

4. A comparative analysis on regional integration communities and implications for East Asia: a regional integration index approach

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INTRODUCTION

This chapter attempts to evaluate the achievements of the movement for East Asian integration by comparing four major regional communities of the Association of South East Asian Nations (ASEAN), North East Asia, the European Union (EU), Mercosur and the North American Free Trade Agreement (NAFTA) with East Asia in terms of degree of integration. To do this, an objective criterion is developed to carry out such analysis, and therefore a set of regional integration indices are introduced and calculated to serve as such criteria.

Lindberg (1971) was the first scholar who began discussing how to calculate the degree of regional integration. Lindberg indicated that various aspects need to be assessed to calculate the degree of integration. He suggested that specific subcategories should be measured and then integrated to gauge the degree of integration at a certain point of time. Hufbauer and Schott (1994) further suggested an integration achievement score (IAS) to measure the degree of integration. They picked five factors in the process of integration: free trade in goods and services, abolition of restrictions on investment, free flow of labor (at least for professionals), harmonized monetary and tax policies, and the establishment of a regional organization which conserves integration and settles disputes. Their index mainly focused on economic integration, and thus selected economic factors for integration. Hufbauer and Schott then expanded the five factors into six as follows: free trade in goods and services, free flow of capital, free flow of labor, the establishment of a regional organization, harmonized monetary policy, and harmonized fiscal policy. Also, all factors were graded on a

scale of 0 to 5, whose scores were averaged to yield the regional integration index. Their regional integration index was calculated for 1994. The EU scored 3.3 out of 5, and NAFTA and Mercosur scored 2.3 and 1, respectively. According to their analysis, in 1994 the EU achieved a high level of free trade in goods and services, free flow of capital, and construction of regional organization but scored low on harmonized fiscal policy. NAFTA scored high on free trade in goods and services and free flow of capital but scored low on free flow of labor, and harmonized monetary and fiscal policies. Mercosur scored fairly high on free trade of goods and services and the establishment of a regional integration but was found to have achieved very low levels in the other areas.

Meanwhile Yi and Genna (2003) adopted Hufbauer and Schott's (1994) IAS to conduct research on correlation between regional integration and similarities in economic systems, and suggested specific criteria to evaluate six factors on a scale of 0 to 5. They attempted to calculate the degree of integration from the onset of those regional communities up to 1995. Yi and Genna (2003) also constructed the IAS by assessing six categories on a scale of 0 to 5 and averaging the scores. The six categories were: free trade in goods and services, the level of capital flow, the level of labor flow, the importance of supranational organization in decision-making, the degree of monetary policy cooperation, and the degree of fiscal policy cooperation. According to their calculation, the EU's IAS was 3.33 out of 5 and ASEAN's 0.33.

Previous research basically focused on economic factors and measured the degree of economic integration in each regional community by assessing categories such as trade, capital, labor movement, regional organizations, and monetary and fiscal policies. However, this chapter tries to avoid limitations of economic integration perspective by employing the regional integration perspective, and evaluates major regional communities accordingly. The reason for this new perspective is that economic integration does not simply end with the integration of economic institution, but may affect and interact with social, cultural and political integration process. Such various kinds of integration process and economic integration may coincide, or take place one after the other. Thus, this chapter categorizes factors of regional integration into the following four factors: functional factor, socio-cultural factor, political and security factor, and institutional factor. The four factors are then synthesized to suggest a comprehensive regional integration index.

This chapter is composed of five main sections. In the next section, a new regional integration index is proposed and 12 subcategories are suggested. The following section measures the 12 subcategories, and then they are compared. The last section draws implications for Asian integration to conclude the chapter.

REGIONAL INTEGRATION INDEX

The four factors or indices are composed of three subindices each. Thus a total of 12 specific factors were evaluated. The functional integration index is calculated by gauging the shares of intra-regional trade, intra-regional foreign direct investment (FDI) and intra-regional portfolio investment. These factors are important indices which show the degree of intra-market economic integration in terms of trade, investment and capital transactions.

