

Intra-Regional Trade in East Asia :

**Need to Overcome Excessive Concentration
on Intermediate Goods
and External Dependency**

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Abstract

Trade in East Asia has been growing and expanding consistently thanks to the spread of the market liberalization policy in the region. The acceleration of efforts to adopt various free trade agreements (FTAs) in the region has also increased the volume and the importance of intra-regional trade here. Intra-regional trade among the 16 states in East Asia that are negotiating East Asia's FTA, officially called Regional Comprehensive Economic Partnership Agreement (RCEP), multiplied by 3.7 times, from USD 1.131 trillion in 2000 to USD 4.175 trillion in 2011, and the share of intra-regional trade for these countries also rose from 39.7% to 44.5% over the same period of time. The sheer growth is all the more remarkable compared with the records of the European Union (EU) and the North American Free Trade Agreement (NAFTA)*.

Despite the outward growth of trade in the region of East Asia, intra-regional trade in this region has begun to display a number of shortcomings. If the growth of the sheer volume and the share of intra-regional trade indicate the quantitative growth of trade in this region, the level of introversion may indicate the qualitative side of intra-regional trade. There are mainly two measures of trade introversion, namely, the Intra-regional

* Regarding the volume of intra-regional trade, it was USD 2.783 trillion in the European Union in 2000, and increased 2.4 times to USD 6.631 trillion in 2011. In case of NAFTA, it increased about 1.5 times from USD 1.272 trillion to USD 1.938 trillion during the same period. Regarding the share of intra-regional trade, in the EU it decreased from 65.6% in 2000 to 62.6% in 2011; in the NAFTA, from 45.1% to 38.9% each

Trade Intensity Index (IRTII), and the Regional Trade Introversion Index (RTII). The analysis of trade in East Asia according to both measures revealed that intra-regional trade among the 16 countries in the region is significantly less introverted than the counterparts in either the EU or the NAFTA. Whereas the introversion of trade in the EU and the NAFTA has increased since the latest global economic crisis, the East Asian case has moved in the opposite direction.

There are mainly two reasons for the relative extrovertedness of trade in East Asia. First, China, which occupies a central position in intra-regional trade in the region, maintains an extroverted trade structure. The increase in the volume of trade involving China has not only multiplied the volume of intra-regional trade as a whole, but also significantly increased the extroversion of intra-regional trade. Second, intra-regional trade in East Asia is still mainly focused on the trade of intermediate goods, which made up 56.9% of all types of goods traded in East Asia in 2011, while final goods made up only 28.2%. This indicates that, while East Asia, as a whole, has become the pivotal producer of intermediate goods, much of the demand for the final goods still lies outside the region. While the IRTII and the RTII of intermediate goods are still higher than those of either primary goods or final ones, those measures continue to decline with respect to intermediate goods, suggesting that the quantitative expansion of intermediate goods trade will eventually cease.

This analysis proves the need for single rules of trade liberalization with a more comprehensive scope and at a higher level. If countries in East

Asia have multiplied their respective trade volumes by signing FTAs with one another so far, they now need to enhance the quality of their trade by adopting the common norms and principles of trade liberalization applying to broader areas. The effect of such norms will be even greater if they applied not only to intermediate goods, but also to final and consumption goods. The enhanced introversion of intra-regional trade, in turn, will help the countries in East Asia to reduce the hardships of excessive external dependency that they suffered when the global financial crisis broke out in 2008, and consequently enable them to enjoy greater stability in economic growth.

The current analysis of the trade structure in East Asia also bears significant implications for Korean businesses. The volume of trade continues to increase not only between Korea and China but also between Korea and the members of the Association of Southeast Asian Nations (ASEAN). Intermediate goods, however, make up 68.2% of all trade that Korea conducts with fellow East Asian countries, which is a figure far higher than those for China and Japan (53.3% and 55.8%, respectively). Considering the pace of economic growth in East Asia and the expedited efforts toward intra-regional economic integration, Korean businesses will need to adopt mid- to long-term growth strategies that support the active development of products that the intra-regional market will demand.

I. Currents in the Process of Economic Integration of East Asia

1. Expansion of Trade in East Asia and Its Limits

Trade in 16 countries of East Asia in 2011 was 3.7 times and twice greater than it (had been) in 2000 and 2005, respectively. There are a number of factors behind this. First, East Asia is “the factory of the world,” producing 77.8% of home appliances, 91.4% of information and communication technology (ICT) devices, 45.4% of automobiles, and 64.0% of steel in circulation worldwide as of 2009. Second, governments in East Asia have been rigorously pursuing trade liberalization over the years. These countries have concluded 67 FTAs in total to date, which is about one fourth of all the present FTAs in effect worldwide.

<FTAs of East Asian Countries>

	Proposed	Under negotiation	Concluded, but not in effect yet	In effect	Total
Asia	50	61	23	109	257
ASEAN+6	41	54	8	67	179

Source: ADB, Asian Integration Monitor, March 2013.

These two facts have turned East Asia into the world’s fastest-growing region. Among the 16 countries participating RCEP negotiation, only Japan (1.9%), New Zealand (2.1%), and Brunei (1.6%) are anticipated to achieve an annual growth rate below the world average (2.4% in 2013), while all the

other participating states are expected to exceed the world average. All the facts above contributed to increase the intra-regional trade in East Asia.

<Economic Growth Rates of East Asian Countries>

(unit: %)

	2006	2007	2008	2009	2010	2011	2012	2013 (E)	2014 (E)	2015 (E)
World	4.2	4.1	1.7	-1.9	4.3	3.0	2.6	2.4	3.3	3.8
OECD	3.0	2.6	0.1	-3.6	2.9	1.7	1.5	1.1	2.0	2.5
US	2.7	1.8	-0.3	-2.8	2.5	1.8	2.8	1.5	2.5	3.2
EU	3.5	3.2	0.3	-4.5	2.0	1.7	-0.4	0.0	1.2	1.7
Korea	5.2	5.1	2.3	0.3	6.3	3.7	2.0	2.4	3.2	4.0
China	12.7	14.2	9.6	9.2	10.5	9.3	7.7	7.8	8.0	8.2
Japan	1.7	2.2	-1.1	-5.5	4.7	-0.5	2.0	1.9	2.0	1.3
India	9.3	9.8	3.9	8.5	10.5	6.3	3.2	4.4	5.6	6.8
Australia	2.7	4.6	2.7	1.4	2.6	2.4	3.6	2.4	2.4	2.9
New Zealand	2.1	3.4	-0.6	0.3	0.9	1.3	3.2	2.1	2.8	3.0
Indonesia	5.5	6.3	6.0	4.6	6.2	6.5	6.2	5.6	5.0	5.5
Thailand	5.1	5.0	2.5	-2.3	7.8	0.1	6.5	3.5	3.8	5.0
Malaysia	5.6	6.3	4.8	-1.5	7.4	5.1	5.6	4.4	4.9	5.2
The Philippines	5.2	6.6	4.2	1.1	7.6	3.6	6.8	7.0	5.6	6.1
Singapore	8.6	9.0	1.7	-0.8	14.8	5.2	1.3	2.8	3.6	4.5
Vietnam	8.2	8.5	6.2	5.3	6.9	6.0	5.0	5.4	5.6	6.3
Myanmar	13.1	11.9	4.0	5.0	5.0	5.1	5.1	5.0	4.9	4.9
Cambodia	10.8	10.2	6.7	0.1	6.0	7.1	7.3	6.9	7.3	8.2
Laos	8.7	6.8	8.8	7.5	8.1	8.0	7.9	7.8	7.4	8.1
Brunei	4.4	0.2	-1.9	-1.8	2.6	2.2	1.0	1.6	1.8	1.3

Source: Global Insight, October 2013.

However, the fast-growing East Asian economies are still highly dependent on trade with regions outside their own. The share of intra-regional trade for the RCEP participating states is 44.5% on average, which

is higher than that for the NAFTA member states (38.9%) but lags far behind the EU counterpart (62.6%). This is mainly because China, by far the largest economy in the region, is highly dependent on trade with other regions (67.2%), thereby limiting trade introversion of the entire region. Most states in East Asia have already suffered setbacks and difficulties since the onset of the global financial crisis in 2008 because of their vulnerability to the trade and financial conditions of advanced economies outside their region. Low trade introversion is a major obstacle that the economy of this region ought to overcome soon.

Another significant obstacle to the improvement of trade in East Asia is the wide diversity of the FTAs among the member states. The levels of market opening under FTAs are quite different among others, and the terms and conditions of the FTAs are also different in many areas. The RCEP participating states have decided to bring the five FTAs that the ASEAN has entered (with Korea, China, Japan, Australia / New Zealand, and India) under a single umbrella. However, these FTAs between the ASEAN and other East Asian states open up far smaller portions of markets than either the Korea–US FTA or the Korea–EU FTA, and apply differing terms and conditions concerning concessions and origins.

<Proportion of Goods Liberalization in the Five ASEAN+1 FTAs>

	Liberalized under all FTAs	Liberalized under different FTAs	Liberalized open under any FTAs
Brunei	84.1%	15.9%	0.0%
Cambodia	64.3%	35.3%	0.4%
Indonesia	46.0%	52.8%	1.2%
Laos	68.0%	31.6%	0.4%
Malaysia	76.0%	22.9%	1.1%
Myanmar	66.6%	31.8%	1.6%
The Philippines	74.6%	24.4%	1.0%
Singapore	100.0%	0.0%	0.0%
Thailand	75.6%	24.3%	0.1%
Vietnam	78.1%	19.1%	2.8%
Average	73.3%	25.8%	0.9%

Source: ERIA, 2009.

<Goods Subject to the Common Origin Conditions of the Five ASEAN+1 FTAs>

Type	Goods	
	Number (HS2002, 6 digit)	Proportion (%)
Common origin conditions across all five FTAs	3,318	64.0
Common origin conditions under four FTAs	766	14.8%
Common origin conditions under three FTAs	825	15.9%
Common origin conditions under two FTAs	25	4.9%
No common origin conditions	23	0.4%

Source: ERIA, 2009.

The multiple overlapping FTAs concerning the same states or regions are fragmented in terms and conditions, and they may serve as obstacles to the expansion and success of businesses. Quite a number of small and

medium businesses in Korea are already reporting complaints regarding this phenomenon.

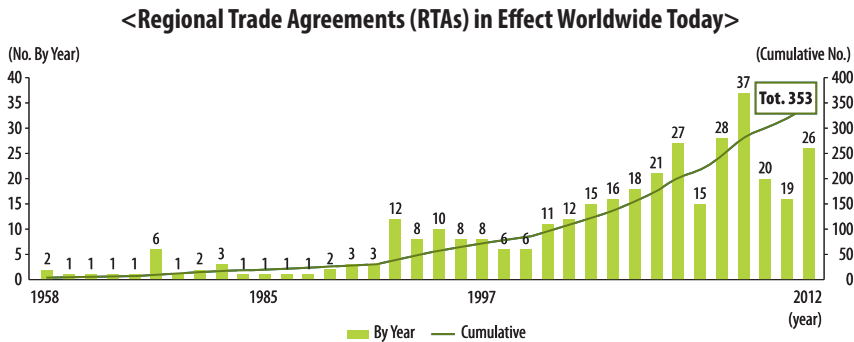
<FTAs among the 16 RCEP Member States (excluding the RCEP and the TPP)>

	Kor	Ch	Jp	Aus	NZ	In	Ind' sia	Thai	Phil	Mal	Sing	Viet	Cam	Mya	Lao	Bru
Kor		▲	□	△	△	○	◎	○	○	◎	◎	◎	○	○	○	○
Ch	▲		△	×	○	×	○	○	○	○	○	○	○	○	○	○
Jp	△	△		△	×	○	◎	◎	◎	◎	◎	◎	○	○	○	◎
Aus	△	×	△		◎	×	○	○	○	○	○	○	○	○	○	○
NZ	△	○	×	◎		×	○	○	○	○	○	○	○	○	○	○
In	○	×	○	×	×		○	○	○	○	○	○	○	○	○	○
Ind' sia	◎	○	◎	○	○	○	Countries currently negotiating the formation of the ASEAN Economic Community (AEC)									
Thai	○	○	◎	○	○	○										
Phil	○	○	◎	○	○	○										
Mal	◎	○	◎	○	○	○										
Sing	◎	○	◎	○	○	○										
Viet	◎	○	◎	○	○	○										
Cam	○	○	○	○	○	○										
Mya	○	○	○	○	○	○										
Lao	○	○	○	○	○	○										
Bru	○	○	◎	○	○	○										

- ◎ Signatories to both multilateral and bilateral FTAs
- ◎ Signatories to multilateral FTAs and currently under negotiations for bilateral FTAs
- Signatories to either multilateral FTAs or bilateral FTAs
- △ Currently under negotiation (or having ceased negotiations)
- ▲ Currently under negotiations for both multilateral and bilateral FTAs
- Currently under negotiation for some FTAs and having ceased negotiations for others
- × signatories to no FTAs

2. Progress of Economic Integration across East Asia

Since the outbreak of the latest global financial crisis, governments worldwide are actively vying to sign increasing number of “mega-FTAs” over and beyond bilateral and multilateral FTAs. The 2008 economic crisis marked a rupture to the dramatic increase in the number of region-wide trade agreements worldwide that had been in place. More specifically, the crisis gave rise to the talks and negotiations of mega-FTAs of unprecedented scopes and ranges, such as the Transatlantic Trade and Investment Partnership (TTIP) between the United States and the EU; the Trans-Pacific Partnership (TPP) around the Pacific; and the RCEP in East Asia. Many countries in East Asia are now participating the negotiation of the TPP and/or the RCEP negotiations. Having participated in the RCEP negotiations, the Korean government is also considering joining the TPP negotiations.



