.67	0.81	0.77

intra-regional orientedness of the EU, NAFTA, and MERCOSUR is developing or stable, that of ASEAN+3 is weakening. This indicates that the increase in the intra-regional trade share of ASEAN+3 regarding capital goods and consumption goods does not guarantee the development of intra-region orientedness.

In general, the regional trade introversion index of the EU and NAFTA is more intra-region oriented than ASEAN+3. As the results of the intra-regional trade intensity index analysis shows, although the intra-regional trade of ASEAN+3 increased in volume and share, the introversion index was rather low. As to intermediate goods, ASEAN+3 showed a higher intra-regional orientedness than for primary goods and final goods although the level is still low. The intra-regional orientedness of processed goods is higher than that of parts and components, which indicates that trade in production based processing based on the processing trade is advancing. The intra-regional orientedness of final goods is low and the difference compared to other economic blocs such as the EU and NAFTA is significant accordingly. The comprehensive analysis of the intra-regional trade intensity index and regional trade introversion index shows that the intra-regional trade of ASEAN+3 still centers on the processing production of intermediate goods among intra-regional countries and then exporting to extra-regional countries.

Correlation analysis

This section analyzes the correlation between intra-regional trade share, the intra-regional trade intensity index, and the regional trade introversion index of ASEAN+3, and those of the EU, NAFTA, and MERCOSUR. We aim to compare the characteristics of ASEAN+3 intra-regional trade with other economic blocs. Table 2 shows the correlation coefficient between the intra-regional trade share of ASEAN+3 and those of other economic blocs: there is a negative correlation coefficient with the EU and a positive correlation coefficient with NAFTA and MERCOSUR. This indicates that the intra-regional trade share of ASEAN+3 moves in the opposite direction to that of the EU and in the same direction as NAFTA and MERCOSUR.

Table 3 shows the correlation coefficient between the intra-regional trade intensity index of ASEAN+3 and those of other economic blocs. The EU, NAFTA, and MERCOSUR all show a negative correlation coefficient, which indicates that the intra-regional trade intensity index of ASEAN+3 moves in the opposite direction to the other economic blocs.

Table 4 shows the correlation coefficient between the regional trade introversion index of ASEAN+3 and those of other economic blocs. As in the case of the intra-regional trade intensity index, the correlation coefficient of the EU, NAFTA, and MERCOSUR are all negative, which indicates that the regional trade introversion index of ASEAN+3 moves in the opposite direction to those of the other economic blocs.

Table 5 shows the correlation coefficient between the intra-regional trade share and the intra-regional trade intensity index, and Table 6 shows the correlation coefficient between the intra-regional trade share and regional trade introversion index.

Table 3. Correlation between intra-regional trade intensity index of ASEAN+3 and other economic blocs.

	Total	Primary goods	Processed goods	Parts and components	Capital goods	Consumption goods
EU	−0.78	−0.88	−0.92	−0.88	−0.27	0.38
NAFTA	−0.62	−0.90	−0.85	−0.47	−0.03	−0.53
MERCOSUR	−0.25	0.16	−0.62	−0.30	0.14	0.62

Table 4. Correlation between regional trade introversion index of ASEAN+3 and other economic blocs.

	Total	Primary goods	Processed goods	Parts and components	Capital goods	Consumption goods
EU	−0.63	−0.64	−0.20	−0.86	−0.70	−0.71
NAFTA	−0.62	−0.80	−0.17	−0.76	−0.79	−0.77
MERCOSUR	0.71	0.39	0.29	0.73	0.68	0.63

Table 5. Correlation between intra-regional trade share and intra-regional trade intensity index.

	ASEAN+3	EU	NAFTA	MERCOSUR
Total	−0.54	−0.20	0.26	0.92
Primary goods	0.96	0.29	0.90	0.97
Processed goods	−0.82	−0.56	0.31	0.91
Parts and components	−0.73	−0.59	−0.69	0.89
Capital goods	−0.02	−0.70	0.63	0.80
Consumption goods	−0.77	−0.30	0.14	0.87

Table 6. Correlation between intra-regional trade intensity index and regional trade introversion index.

	ASEAN+3	EU	NAFTA	MERCOSUR
Total	−0.78	−0.38	0.63	0.91
Primary goods	0.96	0.59	0.97	0.92
Processed goods	−0.82	−0.07	0.78	0.92
Parts and components	−0.73	−0.12	−0.39	0.86
Capital goods	−0.02	−0.31	−0.79	0.86
Consumption goods	−0.94	−0.47	0.51	0.85

In the case of ASEAN+3, both have a negative correlation coefficient, which means, as mentioned above, an increase in the intra-regional trade share and a decrease in both the intra-regional trade intensity index and the regional trade introversion index. In the case of the EU as well, both have a negative correlation coefficient, which indicates that, unlike ASEAN+3, the intra-regional trade share decreases while the intra-regional trade intensity index and the regional trade introversion index both increase. NAFTA and MERCOSUR both show a positive correlation coefficient, which indicates that while the intra-regional trade share increases, the intra-regional trade intensity index and the regional trade introversion index increase as well. The correlation coefficient analysis demonstrates that the increase in the intra-regional trade share of ASEAN+3 is not directly linked to the increase in the intra-regional trade intensity index and the regional trade introversion

index, and that the quantitative expansion of intra-regional trade is not a sufficient condition in which intra-regional trade can develop substantially.