The socio-cultural index measures cultural homogeneity, average maturity level of civil society and the level of information literacy. Cultural homogeneity perceived by citizens of member countries is a pivotal factor in regional integration. Moreover, regional integration may be advanced when a civil society is established in terms of formal aspects such as law and institution, when citizens actively participate in politics and non-governmental organization (NGO) activities, and when government operating by law is established. Expanding information literacy enables free communication between individuals within the region, and is therefore conducive to regional integration. Thus, information literacy is used as an index to gauge the level of understanding between member countries.

The political and security index is measured by the homogeneity and maturity of the politico-economic system, the regional structure of political and security dynamics, and political leadership. Homogeneity and similar levels of maturity of politico-economic systems may facilitate regional integration. Furthermore, the regional structure of political and security dynamics is a catalyst for achieving regional integration. When common crises or threats exist, incumbent nations pursue regional integration to address the common concern. The EU and ASEAN were such cases. To the contrary, factors such as historical or territorial disputes hamper regional integration. Regional competition for hegemony also hampers regional integration. However, countries may strive for regional integration to eliminate the negative effects of such competition. The role of the US, which commands the global political economic structure, may benefit or hinder integration depending on the circumstances. In the case of the EU, the US played a positive role in achieving regional integration.

The institutional integration index is calculated according to the advance of cooperation in various fields, the existence of regional organizations and treaties related to trade and investment, and financial and monetary cooperation. Cooperation starts as a common enterprise in numerous fields such as political and security, economy, and society and culture. It may then progress from a conference of member countries' officials to ministerial meetings and summits. Regional organizations and

treaties related to trade and investment refer to organizations established to address common regional issues and official treaties between nations such as investment treaties and free trade agreements. Financial and monetary cooperation measures the level of cooperation in financial, monetary policies such as exchange rate cooperation and common currency usage.

This chapter aims to measure the different regional integration schemes according to the 12 criteria as shown in the Appendix to suggest the degree of integration in each regional community. Those criteria consist of both quantitative and qualitative data. For qualitative analysis, evaluation criteria for each category are presented. Each category is scored on a scale of 1 to 5 with higher score meaning higher achievement.

APPLICATION OF THE REGIONAL INTEGRATION INDEX

In comparing different regional integrations, the points of comparison are important. Consequently, it is advisable to differentiate the early stages, the developing stages and the maturity stages of regional communities and to compare them accordingly. Hence this chapter sets out to designate the three stages of regional integration and compare the regional integration index of major regional communities in each stage. ASEAN's regional integration index was calculated as of 1985, 1994 and 2007. In the case of the EU, the index was evaluated as of 1948, 1952 and 2007. NAFTA's regional integration index was calculated as of 1986, 1994 and 2007. Mercosur's was assessed as of 1986, 1995 and 2007. Northeast Asia's was evaluated as of 1992, 2000 and 2007. Lastly, East Asia's index is gauged at 1994, 2000 and 2007.

For ASEAN, after the Soviet Union's glasnost and perestroika in 1985 the security threat was gradually alleviated and the importance of economic cooperation along with willingness to cooperate was strengthened in Southeast Asia. Moreover, Southeast Asian economic integration was stimulated after the Plaza agreement as there was an influx of large-scale foreign investment. The Common Effective Preferential Tariff or CEPT became effective in 1994, the year that marked the beginning of instituting Southeast Asian economic integration. After the economic crisis in 1997, Southeast Asia's regional cooperation evolved into the ASEAN Vision 2020 for comprehensive cooperation, and a concrete plan for the ASEAN community based on political and security, finance and economy, and socio-cultural agendas was submitted (ASEAN 2003). In 2006 an exceptional agenda of political integration – the ASEAN Union – was set up through the Eminent Persons Group (EPG) report about the ASEAN charter.

For the EU, in 1948 Europe completed postwar reconstruction to some extent and began establishing a new political and economic system. In 1952, the Paris Treaty was ratified, and the European Coal and Steel Community (ECSC) was officially put into operation to start institutional integration. The European Economic Community (EEC) was established according to the Roman Treaty in 1958, and the European Community (EC) was established in 1967 by integrating the ECSC, EEC and the European Atomic Energy Community (Euratom). The Maastricht Treaty was effectuated in 1993, establishing the European Union and pursuing joint security and diplomatic policies, joint judiciary and domestic policies, as well as economic integration.