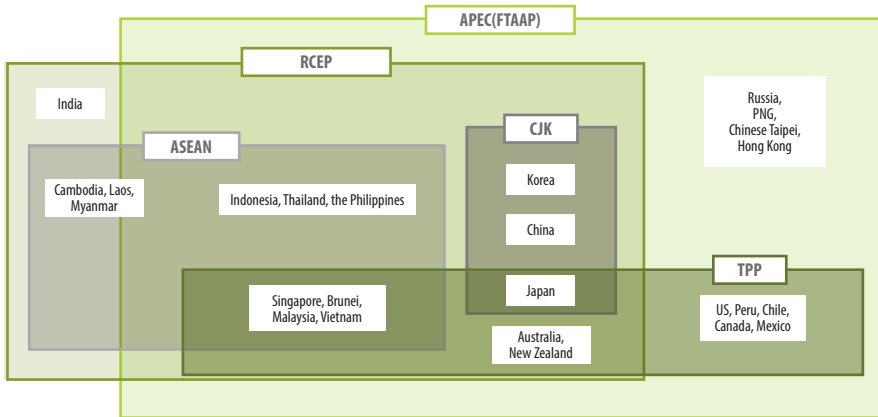
Source: WTO (www.wto.org), “List of All RTAs” under the “Regional Trade Agreements.”

The TPP, an initiative now championed by the U.S., is rapidly expanding its scope of participation as Japan joined its negotiation process in March. The TPP, originally conceived in May 2006 as a transregional

FTA involving a relatively small number of open economies, such as Singapore, New Zealand, Chile, and Brunei, came to include the United States, Australia, Peru, and Vietnam as negotiating partners in March 2010, followed by Malaysia, Canada, Mexico, and finally Japan in March 2013, thus emerging as possibly the most wide-reaching and significant mega-FTA. A total of 19 rounds of negotiations have been held so far aiming to conclude negotiations by the end of 2013. A number of important issues still remain unresolved however, and may lead to additional negotiations even if all the participating countries were to sign the TPP within 2013.

The negotiations for the RCEP, launched in 2011, represent the most visible effort by countries in East Asia to achieve region-wide economic integration centered on and led by the ASEAN. No significant progress has been made with either the East Asian Free Trade Agreement (EAFTA), proposed by China for the ASEAN and three additional countries, or the Comprehensive Economic Partnership for East Asia (CEPEA), proposed by Japan for the ASEAN and six additional countries. In the meantime, the governments of Korea, China, Japan, India, Australia, and New Zealand concluded their own FTAs with the ASEAN. The RCEP is designed to accommodate the five ASEAN+1 FTAs. The negotiators have held the second round of negotiations last September 2013 and aims to conclude the discussions by 2015.

<Structure of Economic Integration in Asia Pacific>



Source: IIT, "Japan Rapidly Catching up with Korea in FTA Race," Trade Focus, July 2013.

The RCEP, if realized, will signify the emergence of an economic bloc that is at least as important as, or even greater than, those of the EU, the NAFTA, or the TPP. The 16 participating states of the RCEP negotiations altogether serve as a home to 3.4 billion people or 48.7% of the total world population, and generate USD 21 trillion in combined gross domestic product (GDP) or 29.5% of the world's total. These 16 states also generate USD 10.5 trillion in intra-regional trade or 29.0% of all worldwide trade.

<Comparison of Major Economic Blocs Worldwide>

(Figures in parentheses represent proportions in the world's total.)

	RCEP	EU	NAFTA	TPP
Population (100 million)	34.3 (48.7%)	5.0 (7.2%)	4.7 (6.6%)	8.0 (11.4%)
GDP (USD 1 trillion)	21.2 (29.5%)	16.6 (23.1%)	18.7 (26.1%)	27.6 (38.4%)
Trade (USD 1 trillion)	10.5 (29.0%)	11.3 (31.0%)	5.6 (15.4%)	9.6 (26.5%)

Source: Global Insight, October 2013.

A number of studies suggest that Korea stands most to benefit from the realization of the RCEP. The KIEP (2012) projected that the RCEP will help the Korean economy to grow by 1.17–1.45% in the long run.¹⁾ The RIETI (2009) also speculated that of the 16 countries in negotiation, Korea would be the second-largest beneficiary of the RCEP after Vietnam.²⁾

<The Effects of the RCEP on the Korean Economy>

Level of openness	5 years after effectuation		10 years after effectuation	
	Real GDP (%)	Welfare (USD 100 million)	Real GDP (%)	Welfare (USD 100 million)
Low	0.32	71.98	1.17	116.11
Medium	0.37	82.79	1.31	137.53
High	0.44	96.25	1.45	163.47

Source: KIEP, December 2012.

<How the RCEP May Increase the Real GDP of Member States (%)>

Level of openness	Kor	Ch	Jp	Aus	In	Ind'sia	Mal	Phil	Sing	Thai	Viet
Low	0.29	0.22	0.03	0.14	-0.10	0.07	0.29	0.14	0.00	0.55	1.31
Medium	0.77	0.20	0.06	0.15	0.16	0.08	0.43	0.19	0.02	0.70	1.86
High	1.15	0.15	0.05	0.16	0.41	0.07	0.50	0.25	0.05	0.74	2.25

Source: M. Ando, Keio University, "Impacts of FTAs in East Asia: CGE Simulation Analysis," RIETI Discussion Paper Series 09-E-037, 2009.

Korea's strategy for free trade was to begin with relatively smaller open economies, such as Chile and Singapore, and use the FTAs with these countries to expand into the larger economies, such as the United States and the EU. The Korean government also launched and conducted negotiations for multiple FTAs simultaneously in a relatively short span of time in order to fostering Korea into a hub of trade and investment. Despite

the early success with these tactics, Korea may not be able to enjoy the “hub” effect for long, as Japan and China are rapidly catching up with it in the intensifying FTA race. Moreover, the hub and spoke strategy may exert negative impact across East Asia, which is currently fragmented by multiple bilateral FTAs.³⁾ Realistically speaking, the Korean government seems to focus more on its trade relations with fellow Northeast Asian states rather than casting its eyes onto the whole East Asian region.

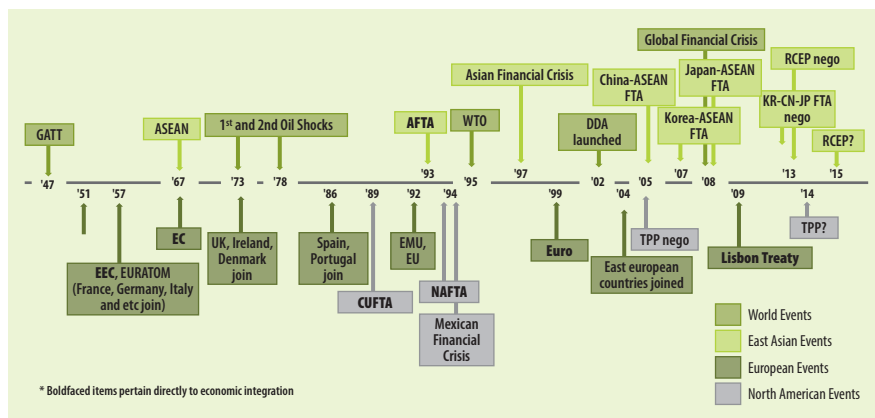
Ahead of its rivals with the FTAs it has already entered with the United States, the EU, and the ASEAN, Korea nevertheless will likely be compelled to undergo a profound paradigm shift, whether for better or worse, once the mega-FTAs like the RCEP and the TPP materialize. Korean businesses are still heavily concentrated in processing trade, relying on suppliers in China and Southeast Asia. The emergence of mega-FTAs involving East Asia may help Korea to overcome the shortcomings of the existing bilateral FTAs but will certainly and fundamentally rearrange the trade circumstances. Despite the increasing vigor and volume of discussions on the economic integration of Asia, the Korean government and businesses are still largely focused on regional FTAs with Northeast Asian states.

1) C. Lee and H. Bang, “Launching of the Negotiations for the Korea-China-Japan FTA and the RCEP, and Suggestions for Korea’s Policy Responses,” Korea Institute for International Economic Policy, KIEP World Economy Today, vol. 12, no. 24, November 2012.

2) M. Ando, “Impacts of FTAs in East Asia: CGE Simulation Analysis,” Research Institute of Economy, Trade, and Industry, RIETI Discussion Paper Series, 09-E-037, 2009.

3) R. Baldwin, “The Spoke Trap: Hub and Spoke Bilateralism in East Asia” (2007), Working Paper No. 2009/28, NCCR Trade Regulation, May 2009.

<Main Events in the World Economy and the Progress of Economic Integration in East Asia, Europe, and North America>



Source: IIT, "Japan Rapidly Catching up with Korea in FTA Race," Trade Focus, July 2013.

II. Research Method

Although multiple studies have already been conducted in Korea with respect to economic integration in Asia, few directly address the RCEP. The majority of the studies on the related topics concern the trilateral FTA among Korea, China, and Japan; the Korea-ASEAN FTA; and the FTA between the ASEAN and Korea/China/Japan. RCEP-related studies published in Korea and Japan mainly concern themselves with analyzing why the RCEP is necessary for the two countries and what impact it is likely to have. Although the Asian Development Bank Institute (ADBI) and the Economic Research Institute for ASEAN and East Asia (ERIA) have launched various projects to promote Asian economic integration, few

analyze the RCEP and its implications in detail.

The main subject of this study is the RCEP. This study analyzes the characteristics and current state of the intra-regional trade structure entailed in the partnership agreement as well as how that structure implicates Korea, China, and Japan. This study then compares the RCEP to the EU and the NAFTA to explore the current status of trade in East Asia. Even though the RCEP is under negotiation, this study uses data of 16 countries participating RCEP negotiation. Therefore the RCEP in this paper means the participating states and the trade among them.

This study draws its data from the Trade Industry Database (TID), which the Research Institute of Economy, Trade, and Industry (RIETI), a Japanese think tank, has developed to support the analyses of East Asian economic integration in the larger context of the global value chain.⁴⁾ The TID classifies the Standard International Trade Categories (SITCs) of the UN Comtrade into three broad economic categories (BECs)⁵⁾ and five systems of national accounts (SNAs).⁶⁾ More specifically, the SITC-subject goods are first divided into three categories according to their completeness (i.e., primary, intermediate, and final goods). Intermediate goods are then divided into processed goods and parts & components, while final goods are divided

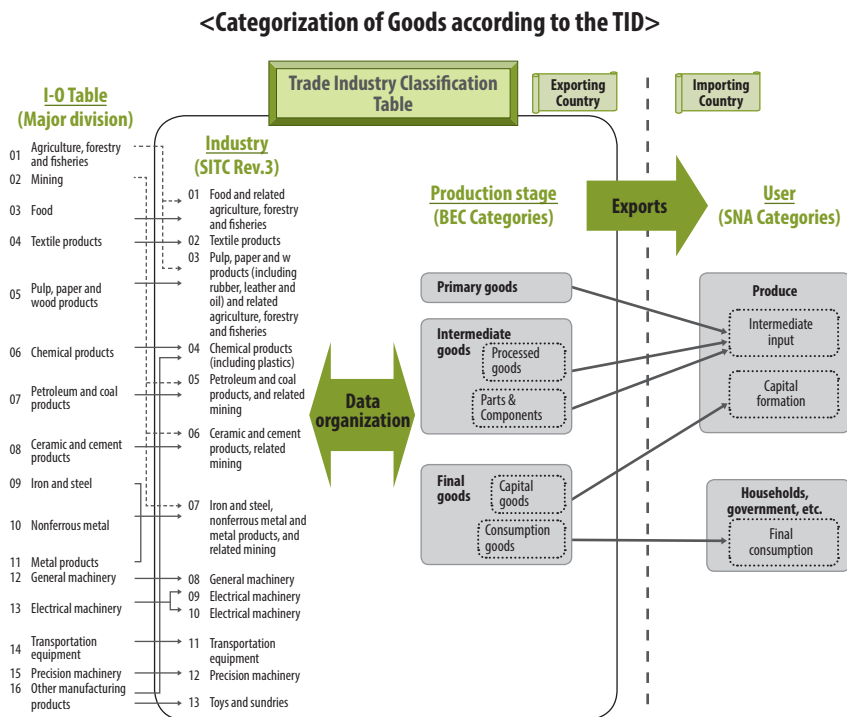
4) The TID provides trade statistics on 59 countries in total, including 14 in Asia, three in North America, 30 in Europe, 10 in Central and South America, and two in the Pacific, spanning over the period between 1980 and 2011, and organized according to the CIF principle.

5) <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=10>.