Conclusion

As discussed above, ASEAN+3 intra-regional trade reached US$4.8tn, which amounts to more than a 29-fold increase and more than a 12% annual growth rate over the period 1980–2012. However, this rapid increase in intra-regional trade would not be a sufficient condition for an explicit deepening of regional economic integration. Therefore, a more indepth and thorough analysis of ASEAN+3 intra-regional trade would be important and necessary for the economic integration of East Asia to correspond to the realization of mega FTAs and the launch of the ASEAN Economic Community by 2015.

We examined the structures and characteristics of the intra-regional trade of ASEAN+3 through an analysis of intra-regional trade share, the intra-regional trade intensity index, and the regional trade introversion index for primary goods, intermediate goods (processed goods, and parts and components), and final goods (capital goods and consumption goods). Furthermore, the comparative analysis with the main economic blocs such as the EU, NAFTA, and MERCOSUR was also discussed. We could see that the economic integration of ASEAN+3 would be enlarged and deepened through the progress and advancement of intra-regional trade. However, we found that although the volume and share of intra-regional trade has been growing, this may not indicate or guarantee the inherent advancement of economic integration in the region. The intra-regional trade of ASEAN+3 seems to be facing limitations in terms of substantial integration of the regional economy. While intra-regional trade has been growing in scale and share, the level of intra-regional orientedness or introversion has been going down and was lower than those of the EU, NAFTA, and MERCOSUR.

More specifically, the analysis shows that intra-regional trade between ASEAN+3 countries is significantly less introverted than their counterparts in either the EU or NAFTA. In particular, whereas the introversion of trade in the EU and NAFTA has increased since the latest global economic crisis in 2008, ASEAN+3, as a whole, has moved in the opposite direction. We may suggest that there are two main reasons for the relative extrovertedness of ASEAN+3. The first is China, which occupies a central and major position in intra-regional trade of ASEAN+3 and maintains an extroverted trade structure for economic development (Ra, 2009; Sohn, 2008; Wong and Chan, 2003). The second is that the intra-regional trade of ASEAN+3 is still mainly focused on the trade of intermediate goods, which made up 64.0% of all types of goods traded in ASEAN+3 in 2012, while final goods made up only 30.5%. This indicates that, while ASEAN+3 has become the pivotal producer of intermediate goods, much of the demand for final goods still lies outside the region, for example in the US and the EU. This analysis proves the need for structural change to be more focused on final goods, and for there to be single rules of trade liberalization with a more comprehensive scope and at a higher level to achieve the advancement of intra-regional trade in ASEAN+3 in terms of both quantity and quality. It would be necessary to enhance the quality of intra-regional trade by adopting common norms and principles of trade liberalization and applying them to broader areas. The effect of such norms would be even greater if they applied not only to intermediate goods but also to final and consumption goods.

In addition, we suggest that there should be a new momentum or strategy to strengthen the intra-regional trade of ASEAN+3. In other words it would be vital to make and practice innovative plans in order to develop intra-regional trade, so that the foundation of FTAs among ASEAN+3 countries would be an ignition point or threshold for the substantial development of intra-regional trade. Furthermore, in order to develop intra-regional trade, a more comprehensive and higher level of intra-regional economic integration is required with corresponding regulations, specific plans, and

practical effort to bring about its realization. Finally, to maximize the effect of intra-regional trade liberalization, trade liberalization needs to go beyond the boundaries of intermediate goods and expand into final goods, especially consumption goods. As the liberalization of intra-regional trade is realized, its quality would be enhanced and then the successful foundation of an ASEAN+3 FTA would also be possible based on the expansion of the intra-regional market as well. In this respect, the establishment of an ASEAN+3 FTA would be of great significance in that it could be a momentum for the qualitative and substantial growth of ASEAN+3 intra-regional trade.

Furthermore, the study shows that among intermediate goods, the indexes of processed goods were higher than those for parts and components, and among final goods, those of consumption goods were higher than those for capital goods. The intra-regional trade share of parts and components and capital goods is relatively low, and the intra-regional orientedness is weak. In other words, as ASEAN+3 relies heavily on the supply of capital goods from the extra-regional market, it is necessary to strengthen the export competitiveness of capital goods. The intra-regional trade share of processed goods and consumption goods is high and highly intra-region oriented. Thus, to increase the market share of processed goods and consumption goods, it will be necessary to open and expand the market through promoting direct investment. The fact that the intra-regional trade share of consumption goods is the lowest except primary goods indicates the need to develop strategies aimed at the consumption goods market in consideration of the rapidly increasing demands for consumption goods among the middle- to higher-classes. In particular, low-priced consumption goods produced domestically and exported abroad are less price-competitive compared to commodities from China. It would be advantageous to take local production and direct investment strategies. Also, it is necessary to come up with mid- to long-term strategies for economic integration and intra-regional trade of ASEAN+3, including the differentiation of middle/high priced commodities consumed mainly by middle- to higher-classes.

This study focused on the analysis of intra-regional trade by ASEAN+3 countries specifically regarding the five categories of goods. A future study also needs to examine the individual countries within ASEAN+3, their roles and positions in intra-regional trade, and the classification of more categories of goods for a more thorough and comprehensive analysis of intra-regional trade.

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1. Primary goods include industrial raw materials and processed food products. These products may be converted into intermediate goods through a certain type of processing. Intermediate goods mean processed primary goods used for final goods to be produced. They are divided into processed goods, and parts and components. In general, processed goods are items that are in the medium stage between the first raw material processing and the reprocessing. Threads and textures for clothing, steel plates for vehicle production, etc. are all examples. Parts and components are finished goods but may be used for the production of finished goods on a greater scale. Tires and glass for vehicle production are examples. Final goods means items that a producer uses in a production process or which a consumer or the government consume as end-users. The former is capital goods, and the latter consumption goods respectively.

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Erratum

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