In the case of Mercosur, the movement for regional integration was initiated in 1986 as democratic governments sprang up in South America, and Brazil and Argentina chose an economic integration and cooperation program. In 1991, Brazil, Argentina, Uruguay and Paraguay signed the Asuncion Treaty that abolished tariffs among them and set common tariffs against other countries, scheduled to be effectuated on 1 January 1995. After 1995, Chile, Bolivia, Peru, Colombia and Ecuador joined as associate members, and Venezuela joined Mercosur as an official member in 2006.

As for NAFTA, 1986, the year Mexico joined the General Agreement on Tariffs and Trade (GATT), will be marked as the beginning of regional economic integration. The year that NAFTA was effectuated, 1994, will be designated as the start of the institutionalizing period. After Mexico joined GATT in 1986, its average tariff by continuous reduction fell from over 25 percent before 1985 to 13 percent in 1992 when full-scale NAFTA negotiations were taking place. Furthermore, Mexico lifted non-tariff barriers and barriers to foreign investment. NAFTA stimulated the speed of Mexican economic reforms. Meanwhile the US and Canada had already effectuated a bilateral free trade agreement (FTA) in 1989.

In the case of Northeast Asia, 1990 was the year that China truly opened its doors. In 1992 diplomatic ties between Korea and China were established, which was the foundation of Northeast Asian economic integration. After the Asian financial crisis of 1997, the Asian economy started a full-fledged recovery in 2000, and the awareness of need for economic cooperation and integration among Northeast Asian countries heightened the atmosphere of economic cooperation in the region. Geographically, Northeast Asia includes Taiwan, Mongolia, North Korea and Far East Russia as well as Korea, China and Japan. However, this chapter will use 'Northeast Asia' to refer to three countries – Korea, China and Japan – as they are dominant in the region in political and economic terms.

Lastly, East Asia's indices are gauged for 1994, when ASEAN was established, and for 2000 when the active discussion on the integration

Table 4.1 Intra-regional trade share (in percent)

Year	ASEAN	EU	MERCOSUR	NAFTA	Northeast Asia	East Asia		
1948	–	20.9	(6)	–	–	–		
1952	–	28.4		–	–	–		
1985	17.9	(6)	51.4	–	–	–		
1986	16.4		56.8	(12)	10.0	36.4	–	
1987	17.1		58.2		8.9	36.1	–	
1988	16.5		58.6		8.9	36.3	–	
1989	16.3		58.4		10.7	36.7	–	
1990	16.5		59.2		11.0	37.2	–	
1991	17.5		59.6		12.8	38.9	13.9	
1992	17.7		60.1		16.0	39.7	14.0	
1993	18.4		55.3		18.8	41.0	16.1	
1994	20.0		55.8		19.4	43.0	17.5	35.4
1995	20.4	(7)	61.7	(15)	19.2	42.0	18.6	36.9
1996	20.6		60.9		21.2	43.4	19.0	37.4
1997	21.2	(9)	54.8		22.4	44.4	18.6	36.4
1998	20.9		55.9		23.0	45.7	17.4	33.2
1999	21.8	(10)	62.0		19.8	46.8	19.2	35.4
2000	22.7		60.0		19.9	46.8	20.3	37.4
2001	22.2		59.5		17.9	46.5	21.2	37.3
2002	22.7		59.9		13.9	45.9	22.4	38.3
2003	24.4		60.6		14.8	44.8	23.7	39.4
2004	24.4		65.6	(25)	15.2	43.7	24.1	39.5
2005	24.9		64.2		15.4	43.6	23.7	39.1
2006	24.9		65.3		15.7	42.0	22.8	38.2
2007	25.0		66.7		16.5	41.1	22.2	37.8

Note: The numbers inside parentheses indicate the number of member countries in a given year.

Source: IMF, Direction of Trade Statistics; IMF, Direction of Trade Statistics Historical.

of East Asia was started. Here ‘East Asia’ means the ASEAN + three countries of China, Japan and Korea.