6) <http://unstats.un.org/unsd/nationalaccount/sna.asp>.

into capital goods and consumption goods.

Primary goods include raw materials for industrial (manufacturing) purposes as well as ingredients for processed foods (aside from ingredients for general and direct consumption). The majority of these goods are processed and turned into intermediate goods. Intermediate goods are processed objects that are used to produce final goods. BECs of intermediate goods include processed goods and parts/components. Final goods are used by end consumers or governments and categorized into capital goods and consumption goods.



Source: RIETI-TID, 2012.

This study uses the trade statistics of the TID to analyze and gauge the share, intensity, and introversion of intra-regional trade in East Asia and compare them to their counterparts of the EU and the NAFTA.

The Intra-regional Trade Share (IRTS) refers to the ratio of trade between countries in the proposed region over total trade of all these countries. The IRTII is obtained by dividing the share of trade in a given region by the world total. An IRTII score greater than one indicates that the trade in a given region is introverted. If the score is smaller than one, the trade in a given region is extroverted. The RTII measures both the introversion and extroversion of trade activities in a given region. The closer the RTII score is to zero, the more geographically neutral the trade is in that given region. The greater the RTII score is than zero, the more introverted the trade is in that region.

$$IRTS = A/B$$

A = intra-regional exports and imports in a given economic bloc

B = total exports and imports in a given economic bloc

$$IRTII = \frac{A/B}{B/C}$$

C = world's total exports + world's total imports

$$RTII = \frac{RI-RE}{RI+RE}$$

$$RI = \frac{A/B}{O/T}$$

$$RE = \frac{1-(A/B)}{1-(O/T)}$$

O = offshore exports and imports in a given economic bloc

T = total exports and imports of parties outside a given economic bloc

Subject to the analysis of this study are the 16 states participating in the

RCEP negotiations. This study, however, has designated four out of the 10 ASEAN member states (i.e., Indonesia, Thailand, the Philippines, and Malaysia) to a separate group considering their economic scales, population sizes, and real trade volumes. These 16 states were compared with the 27 of the EU member states⁷⁾ and the three North American states (i.e., the United States, Canada, and Mexico).

The TID provides statistics from 1980 to 2011, and China-related statistics from 1990 to 2011. The period of time subject to this study's analysis is thus from 1980 to 2011. Any discussions of China in this study are based on the TID's China statistics that begin in 1990.

III. Intra-Regional Trade Share (IRTS) Analysis

1. IRTS Comparison among East Asia, the EU and the NAFTA

Intra-regional trade among the 16 RCEP participating states has steadily increased with an IRTS lower than that of the EU but higher than that of the NAFTA as of 2011. The volume of trade among the 16 states multiplied by 23 times, from USD 17.9 billion in 1980 to USD 417.5 billion in 2011, with the IRTS concomitantly increasing from 36.0% to 44.5% over the same period. The volume of intra-regional trade in the EU amounted to USD

663.1 billion or 62.6% of all trade involving the EU as of 2011. The volume of intra-regional trade in the NAFTA amounted to USD 193.8 billion or 38.9% of all trade involving the NAFTA member states as of 2011.

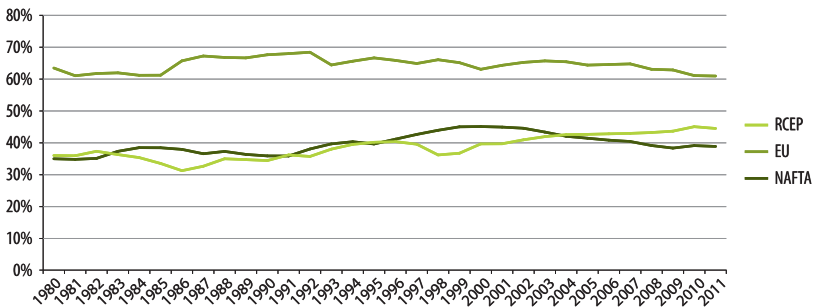
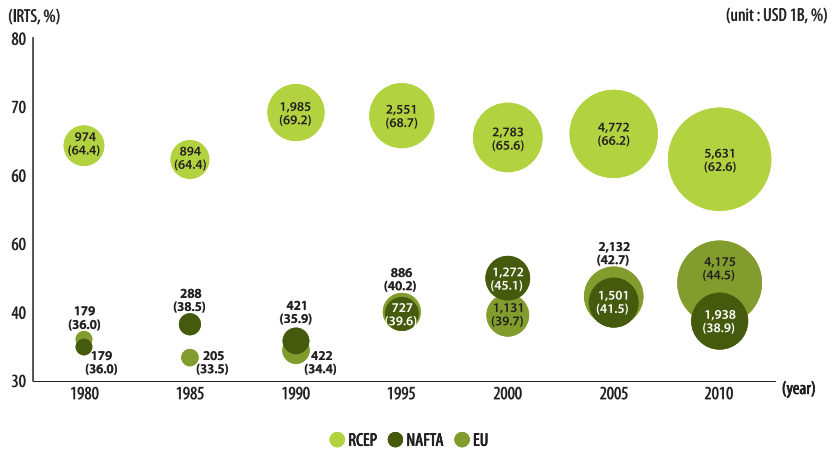
While the volume of intra-regional trade continues to grow in the EU and the NAFTA alike, the IRTS for both regions are steadily declining, in contrast to the case of the RCEP. Although the EU managed to maintain an IRTS score in the 60% range since the 1990s, the score noticeably declined over the years (from 68.4% in 1992 to 61% in 2011). The IRTS of the NAFTA also dropped from 45.1% in 2000 to 38.9% in 2011. On the contrary, the IRTS of the RCEP rose from 36.0% in 1980 to 44.5% in 2011.

The process of economic integration began in Europe in early 1957, and the IRTS in the region reached its peak when Spain and Portugal, both large markets, joined the Europe Union (EC at that time) in 1986. Despite the addition of 15 more states to the EU in subsequent years, the IRTS of the region has been decreasing because of the relative increase in the share of offshore trade. On the other hand, the IRTS increased rapidly in the NAFTA immediately after the agreement took effect in 1994, rising from 39.7% in 1993 to 45.1% in 2000. Then, the steep increase in trade between

7) The current number of member states in the EU is 28, including Croatia. Because this study deals with the period that is from 1980 to 2011 only, however, Croatia was not included in its analysis. The EU member states included in this study's analysis (and the years in which those states joined the EU, indicated in parentheses) are France, Germany, Italy, Belgium, Luxembourg, the Netherlands (1957); England, Ireland, and Denmark (1973); Greece (1981); Spain and Portugal (1986); Sweden, Austria, and Finland (1995); Latvia, Lithuania, Malta, Slovakia, Slovenia, Estonia, the Czech Republic, Cyprus, Poland, and Hungary (2004); and Romania and Bulgaria (2007).

the NAFTA and Asia and Europe in the new millennium has led the IRTS in the NAFTA to drop drastically. The IRTS of the RCEP member states, on the contrary, continues to grow rapidly because of Japan's increasing investment in the ASEAN member states since the 1980s, the dramatic growth of the Korean economy in the 1990s, and the astonishing expansion of the Chinese market in the new, millennia as well as the impetus for the liberalization of trade in the region in the forms of the ASEAN and the AFTA.

<IRTS of the RCEP, EU, and NAFTA>



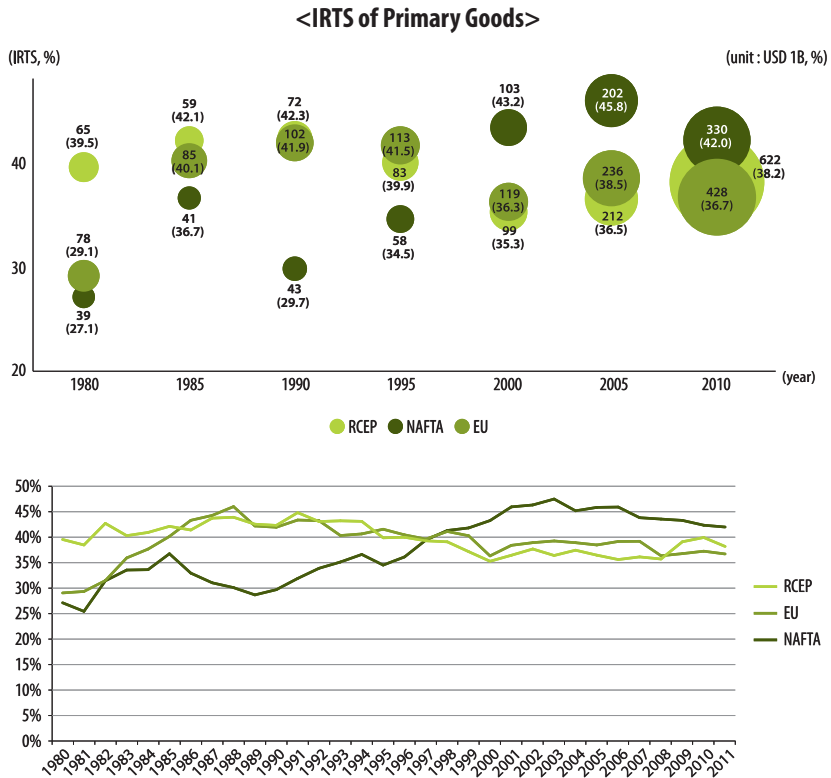
The NAFTA has the highest IRTS of primary goods among the three compared blocs, hovering in the 40% range, while the IRTS of primary goods reaches mid- to high range of 30% in the case of the EU and the RCEP. However, whereas the IRTS continues to decline consistently in both the NAFTA and the EU, the IRTS of the RCEP continues to rise with the sheer volume of intra-regional trade in the RCEP also surpassing those of the EU and the NAFTA.

The three NAFTA member states produce crude oil, which occupies a great share of primary goods traded worldwide. Both Canada and Mexico also export large quantities of other primary goods to the United States. These are the factors behind the relatively high IRTS of primary goods in the region. However, even the IRTS of primary goods in the NAFTA has been declining, from 47.5% in 2003 to 42.0% in 2011.

The IRTS of primary goods spiked in the 1980s in the EU because of the exploitation of the North Sea oil reserves beginning from 1970s. The dramatic increase in the amounts of oil and gas imports from Russia and Central Asia, however, has led to a consistent decline in the EU's IRTS of primary goods as well from 43.3% in 1991 to 36.7% in 2011.

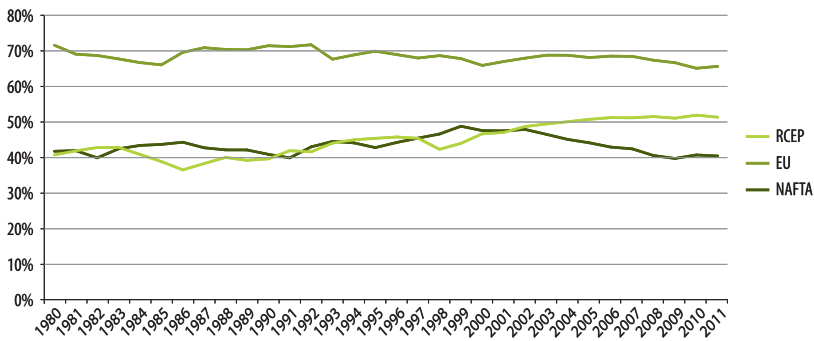
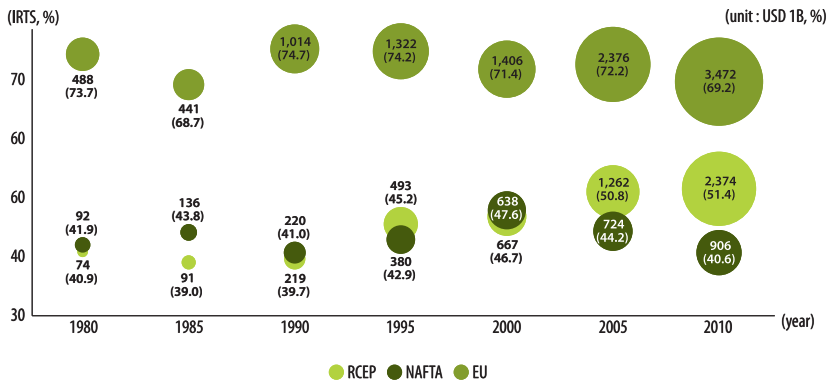
While the RCEP member states produce a wide range of primary goods, the rapid industrialization of Northeast Asia has abruptly increased the demand for primary goods around the world. Accordingly, the IRTS of primary goods has been declining in this region, from 44.8% in 1991 to 38.2% in 2011. The rise of Australia, a major exporter of primary goods,

and the significant increase of the prices, however, have been increasing the IRTS of primary goods toward 2010.



The IRTS of intermediate goods in the EU remains in the 60% range but has been declining in the recent years, from the peak at 71.5% in 1992 to 65.5% in 2011. Approximately one half of all intermediate goods in the NAFTA also came from the three member states as of the late 1990s but steadily dropped to 40.5% by 2011. On the contrary, the IRTS of intermediate goods in the RCEP has been consistently rising, from 40.9% in 1980 to 50% and higher after 2004. As of 2011, it reached 51.4%.

<IRTS of Intermediate Goods>



Intermediate goods can be divided into processed goods and parts/components. The IRTS of both types continues to decrease in the case of the EU and the NAFTA. The IRTS of parts/components, on the other hand, is rapidly increasing in the RCEP.

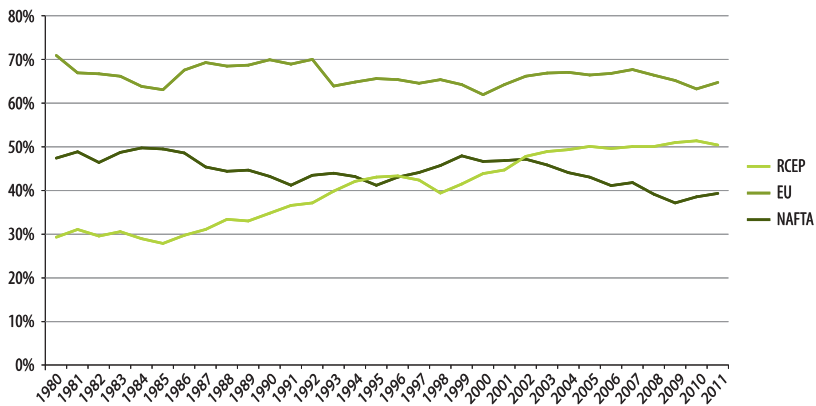
The IRTS of parts/components has remained in the 60% range for some time in the EU (70.6% in 1980 and 64.5% in 2011), while it has dropped significantly to below 40 % in the NAFTA since 1999 (46.5% in 2000 to 39.3% in 2011). In the meantime, the IRTS of parts/components has been growing sharply in the RCEP, notwithstanding a brief setback in the Asian

Financial Crisis (29.3% in 1980 to 50.2% in 2011).

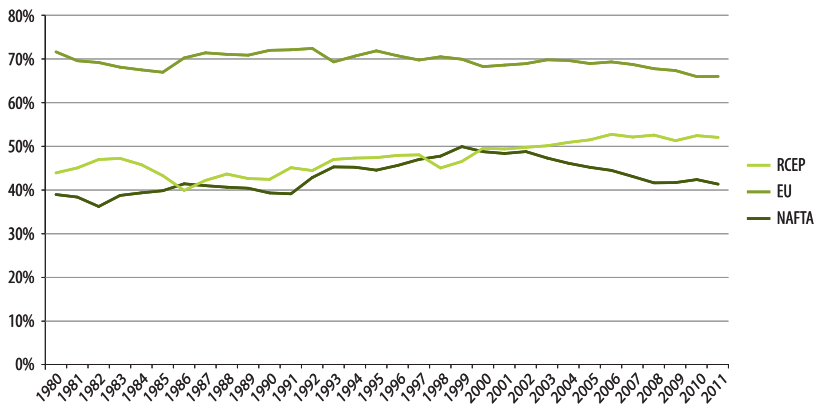
The IRTS of processed goods has also been declining consistently in the EU, from 71.9% in 2005 to 66.0% in 2011, as well as in the NAFTA, from 48.9% in 2000 to 41.3% in 2011. A contrasting pattern is noted in the case of the RCEP. Here, the IRTS of parts/components has also been rising to 52.0% in 2011.

<IRTS of Intermediate Goods>

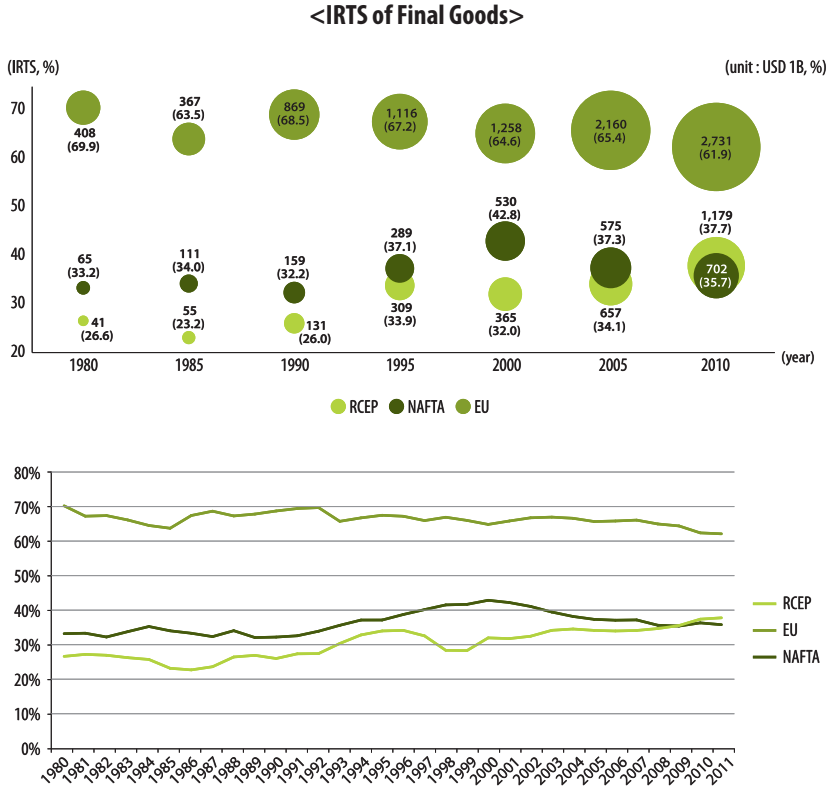
(parts & components)



(processed goods)

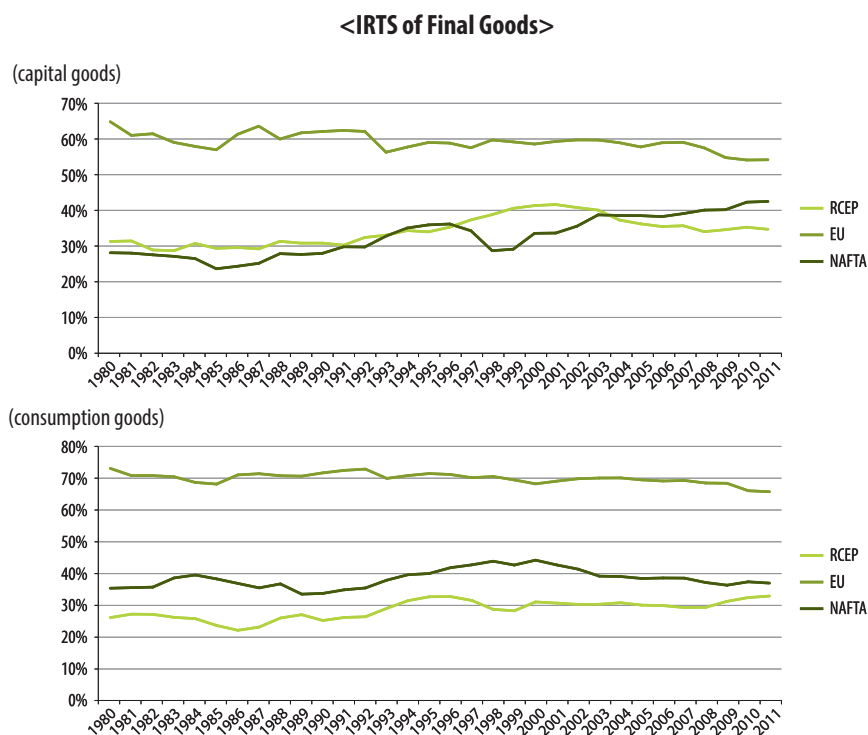


The IRTS of final goods similarly continue to decrease in the EU and the NAFTA but rises in the RCEP. While the IRTS of final goods still remains in the 60% range in the EU, it decreased visibly from 69.2% in 1992 to 61.9% in 2011. The IRTS of final goods in the NAFTA spiked in the several years following the agreement's conclusion but declined consistently in the new century from 42.8% in 2000 to 35.7% in 2011. The IRTS of final goods in the RCEP, on the other hand, rapidly rose from less than 30% in the early 1990s to 32.0% in 2000 (notwithstanding the Asian Financial Crisis), then to 37.7% in 2011, which is higher than the NAFTA counterpart.



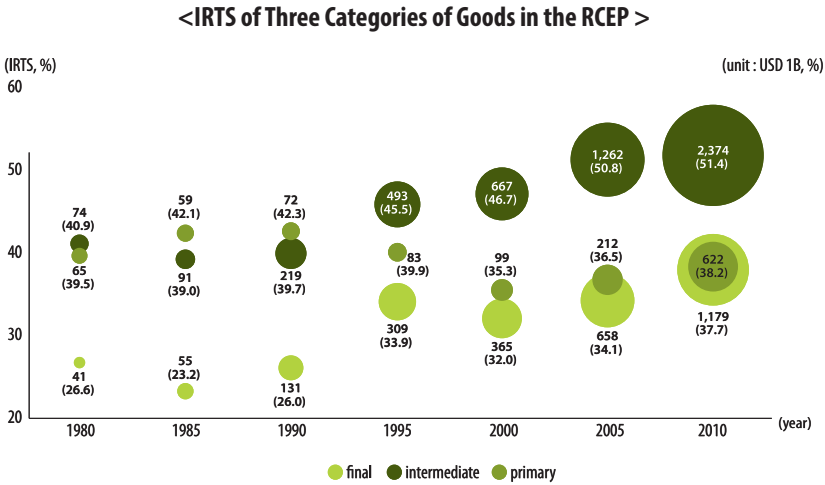
The IRTS of capital goods in the EU has dropped to a mid-50% range. The IRTS in the NAFTA maintained to 40% range around 2000, but again dropped to the low 30%. On the other hand, after a setback around the Asian Financial Crisis, it rose above 40% in the RCEP.

While the IRTS of consumption goods is also declining in both the EU and the NAFTA, the margin of decline is not as steep as that of the IRTS of capital goods. For consumption goods, 65.9% were traded in the EU as of 2011, as did more than 30% of all consumption goods in the NAFTA. On the contrary, the intra-regional trade of consumption goods in the RCEP has grown only marginally to 32.6% in 2011.



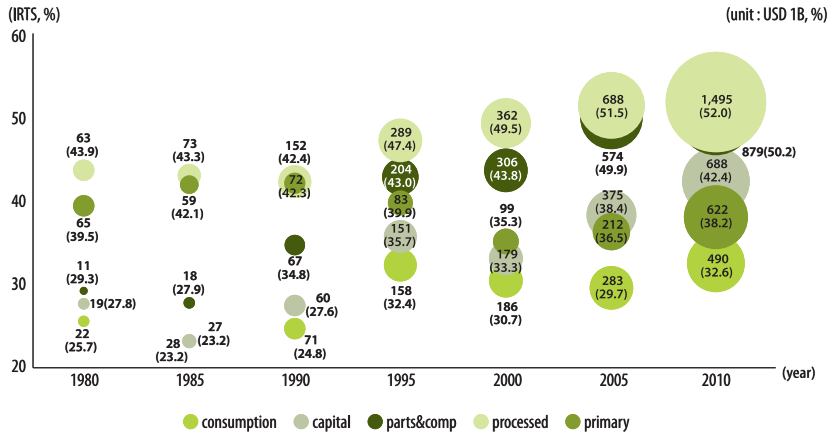
2. Category Specific IRTS Analysis of 3 Regions

While the IRTS continues to grow in the RCEP across all categories—whether primary, intermediate, or final goods—the upward trend is especially noteworthy with respect to intermediate goods. The IRTS of intermediate and final goods has been rising in the RCEP since the mid-1980s, while that of primary goods began to increase in the new millennium. The IRTS of intermediate goods has reached 51.4%, in particular, significantly higher than that of either primary goods (37.7%) or final goods (38.2%).



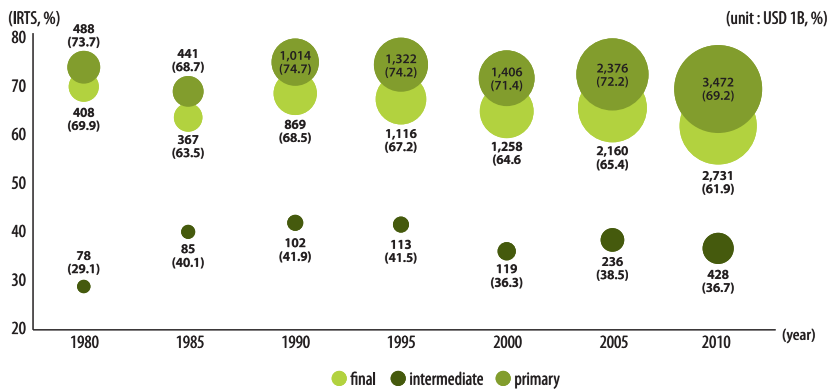
More specifically, the IRTS is the highest for processed goods (USD 1.495 trillion, 50.2%). Next up is the share of parts/components (USD 879 billion, 50.2%), followed by capital goods (USD 688 billion, 42.4%), primary goods (USD 622 billion, 38.2%), and consumption goods (USD 490 billion, 39.2%).