Functional Integration Index

Intra-regional trade ratio

The intra-regional trade ratios are shown in Table 4.1. According to the criteria in the Appendix, ASEAN’s indices were marked 2, 3 and 3; the EU’s, 3, 3 and 5; Mercosur’s, 2, 2 and 2; NAFTA’s 4, 5 and 5; Northeast Asia’s, 2, 3 and 3; and East Asia’s, 4, 4 and 4.

Table 4.2 Shares of intra-regional foreign direct investment (in percent)

Year	ASEAN ¹	EU ²	MERCOSUR ³	NAFTA ⁴	Northeast Asia ⁵	East Asia
1986	–	–	–	27.8	–	
1987	–	–	2.3	26.3	–	
1988	–	–	1.6	27.3	–	
1989	–	–	2.6	26.4	–	
1990	–	–	2.6	25.6	–	
1991	–	–	2.5	24.6	2.7	
1992	–	73.2	3.6	22.6	6.5	
1993	–	62.5	3.4	20.8	11.3	
1994	–	62.3	1.4	20.6	16.3	29.5
1995	16.5	53.9	4.9	19.9	21.9	36.1
1996	14.1	57.3	3.2	19.3	8.3	30.5
1997	15.4	47.1	3.2	19.5	4.0	15.0
1998	12.2	39.1	0.6	18.2	5.9	22.2
1999	6.4	51.8	–0.6	18.6	11.5	25.7
2000	5.1	64.7	–0.2	18.9	16.5	27.7
2001	12.3	51.7	6.5	19.0	7.5	16.1
2002	25.9	73.0	0.7	18.6	18.1	22.1
2003	10.2	66.6	6.6	18.1	9.2	18.1
2004	8.0	61.5	3.8	17.8	26.7	31.6
2005	9.2	71.3	4.6	19.5	16.8	22.4
2006	13.8	71.2	1.8	15.9	19.1	25.3
2007	13.5	62.2	2.3	23.4	13.0	18.7

Notes:

1. Includes profit from compound interest in Malaysia, Brunei, Singapore and Cambodia
2. 2001–07 EU25 countries, 1992–2000 EU15 countries.
3. Only Brazilian and Argentine data available, and in the case of Argentina, data for 1987–92.
4. No data available for direct investment from Mexico to the US and Canada.
5. China data are available from 1995.

Source: Eurostat, European Union foreign direct investment yearbook; ASEAN Secretariat, Statistics of FDI in ASEAN; OECD, OECD Stat, 2007; Bureau of Economic Analysis, US Department of Commerce; National Institute of Statistics and Censuses (INDEC); Banco Central Do Brazil (BCB); Ministry of Knowledge Economy, Republic of Korea; China Statistics Press, China Statistical Yearbook; JETRO; World Investment Report.

Intra-regional FDI shares

Table 4.2 presents the intra-regional FDI ratio of major regional communities. Accordingly to the criteria in the Appendix, ASEAN was marked 1, 2 and 2; the EU, 1, 1 and 5; Mercosur, 1, 1 and 1; NAFTA, 3, 2 and 3; Northeast Asia, 1, 1 and 2; and East Asia, 3, 3 and 2.

Table 4.3 Shares of intra-regional portfolio investment

Year	ASEAN	EU	MERCOSUR	NAFTA	Northeast Asia	East Asia
2001	11.8	57.3	0.9	11.8	1.2	3.0
2002	13.1	60.3	1.1	11.4	1.2	2.5
2003	11.9	61.7	1.2	11.7	0.9	4.5
2004	15.9	63.1	1.2	11.4	1.0	2.9
2005	13.8	63.2	2.5	12.7	0.8	4.2
2006	10.9	62.7	0.9	12.7	1.2	2.9
2007	13.0	60.1	1.1	13.0	1.7	6.1

Source: IMF (2007); Coordinated Portfolio Investment Survey (CPIS) 2001–2005.