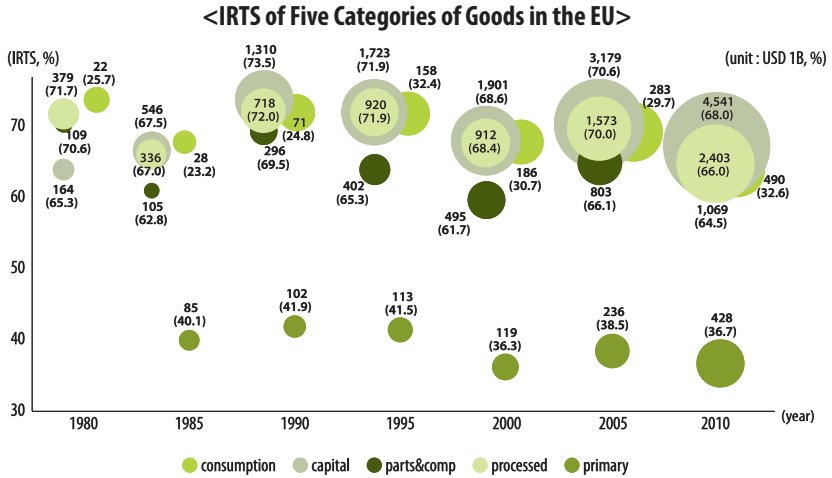
<IRTS of Five Categories of Goods in the RCEP >



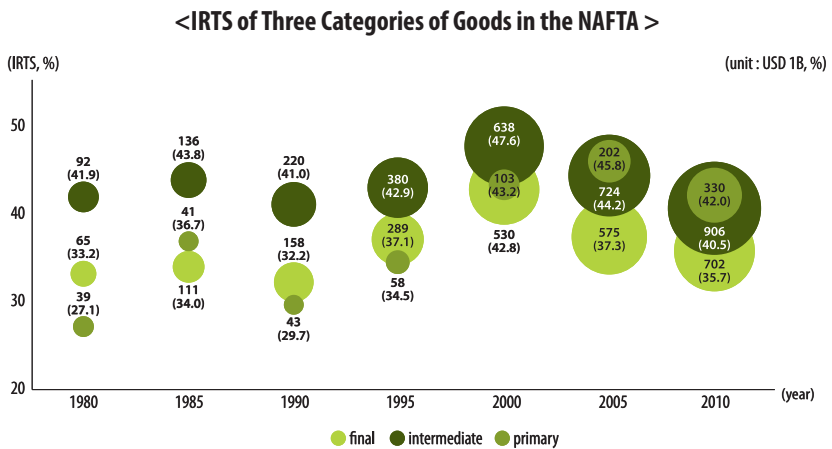
While the IRTS of goods in all their stages is in decline in the EU, the region still boasts the highest IRTS relative to the other two regions. Intermediate goods also occupy the greatest share in intra-regional trade in the EU (USD 3.472 trillion, 69.2%), similar to the RCEP. In contrast, however, the IRTS of final goods is also high in the EU (USD 2.731 trillion, 61.9%), unlike the RCEP. This contrast is even more evident as switched to the five-category analysis.

<IRTS of Three Categories of Goods in the EU >

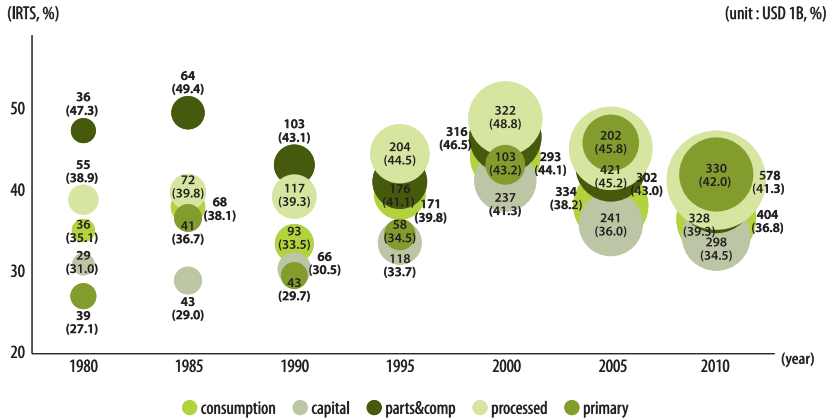




The shares of primary, intermediate, and final goods in intra-regional trade in the NAFTA have been consistently decreasing since the dawn of the new millennium. While the category of intermediate goods still boasts the greatest share in all trade in this region (USD 906 billion), the IRTS is the highest with respect to primary goods (42.0%), signifying the continuing importance of raw material trade in this region.



<IRTS of Five Categories of Goods in the NAFTA >

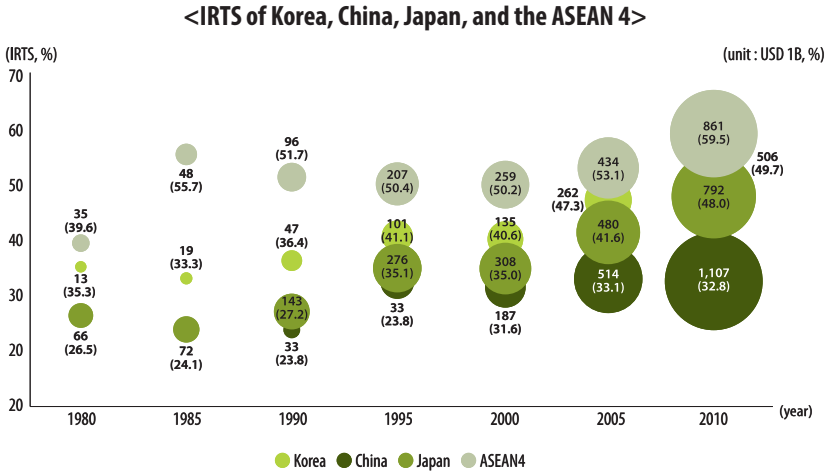


3. IRIS Analysis and Comparison of Major East Asian States

The intra-regional trade structure was analyzed with respect to the relatively greater economies in the RCEP, including Korea, China, and Japan, and the four ASEAN member states categorized as a single “ASEAN 4” group (i.e., Indonesia, Thailand, the Philippines, and Malaysia).

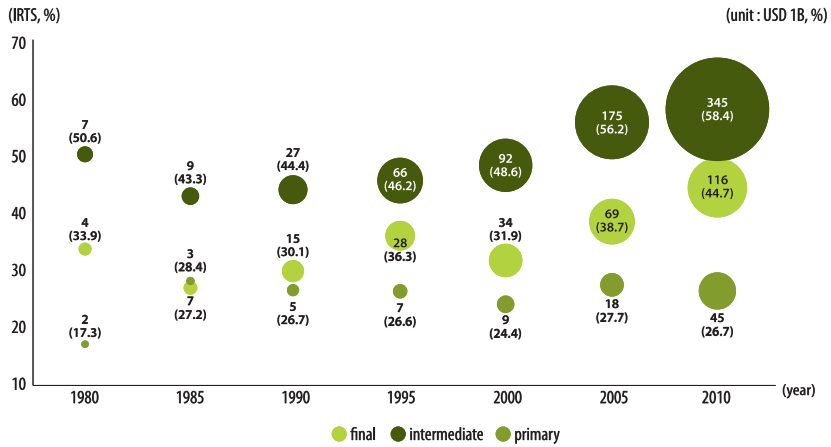
China by far is the source of the greatest share of intra-regional trade (USD 110.7 billion), followed by the ASEAN 4 (USD 86.1 billion), Japan (USD 79.2 billion), and Korea (USD 50.6 billion). However, the IRTS is the highest in the ASEAN 4, followed by Korea, China, and Japan. The ASEAN 4 relied on intra-regional trade with 16 RCEP member states for 59.5% of all its trade. The IRTS scores of Korea, Japan, and China are 49.7%, 48.0%, and 32.8 %, respectively.

The volume of intra-regional trade involving the three countries and the ASEAN 4 has doubled since 2005, and their IRTS continues to rise concomitantly. The IRTS of the ASEAN 4 and Japan has increased by 6.4% since 2005 while that of Korea has increased by 2.4%. However, China's IRTS dropped by 0.3% because of the relative increase in China's trade with countries and economic blocs outside the region.



The IRTS of intermediate and final goods is on a visible rise in Korea. Korea significantly relies on the RCEP member states for intermediate goods trade (up to 58.4% as of 2011). On the other hand, the IRTS of final goods is 44.7%, and the IRTS of primary goods is merely 26.7% as crude oil and other key raw materials have to be imported from countries outside the RCEP.

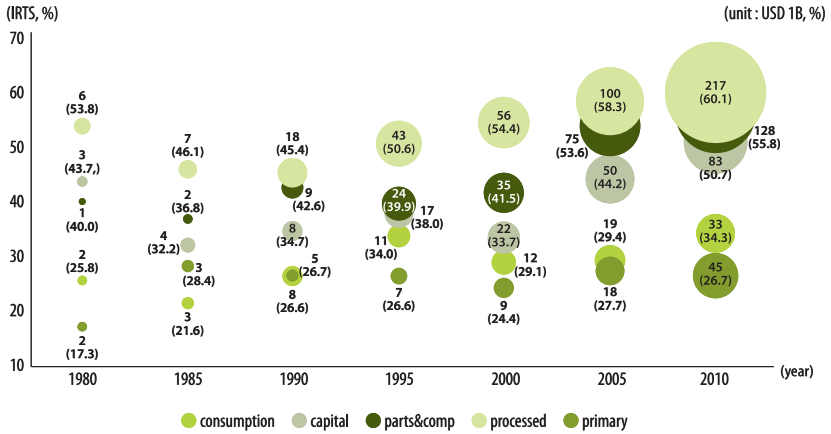
<IRTS of Three Categories of Goods in Korea>



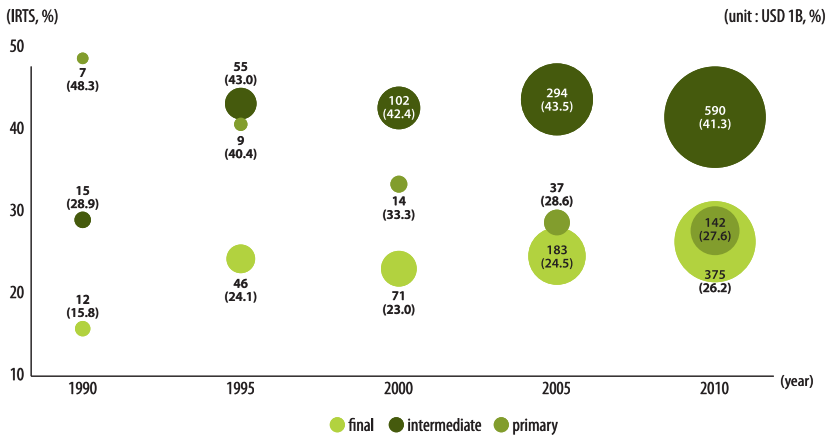
Of intermediate goods, Korea's IRTS of processed goods (60.1%) is higher than that of parts/components (55.8%). As for final goods, Korea's IRTS of capital goods (50.7%) is quite high but significantly lower in terms of consumption goods (34.3%). Korea's intra-regional trade of processed and capital goods has been growing noticeably since the dawn of the new century mainly because Korean corporations began to invest in other East Asian countries, causing the volume of transactions between Korean corporations and their overseas subsidiaries to multiply.

As for China, the IRTS of final goods has grown only slightly, while the IRTS of intermediate and primary goods has dropped. The category of intermediate goods still occupies the greatest IRTS (41.3%), but this share has been decreasing consistently since 2005. Although China's intra-trade volume of final goods amounts to USD 375 billion, its IRTS is only 26.2%, which is even smaller than the country's IRTS of primary goods (27.6%).

<IRTS of Five Categories of Goods in Korea>

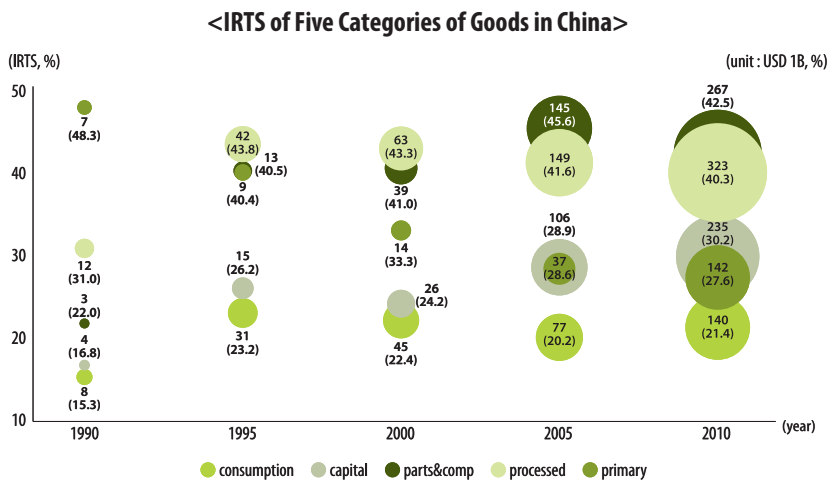


<IRTS of Three Categories of Goods in China>



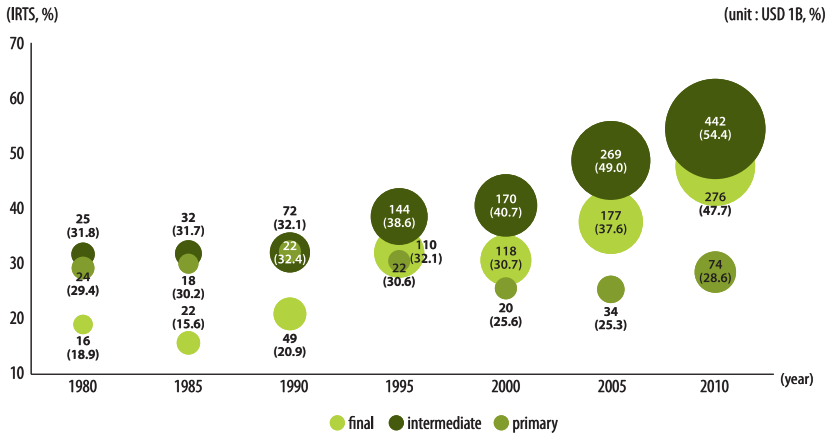
In the meantime, China's economy has been growing at an astonishing pace because of the equally astounding increase in trade mainly with countries outside the RCEP. The decrease in China's IRTS of intermediate goods since 2005 also suggests that eventually China may grow unwillingness to join to the RCEP.

While the volume of China's intra-regional trade of processed goods has increased, the share of these goods in overall intra-regional trade has rather dropped to 40.3%. On the other hand, the IRTS of parts/components has increased (to 42.5%). China's IRTS of capital goods continues to grow (30.2%), but the IRTS of consumption goods remains relatively low (21.4%). The increase in the share of capital goods appears to reflect the growing foreign direct investment from businesses in Korea and elsewhere.



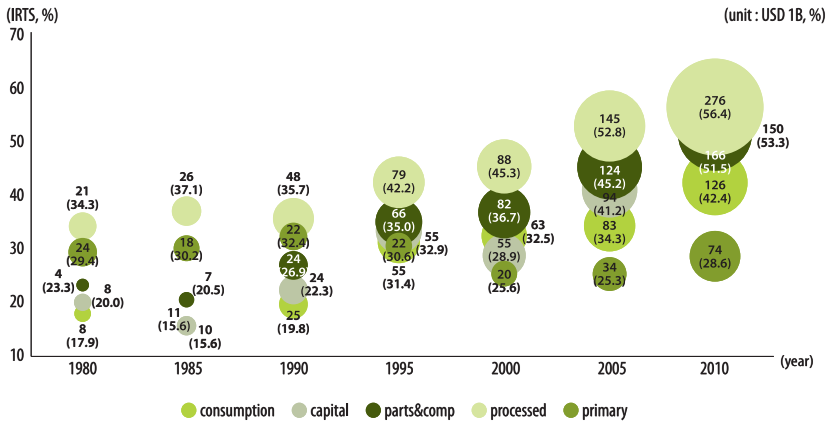
Japan's IRTS continues to grow with respect to all categories except for primary goods. The category of intermediate goods occupies the greatest share (54.4%) in Japan's intra-regional trade as it does in the cases of Korea and China. However, compared with its Korean and Chinese counterparts, Japan's IRTS of final goods remains relatively high (47.7% as of 2011).

<IRTS of Three Categories of Goods in Japan>



Japan's IRTS is also high with respect to processed goods (60.1%) and parts/components (55.8%). The IRTS of capital goods also hovers above 50% (50.7%). While Japan's IRTS of consumption goods is a bit lower (42.4%), it is clearly on the rise and significantly higher than that of either Korea (34.3%) or China (21.4%).

<IRTS of Five Categories of Goods in Japan>



Trade among the countries participating RCEP negotiation has been growing significantly to overwhelm the NAFTA in terms of both sheer volume and share alike in the 21st century. However, intra-regional trade in the RCEP amounts to only 60% or so of the EU counterpart, and the RCEP IRTS lags behind the EU counterpart by 18% points. The volume of intra-regional trade in the RCEP, especially the share of intermediate goods, has increased mainly because Korea, China, Japan, the three greatest markets in the RCEP, increased their dependency on the trade of intermediate goods following the expansion of mutual investment in production facilities among themselves.⁸⁾ The industrialization of the ASEAN and its rising demand for intermediate goods also appear to contribute to this phenomenon.

Korea, China, and Japan are all consistently increasing their trade with other RCEP member states. It must be noted, however, that while the IRTS of Korea and China has grown consistently, the IRTS of China has rather dropped as China is more rapidly increasing its trade with the countries outside the RCEP.

Korea, China, and Japan are all heavily dependent on the non-RCEP participating states for the imports of primary goods, including crude oil and other key raw materials. The three countries' IRTS of primary goods is therefore significantly low, hovering in the 20% range. The drop in China's IRTS in this regard is especially notable as China continues to import

8) However, the signs of change have begun to appear in this regard over the last few years. See the following section on the greenfield foreign direct investment from Korea, China, and Japan in the RCEP.

astounding quantities of primary goods from countries outside the RCEP to fuel and sustain its industrialization drive. Although all the three countries carry a high IRTS with respect to intermediate goods, China's share remains in the 40% range, while Korea and Japan continue to rely on the RCEP for more than 50%. In the meantime, the IRTS of final goods is relatively high (in the 40% range) in Korea and Japan but quite low in China (in the 20% range). Whereas Japan carries a high IRTS in terms of both capital goods (53.3%) and consumption goods (42.4%), Korea is far more dependent on the RCEP for capital goods (50.7%) than consumption goods (34.3%).

**【Patterns of Foreign Direct Investment (FDI) from Korea, China,
and Japan in the RCEP】**

The series of financial and economic crises that broke out in North America and Europe and have spread around the globe over the last five years have drastically reduced the amount of greenfield FDI worldwide. Nevertheless, East Asia prove its capability as investors with its relatively small decrease in FDI.

The total amount of greenfield FDI worldwide has dropped from USD 1.5821 trillion in 2008 to USD 612.2 billion in 2012 or at a rate of 21.1% a year. The margin of drop, however, was merely 13.3% a year in the case of East Asia (from USD 311.6 billion to USD 176.3 billion), helping East Asia's share of the world's total greenfield FDI to rise from 19.7% to 28.8%. The share of all East Asian countries except for China as sources of greenfield FDI has increased, with Korea making 2.7% more FDI than it did in the past and enlarging its share by 4.1% age points. China was the source of 3.3% of greenfield FDI worldwide in 2008 but reduced its share to 3.1% by 2012.

<Greenfield FDI from Asia-Pacific Countries>

(unit: %)

Country	2008	2009	2010	2011	2012	Annual increase rate
Korea	34.8 (2.2)	30.6 (2.9)	37.5 (4.2)	20.8 (2.3)	38.7 (6.3)	2.7%
China	51.5 (3.3)	26.5 (2.5)	32.9 (3.6)	40.1 (4.4)	19.1 (3.1)	-22.0%
Japan	98.6 (6.2)	64.1 (6.2)	66.0 (7.3)	75.9 (8.3)	42.7 (7.0)	-18.9%
ASEAN	53.4 (3.4)	40.4 (3.9)	36.2 (4.0)	29.0 (3.2)	38.9 (6.4)	-7.6%
Australia / New Zealand / India	73.4 (4.6)	43.7 (4.2)	33.6 (3.7)	50.2 (5.5)	36.8 (6.0)	-15.8%
Subtotal (East Asia)	311.6 (19.7)	205.4 (19.7)	206.1 (22.9)	216.1 (23.7)	176.3 (28.8)	-13.3%
World total	1582.1 (100.0)	1041.9 (100.0)	901.2 (100.0)	913.8 (100.0)	612.2 (100.0)	-21.1%

Note: Figures in the parentheses indicate the respective shares in the total amount of FDI worldwide.

Source: UNCTAD, *FDI Market Data*.

However, the amount of intra-regional FDI in East Asia has been decreasing, whether from Korea, China, or the ASEAN states, except for the increasing one from Japan. Overall, East Asia's FDI in the world has decreased by 13.3%, but the region's intra-regional FDI has decreased even more by 15.8

<Intra-Regional FDI in East Asia>

<Changing Shares of Intra-Regional FDI in East Asia>

(unit: %)

(unit: %)

Source	'08	'09	'10	'11	'12	Annual increase rate	Source	'08(A)	'09	'10	'11	'12(B)	Difference (B-A)
Korea	218	232	173	73	88	-20.4	Korea	62.8	75.8	46.2	35.1	22.6	-40.2
China	151	66	79	173	53	-22.9	China	29.3	25.0	24.0	43.0	27.9	-1.4
Japan	480	430	338	363	265	-13.8	Japan	48.6	67.0	51.3	47.8	62.0	13.4
ASEAN	366	302	301	204	208	-13.2	ASEAN	68.5	74.8	83.0	70.3	53.4	-15.1
East Asia	1,415	1,136	951	967	710	-15.8	East Asia	45.4	55.3	46.2	44.7	40.3	-5.1

Source: UNCTAD, *FDI Markets Data*.

Among East Asian countries, China is the largest recipient of Korea's greenfield FDI. China and Japan, on the other hand, invest most in the ASEAN. China received 46.2% of all greenfield FDI (USD 8.8 billion) from Korea in 2012, with its share rising since 2010. The share of the ASEAN in Korea's greenfield FDI, on the other hand, has drastically decreased from 50.3% in 2011 to 20.1% in 2012.

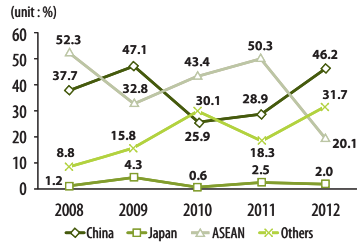
<Korea's FDI in East Asia>

(units: USD 1 million, %)

Country	'08	'09	'10	'11	'12	Annual increase rate
China	8,228	10,929	4,485	2,118	4,052	-16.2
Japan	269	997	101	180	172	-10.6
ASEAN	11,412	7,598	7,509	3,686	1,762	-37.3
Other	1,923	3,675	5,209	1,341	2,784	9.7
East Asia	21,832	23,199	17,305	7,325	8,770	-20.4

Source: UNCTAD, FDI Markets Data.

<East Asian Shares in Korea's FDI>



China provides more than one half of all greenfield FDI to the ASEAN. A relatively small amount of 5.3% was attributed to Japan in 2012, but this was an increase from 1.3% in 2010.

<China's FDI in East Asia>

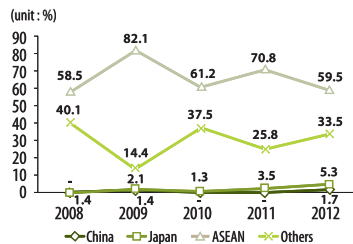
(units: USD 1 million, %)

Country	'08	'09	'10	'11	'12	Annual increase rate
China	209	94	-	-	88	-19.4
Japan	-	139	100	180	281	26.4
ASEAN	8,825	5,441	4,823	3,686	3,165	-22.6
Other	6,056	952	2,956	1,341	1,784	-26.3
East Asia	15,090	6,627	7,879	5,207	5,319	-22.9

Note: The annual increase rate of China's investment in Japan was calculated for the period from 2009 to 2012.

Source: UNCTAD, FDI Markets Data.

<China's FDI in East Asia>



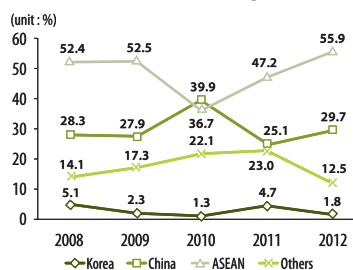
Greenfield FDI from Japan in the ASEAN increased from 36.7% in 2010 to 55.9% in 2012 at a rate of 19.2% a year.