Intra-regional portfolio investment shares

Each regional community's share of gross intra-regional portfolio investment was evaluated to measure the level of integration of financial markets. Gross portfolio investment is composed of stock investment and bond investment (which consists of short-term bonds and long-term bonds). In this subsection, the share of intra-regional portfolio investment is derived by dividing gross intra-regional portfolio investment in countries within the region by gross intra-portfolio investment in all countries around the world. Meanwhile, the status of gross portfolio investment after 2001 will be discussed in this subsection since the bilateral portfolio investment data were only recently released by the International Monetary Fund (IMF).

According to the criteria in the Appendix, the intra-regional portfolio investments for ASEAN were marked 1, 1 and 2; the EU's, 1, 1 and 5; Mercosur's 1, 1 and 1; NAFTA's 1, 1, 2; Northeast Asia's 1, 1 and 1; and East Asia's 1, 1 and 1, based on the data in Table 4.3.

Socio-Cultural Index

Homogeneity of culture

When ASEAN was launched in 1967, it involved elements of dispute that included racial, religious and linguistic factors. All member states were different ethnically: Indonesia composed of Muslim Malays, and Thailand with Thai Buddhists, Singapore with Buddhist and Confucian ethnic Chinese, the Philippines with Catholic Malays, and Malaysia with Muslim Malays. In terms of religion, diverse religions such as Catholicism, Islam and Buddhism are mixed, and although English is widely used, each member state has its own language. Such ethnical, religious and linguistic differences became factors that might lead to regional dissent.

Nevertheless, after coming to existence in 1967, ASEAN has promoted a communal consciousness and such efforts have led to the CEPT and the Asian Free Trade Area (AFTA) and have strengthened such feelings. The years 1985, 1994 and 2007 can be considered as stages when the communal sense increased through voluntary efforts of regional members despite different histories, religions and languages (4, 4, 4).

In the EU's case, cultural homogeneity is prevalent since European countries share Christianity as their religion and a common cultural legacy of Greek and Roman civilizations. In 1948 and 1952, there were few programs to bolster cultural homogeneity. However, homogeneity has been historically created based on Greek and Roman civilizations and Christianity. Later on the Erasmus Program, which is an intra-regional student exchange program, and Bologna Process for establishing criteria for joint degrees were operated. In 1948 and 1952 the EU was characterized by the existence of identity or recognition as a regional entity due to its homogeneous history, religion and language. Also, in 2007 the region was characterized by institutionalized community awareness due to the spontaneous efforts of members besides homogeneous history, religion and language (3, 3, 5).

For Mercosur, most countries are Catholic and speak Spanish or Portuguese since they were once Spain's or Portugal's colonies. Thus their cultural identity and similarities are considerable. In 1986 and 1995 the region possessed an identity or recognition of the regional entity due to its homogeneous history, religion and language. The establishment of South American Community of Nations or CSN was announced by 12 countries at the third South American Summit of Cuzco, Peru in December 2004. In 2007, this region manifested a high level of community awareness engendered by spontaneous efforts besides homogeneity of history, religion and language (3, 3, 4).

Mexico in NAFTA has long felt enmity and mistrust against the United States owing to the territorial war (1846–48) and the intervention from the US. Meanwhile the influx of the Mexican population during the second half of the twentieth century has boosted the importance of Spanish in the US society. Also, the Protestant-oriented US and Catholic-oriented Mexico share a Christian civilization. The US and Canada used to be English colonies and are both English-speaking countries. Canada is a British Commonwealth country, but since the mid-twentieth century its relationship with the US has been strengthening. Therefore the two countries have a very homogeneous culture. A high level of community awareness engendered by spontaneous efforts besides homogeneity of history, religion and language could be observed (3, 3, 3).

Korea, China and Japan in Northeast Asia were all influenced by Confucianism and used Chinese characters. Stalled cultural exchanges

were resumed as China opened its doors to the other two countries in 1990. However, their disputes over history have not been resolved yet. Recently each government has initiated programs to promote cultural cooperation. In 1991 this region manifested in an identity or recognition of the regional entity due to regional proximity. Also, in 2000 and 2007 the countries had an identity or recognition of regional entity due to homogeneous history, religion and language (2, 3, 3).