<Japan's FDI in East Asia>

(units: USD 1 million, %)

Country	'08	'09	'10	'11	'12	Annual increase rate
China	2,458	1,007	434	1,720	487	-33.3
Japan	13,587	11,986	13,507	9,101	7,881	-12.7
ASEAN	25,130	22,578	12,420	17,122	14,811	-12.4
Other	6,783	7,422	7,477	8,362	3,313	-16.4
East Asia	47,957	42,993	33,838	36,305	26,492	-13.8

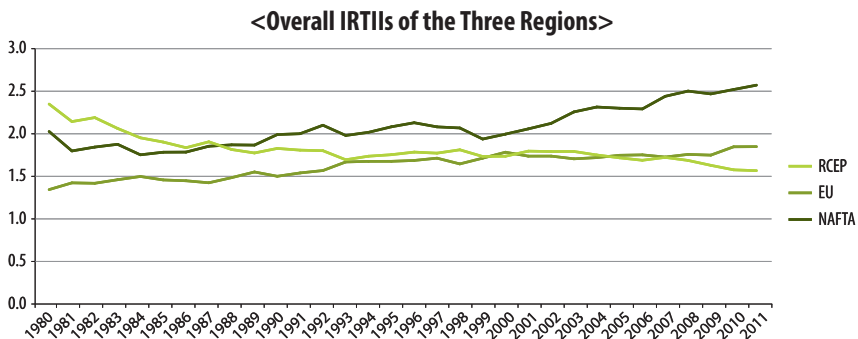
<East Asian Shares in Japan's FDI>



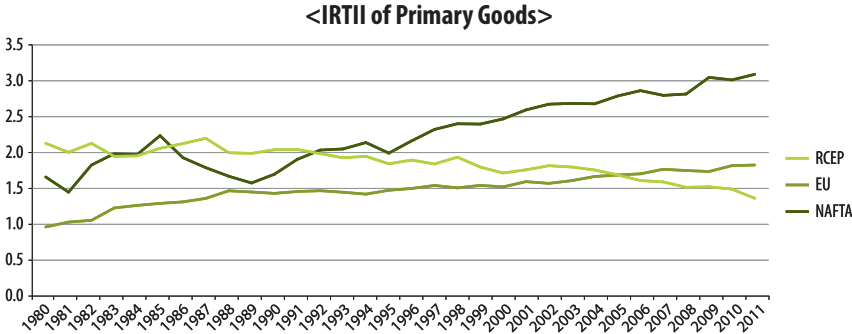
IV. Intra-Regional Trade Intensity Index (IRTII) Analysis

The IRTII measures how introverted or extroverted trade in a given region or economic blocs. The share of a given region in the total world trade is measured and used to divide the region's IRTS. If the yield is greater than 1, the trade in that region is introverted. If the yield is less than 1, the trade in that region is extroverted.

The IRTII analysis, based on the statistics of the TID, reveals that the IRTII is on continuous rise in both the EU and the NAFTA but on a decline in the RCEP. In other words, the RCEP's IRTS continues to increase, but its IRTII has decreased from 2.33 in 2008 to 1.55 in 2011. The exact opposite pattern is noted with respect to the EU and the NAFTA whose IRTIIs increased from 1.33 to 1.84 and from 2.01 to 2.55, respectively, over the same period. This indicates that not only intra-regional trade in the RCEP has increased but also the share of the RCEP in the total world trade has grown with the RCEP's trade with the outside world increasing at a faster pace.



Whereas the IRTII with respect to primary goods continues to drop in the RCEP, it continues to grow in the EU and by large leaps in the NAFTA. The IRTII increases in the EU and the NAFTA (0.96 to 1.82 between 1980 and 2011, and 1.57 to 3.10 between 1989 and 2011, respectively) appears to result from the exploitation of the oil reserves in North Sea and the exploitation of domestic oil reserves in the aftermath of the oil shocks, respectively. On the other hand, the abrupt rise in the demand for fuels from the outside world in the 1990s appears to have decreased the IRTII of the RCEP from 2.13 in 1980 to 1.36 in 2011.

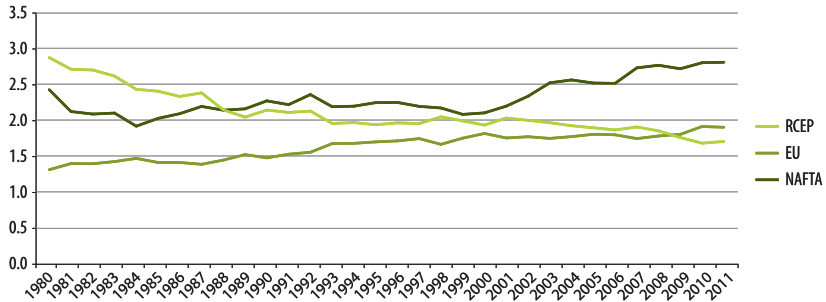


Similarly, the IRTII of intermediate goods has been decreasing in the RCEP while on rise in the EU and the NAFTA. The IRTII of the RCEP with respect to parts/components showed a high level of introversion until the early 1990s, but it began to decline from 1.75 in 1992 to 1.44 in 2011. In the meantime, the IRTII of intermediate goods has been consistently rising in the EU from 1.36 in 1980 to 1.95 in 2011, and by noticeable leaps in the NAFTA, from 1.69 in 1991 to 2.36 in 2011. The IRTII of processed goods continues to decline in the RCEP from 2.90 in 1980 to 1.90 in 2011, while on consistent rise in the EU from 1.32 in 1980 to 1.90 in 2011. It dropped

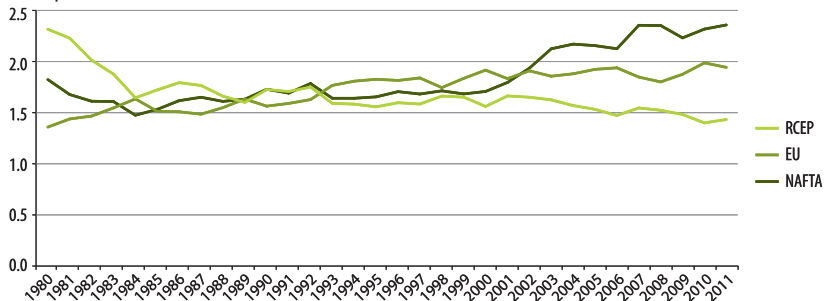
briefly in the mid- to late-1990s in the NAFTA but began to rise again afterward from 2.85 in 1995 to 2.55 in 2000 and back to 3.09 in 2011.

<IRTIIs of Intermediate Goods>

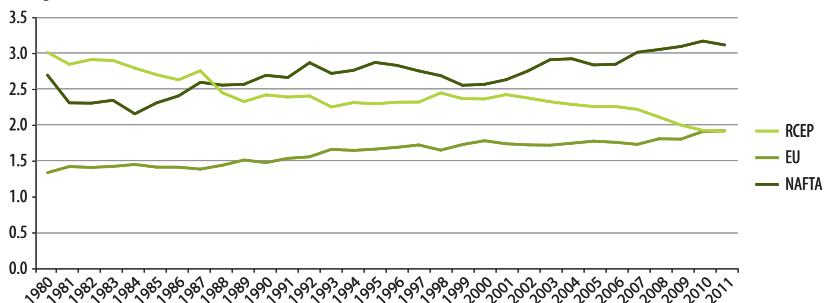
(intermediate goods, including both parts & components and processed goods)



(parts & components)



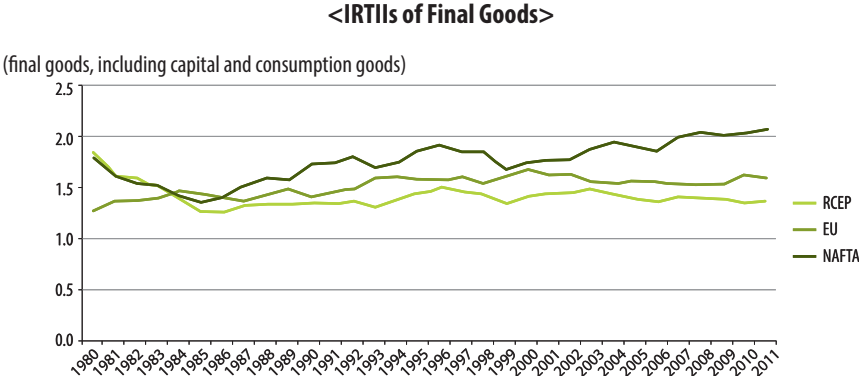
(processed goods)

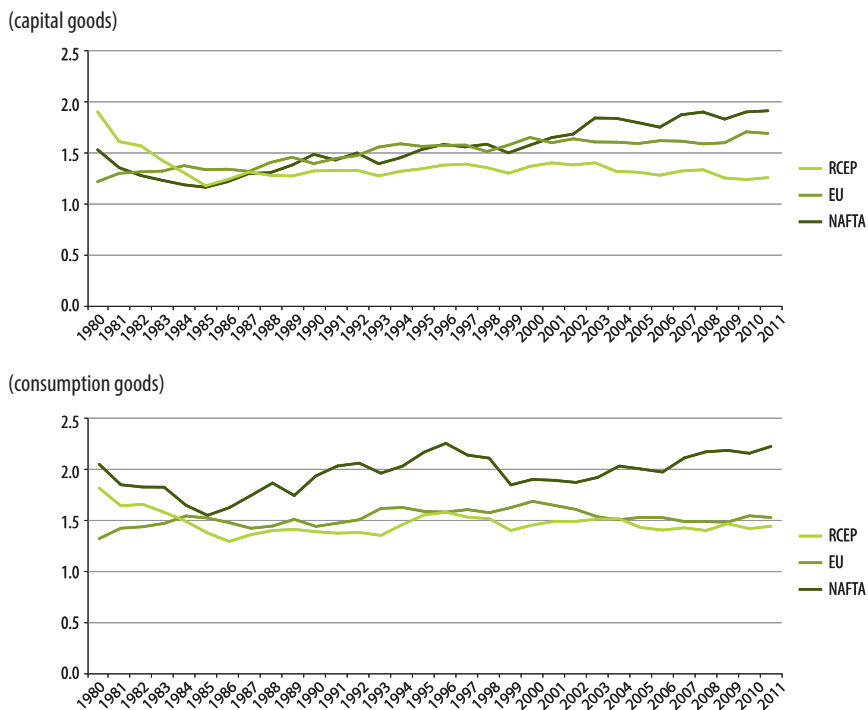


As for final goods, the IRTII of the RCEP has remained consistently low without much change (1.75 in 1992 to 1.44 in 2011). In contrast, the IRTII

of final goods has been continuously rising in the EU (1.28 in 1980 to 1.61 in 2011) and in the NAFTA (1.94 in 1996 to 1.69 in 1999 and 2.09 in 2011).

The IRTII of capital goods was higher in the RCEP than in either the EU or the NAFTA in the early 1980s (1.32, 1.23, and 1.42 in the EU, the NAFTA, and the RCEP in 1983), and remained so until the end of that decade. However, the IRTII of capital goods began to rise in the EU as well as the NAFTA reaching 1.69 and 1.91, respectively, by 2011, while it remained at 1.26 as in the RCEP. In particular, the IRTII of capital goods has been rising dramatically in the NAFTA, to reach 1.91 in 2011 from 1.50 in 1999, thus easily overwhelming the IRTII of either the EU or the RCEP. The IRTII of consumption goods in the NAFTA has similarly been rising, notwithstanding the brief setback in the late 1990s. The IRTII of consumption goods for the EU, NAFTA, and RCEP were 1.63, 1.85, and 1.41, respectively, in 1999, and 1.53, 2.23, and 1.45, respectively, in 2011. In the meantime, the IRTII has been declining steadily in the RCEP and the EU alike, although the EU still remains largely introverted in terms of its trade of consumption goods.





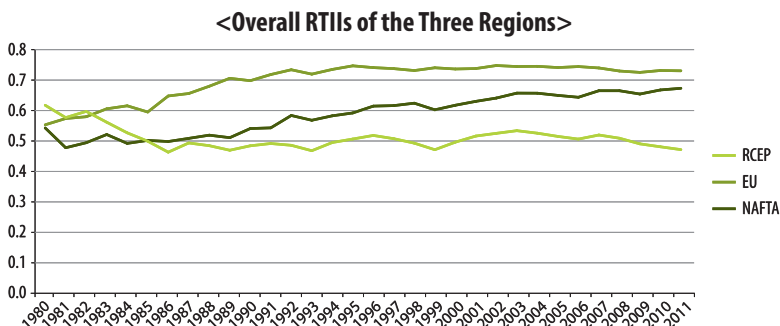
In sum, although the volume and share of intra-regional trade are growing much more quickly in the RCEP than in either the EU or the NAFTA, the trade in the RCEP is growing less and less introverted. This is mainly because of the dramatic increase in the amount of trade that China conducts with countries outside the RCEP. In the meantime, the shares of the EU and the NAFTA in the total volume of trade worldwide are growing smaller, while the volume of intra-regional trade remains more or less consistent in both regions, thus raising their IRTII.

V. Regional Trade Introversion Index (RTII) Analysis

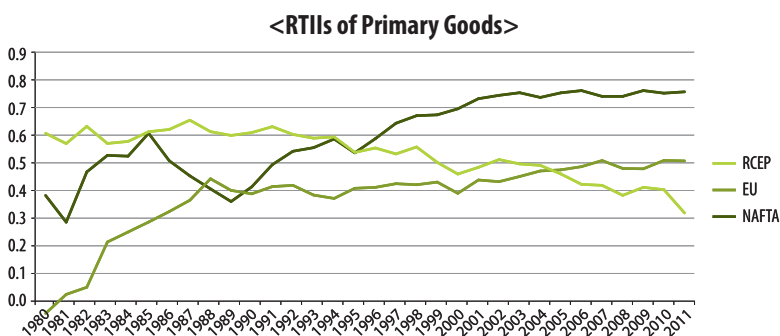
The RTII measures how introverted the state of trade is in a given region or economic bloc. The IRTII, in theory, may produce equal degrees of introversion and extroversion on a given time series. This theoretical limitation of the IRTII has led some researchers and the Asian Development Bank (ADB) to develop the RTII to produce more refined analyses of the introversion of trade in given regions. The closer the RTII score to zero, the more geographically neutral (or indifferent) trade in a given region is. The larger the RTII score than zero, the more geographically bound trade in a given region is.

The RTII scores of the EU and the NAFTA hover well above that of the RCEP. While trade in the EU and the NAFTA continues to become more introverted (from 0.56 to 0.73 and from 0.55 to 0.68, respectively), the RTII score in the RCEP took a radical downturn in the mid-1980s to 0.47, briefly went back up and dropped again since the dawn of the 21st century from 0.54 in 2003 to 0.47 in 2011.

Interestingly, the NAFTA boasts of a higher IRTII score than the EU's, but the EU easily surpasses the NAFTA in terms of the RTII score. Given the greater precision of the RTII, trade in the EU appears to be more introverted than that of the NAFTA.



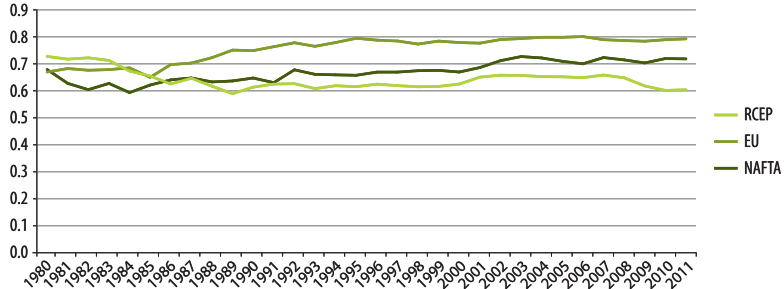
The RTII score of primary goods in the RCEP reached its peak in the late 1980s before plummeting in subsequent decades. The RTII scores of primary goods, in contrast, have been consistently rising in both the EU and the NAFTA. The EU was relatively extroverted with respect to the trade of primary goods prior to the 1980s (-0.04 in 1980), but grew significantly introverted in the following years (to 0.44 in 1988 and again to 0.51 in 2011). The RTII score in the NAFTA, which took a big dip in the mid- to late-1980s, began to rise noticeably afterward (to reach 0.76 in 2011, from 0.36 in 1989). The exploitation of domestic oil reserves appears to explain these rises in both the EU and the NAFTA. On the other hand, the abrupt rise in the demand in the RCEP for crude oil and primary goods appears to fuel the increasing extroversion of trade in this region.



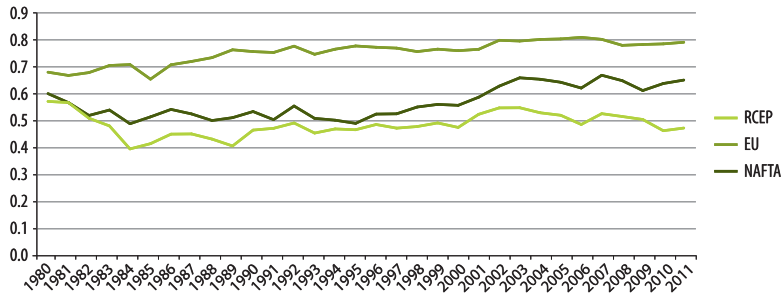
The RTII scores of intermediate goods have been rising consistently in the EU and the NAFTA while in decline in the RCEP over the last several years. As for the trade of parts/components, the EU is more introverted than the NAFTA, and the NAFTA is more introverted than the RCEP. The gap among the three blocs, which narrowed in the first years of the new century, has been widening in the recent years again (from 0.79, 0.66, and 0.55 in the EU, the NAFTA, and the RCEP, respectively, in 2002, to 0.79, 0.65, and 0.47, respectively, in 2011). As for processed goods, the EU and the NAFTA have managed to recover the RTII scores after the global financial crisis (reaching 0.79 and 0.75, respectively, by 2011), while the RCEP has lost much of its introversion (from 0.73 in 2006 to 0.66 in 2011).

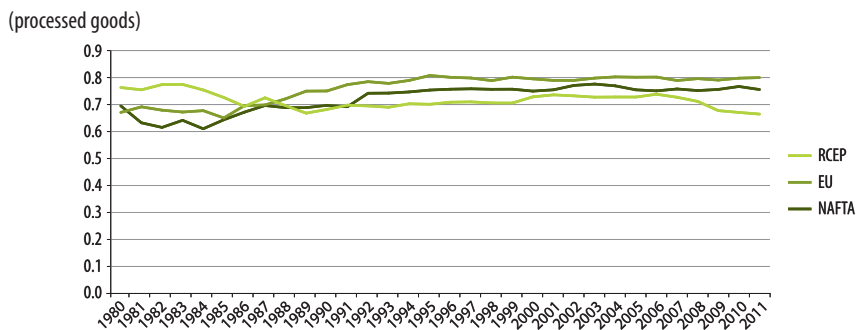
<RTIIs of Intermediate Goods>

(intermediate goods, including parts/components and processed goods)



(parts & components)





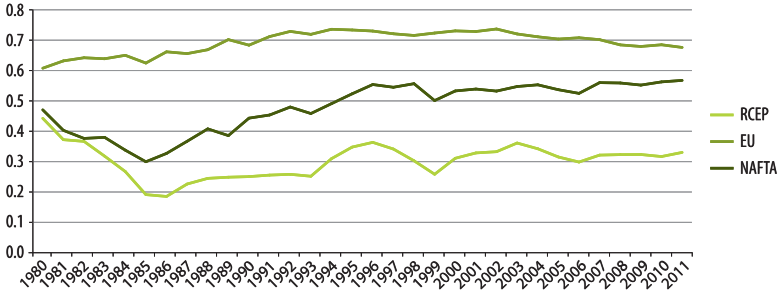
The RTII scores of intermediate goods are more or less the same across the three economic blocs. However, as for final goods, the RTII scores of the EU and the NAFTA are much higher than that of the RCEP. The RTII score in the EU has dropped by a small amount in the new century (from 0.73 in 2000 to 0.68 in 2011) but still remains higher than those of the NAFTA and the RCEP (0.57 and 0.33, respectively, in 2011). The NAFTA has also been growing significantly introverted with respect to final goods (0.30 in 1985 to 0.57 in 2011).

While the three economic blocs also maintained relatively similar RTII scores of capital goods in 1980 (0.47, 0.36, and 0.46 in the EU, the NAFTA, and the RCEP, respectively), the scores soon began to drop in the RCEP and the NAFTA by 1985 (to 0.13 and 0.14, respectively), while the score continued to increase in the EU to reach 0.62 in 2011. Nevertheless, the RTII score of the NAFTA began to hover well above that of the RCEP in the late 1980s and soon surpassed it. The RTII scores of the NAFTA and RCEP were 0.34 and 0.27, respectively, in 1994 but changed to 0.52 and 0.28, respectively, by 2011.

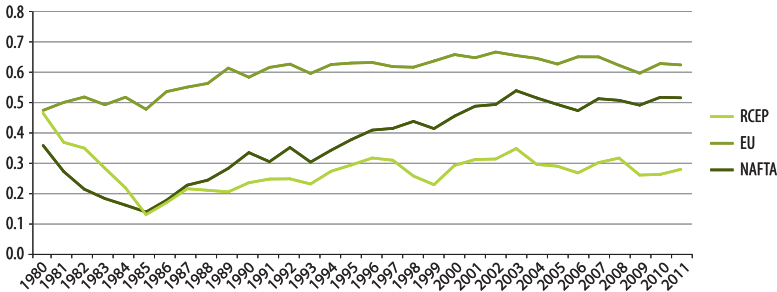
The RTII score of the EU for the consumption goods has also risen consistently throughout the 1990s to reach its peak in 2002 at 0.77. Although the score has been decreasing somewhat since, to as low as 0.70 in 2011, it still remains significantly higher than those of the NAFTA and the RCEP (0.61 and 0.33, respectively, by 2011). The RTII score of the NAFTA may be lower than its EU counterpart but is significantly higher than its RCEP counterpart, rising from 0.58 to 0.61, while the RCEP score remained at 0.33 from 1993 to 2011.

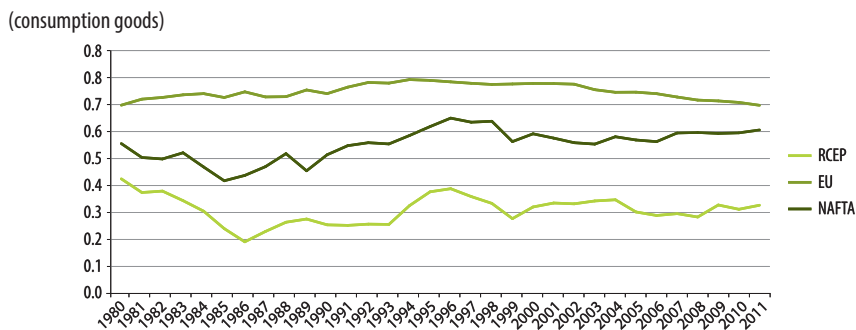
<RTIIs of Final Goods>

(final goods, including capital and consumption goods)



(capital goods)





The RTII scores appear to closely track the IRTS. Furthermore, the higher RTII of the EU than that of the NAFTA demonstrates that the EU has more introverted trade than the NAFTA, reflecting reality and complementing the limitation of the IRTS.

Despite the increase in the volume of intra-regional trade in the RCEP, the region's RTII score still remains low. Although the RCEP is more dependent on intra-regional trade for intermediate goods than for primary or final goods, its intra-regional trade has been growing centered on processing trade and less has been introverted than the case of either the EU or the NAFTA. The IRTS of final goods is especially small in the RCEP compared with that of the EU and the NAFTA.

VI Conclusions

The sheer amount and relative share of intra-regional trade continue to grow in the RCEP at a faster pace than the case with the EU or the NAFTA.

<Patterns of the Volumes and Shares of Intra-Regional Trade>

	RCEP		EU		NAFTA	
	Volume (USD 1 billion)	Share (%)	Volume (USD 1 billion)	Share (%)	Volume (USD 1 billion)	Share (%)
2000	1,131	39.7	2,783	65.6	1,272	45.1
2005	2,132	42.7	4,772	66.2	1,501	41.5
2011	4,175	44.5	6,631	62.6	1,938	38.9

Nevertheless, 56.9% of intra-regional trade in the RCEP is concentrated in the category of intermediate goods, while the share of final goods is mere 28.2%.

<Respective Shares of Different Categories of Goods in Intra-Regional Trade (2011)>

	RCEP	EU	NAFTA
Primary goods	14.9%	6.4%	17.0%
Intermediate goods	56.9%	52.4%	46.8%
Final goods	28.2%	41.2%	36.2%

Moreover, notwithstanding the increase in the volume and share of intra-regional trade in the RCEP region, the level of introversion of intra-regional trade in this region has been rather decreasing. The IRTII and RTII analyses reveal that while intra-regional trade continues to grow all the more

introverted in the EU and the NAFTA, it is opposite in the case of East Asia in all categories of goods other than final ones.

<IRTII and RTII Patterns>

	RCEP		EU		NAFTA	
	IRTII	RTII	IRTII	RTII	IRTII	RTII
2000	1.72	0.50	1.77	0.74	1.98	0.63
2005	1.71	0.52	1.73	0.74	2.29	0.65
2011	1.56	0.47	1.84	0.73	2.55	0.68

<IRTII and RTII Patterns in Different Categories of Goods in the RCEP>

	Primary goods		Intermediate goods		Final goods	
	IRTII	RTII	IRTII	RTII	IRTII	RTII
2000	1.71	0.46	1.95	0.62	1.42	0.31
2005	1.69	0.46	1.91	0.65	1.40	0.32
2011	1.36	0.32	1.72	0.60	1.38	0.33

What does this decline in the level of introversion of trade in East Asia signify to businesses? It means that businesses native to East Asia have not been able to keep up with the rapidly increasing demand of the expanding middle classes across the region. The 16 states of East Asia altogether serve as a home to approximately one half of the world population. According to the Boston Consulting Group, at least 410 million people will form middle classes (i.e., earning USD 5,000 or more a year) in the ASEAN alone by 2020.⁹⁾ As a result, East Asia will emerge as the world's largest and most important market of consumption goods.

In the meantime, Korea's trade of consumption goods in the RCEP amounted to a mere USD 33 billion or 34.3% of all consumption goods trade, in 2011, lagging behind China (USD 140 billion, 21.4%) and Japan (USD 126 billion, 42.4%). Korean businesses therefore need to discover new and unique strategies to increase their presence throughout East Asia. The low-end goods produced in Korea have little chance of beating ahead their counterparts from China or the ASEAN member states in terms of prices. Korean businesses therefore need to consider the strategy to minimize the cost by relocating their production facilities within this region. Instead, goods manufactured in Korea should be middle- to high-end, targeting middle classes and upward. Korean businesses have traditionally exported consumption goods to clients in Europe and North America. They now need to turn their eye to the growing Asian market and develop products that cater more closely to the needs and preferences of Asian consumers. The emergence of the RCEP will expedite the process of economic integration across East Asia and thus needs to be taken into account of Korean businesses' mid- to long-term strategies.

9) Koh Yeong-seok, "Emerging Markets: a Perspective on the ASEAN," KAMA Journal, 2012, quoting the report entitled BCG Southeast Asia Challengers, 2012.

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Intra-Regional Trade in East Asia :

**Need to Overcome Excessive Concentration
on Intermediate Goods
and External Dependency**



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