Even though East Asian countries include diverse languages, races and religions, they share a common historical and cultural background. Korea, Japan and the ASEAN countries are located in proximity to China, and they have been influenced by China's historical and cultural development. For example, they have been exposed to Chinese characters, Confucian cultures and the hegemonical influence of empirical China in varying degrees. So, from a broad sense, they have a common identity of East Asia, which is different from Western cultures and values. Since 2000, the exchange of popular culture in media, especially Korean waves, has been expanding in East Asia. These spontaneous exchanges help to overcome the historical and cultural limits, and play a role in the integration of the regional community (2, 3, 3).

Average maturity of civil society

In the case of ASEAN, most of the member states gained independence after World War II and the majority were ruled by authoritarian governments afterwards. The tradition of authoritarianism persisted for a long period of time, but in the 1990s the wave of democratization expanded, resulting in the creation of civil societies in some states as well as increased political participation and NGO activities, but the maturity of civil society is quite low in other states. The year 1985 can be marked as the initial phase of the formation of civil society in terms of laws, institutions and form, while 1994 is a period when the voluntary civil political participation and NGO activities started (2, 3, 3).

Europe's socio-economy was devastated by the two World Wars but has formed civil societies through the Reformation, industrial revolution, and the French Revolution since the sixteenth century. The Action Committee for United States of Europe led by Jean Monnet especially played an important role behind the scenes. In 1948 and 1952, Europe experienced the inception of civil society in terms of formal laws and institutions. Currently in 2007, the maturity of EU's civil society is the foremost around the world. Citizens are involved in spontaneous political participation and NGO activities. Governing by law has been established by formal laws and institutions (3, 3, 5).

Military juntas subordinate to the US have traditionally dominated countries in Mercosur, which resulted in a wider gap between the rich and

the poor and increased social conflicts. The opinions of the citizens were not reflected and systemic political participation was not allowed in the 1960s and 1970s. In the 1980s democracy was promoted and civil societies started to develop in the region. The region experienced the inception of civil society in terms of formal aspects such as laws and institutions in 1995. In 2007, citizens' spontaneous political participation and NGO activities commenced (2, 3, 3).

In NAFTA, the US and Canada have mature civil societies where citizens voluntarily participate in politics and NGO activities, and governing by rule has been settled. In Mexico, however, the civil society is immature and spontaneous political participation and NGO activities are just beginning. On average in 1986 the region underwent the beginning stage of civil society in terms of formal aspects such as laws and institutions. In 1994 and 2007 there was active spontaneous political participation and NGO activities by citizens besides formal aspects such as laws and institutions (3, 4, 4).

There were considerable vestiges of absolutism and feudalism due to the traditional influence of Confucianism in Northeast Asia. NGO activities are flourishing in Korea and Japan, whereas they are rare in China. The spontaneous growth of civil society has especially been restrained in China since the rule of the Communist Party began in 1949. In 1991 the region underwent the early stage of civil society in terms of formal aspects such as laws and institutions. While NGO activities in Korea and Japan have flourished for many years, NGO activity in China was subject to controls and restrictions. Despite indications of active NGO participation in such areas as the environment, redressing the income gap, education and consumer protection, they have yet to move beyond infancy (2, 3, 3).

Other than Korea and Japan, most East Asian countries including China lack active political participation and NGO activities by citizens. The political participation and NGO activities in ASEAN countries started earlier than in China, but their impact on the society is still limited. The inception of civil society in terms of formal aspects such as laws and institutions in Myanmar, Cambodia and Vietnam is slow compared to Singapore and Thailand (2, 3, 3).

The level of information literacy

Increased information literacy facilitates mutual communication, enhances understanding of the counterpart country and therefore establishes a positive environment for economic integration. The number of telephones per 1000 population from 1990 to 1993 and the average of number of phones and mobile phones per 1000 were measured to estimate the level of information literacy. Based on the data in Table 4.4 and the criteria in the

Table 4.4 Information literacy index (no. of people per 1000)

Year	ASEAN ¹	EU ²	MERCOSUR ³	NAFTA	Northeast Asia ⁴	East Asia
1990	119.3	388.4	60.1	382.4	357.8	238.6
1991	125.3	399.1	62.6	394.1	381.9	253.6
1992	na	na	na	na	na	na
1993	109.2	430.4	93.8	411.2	281.8	195.5
1994	69.6	243.4	53.5	230.8	151.3	110.5
1995	79.8	268.9	58.6	258.3	160.6	120.2
1996	109.8	310.9	73.7	252.9	199.8	154.8
1997	126.3	342.8	96.7	276.7	232.9	179.6
1998	125.6	384.3	112.8	306.7	279.1	202.4
1999	146.8	501.6	140.1	342.1	333.3	240.1
2000	181.2	614.2	182.4	389.3	372.2	276.7
2001	216.8	672.5	202.9	421.8	408.7	312.8
2002	251.2	694.2	198.5	446.4	436.0	343.6
2003	286.3	725.8	220.8	449.1	469.0	377.7
2004	324.4	712.6	294.9	479.3	497.9	411.2
2005	361.2	733.1	373.9	515.1	509.5	435.4
2006	467.0	767.7	437.8	546.0	530.8	498.9
2007	577.3	806.1	523.9	558.4	548.8	563.1

Notes:

No data exist for year 1992.

1–1 Brunei, Vietnam, Laos, Myanmar and Cambodia: no data available.

1–2 The Philippines: Telephones (1990–1991), Mobile (1994–1995) data not available.

2–1 Cyprus, Latvia and Malta: Telephones & Mobile (2004–2005) data not available.

2–2 Lithuania: Telephones and Mobile (2004) data not available.

3–1 Paraguay, Uruguay: no data available.

3–2 Argentina: Telephones (1990–1991) data not available.

4 China: Telephones (1990–1991) data not available.

Source: *IMD World Competitiveness Yearbook* (1992–2002 & 2003–2007), Telephones (1990–1993), Telephone Lines & Cellular Mobile Telephone Subscribers (1994–2000), Fixed Telephone Lines & Mobile Telephone Subscribers (2001–2005)

Appendix, the level of information literacy of ASEAN is marked 1, 2 and 5; for Mercosur, 1, 1 and 5; NAFTA, 3, 4 and 5; Northeast Asia, 2, 4 and 5; and East Asia, 2, 3 and 5.

Political and Security Index

Homogeneity and maturity of politico-economic system

Southeast Asian states share a common history of complete or partial colonialization by Western powers and that molded a sense of homogeneity and

later on led to the formation of ASEAN in order to overcome outside security threats. Thailand and the Philippines have achieved a certain degree of democratization but Malaysia, Indonesia and Singapore still maintain relatively closed and authoritarian government systems while Vietnam, Laos and Myanmar have a one-party system or an authoritarian military junta ruling the country. In terms of political and security cooperation, Indonesia and Malaysia pursue a line of neutrality and are quite conservative. After the 1990s the capitalist economic system expanded but with the exception of Singapore and Brunei most states remained as developing states and the level of their maturity of capitalism is quite low. In 1985, the major states had undemocratic political systems, non-market economic systems, and the levels of political and economic maturity were low. Since 1994, although political and economic homogeneity is low, the average level of maturity has increased significantly (2, 3, 3).

In 1948 and 1952, the EU had a democratic political system and a market economy with high homogeneity and a middle level of maturity. In 2007, the EU has a democratic political system and a market economic system with a high level of homogeneity and maturity of political and economic system (4, 4, 5).

In 1986 and 1995, Mercosur had a non-democratic political system but a market system with high homogeneity and a low level of maturity. In 2007, Mercosur has a democratic political system and a market economic system with a high level of homogeneity and a middle level of maturity of the political and economic system (3, 3, 4).

In 1986 and 1994, the major countries of NAFTA still had a non-democratic political system and a market economic system with low homogeneity and a high average level of maturity. In 2007, NAFTA had a democratic political system and a market economic system with a middle level of homogeneity and a high average maturity of the political and economic system (3, 3, 4).

In the case of Northeast Asia, as South Korea succeeded in democratization in the 1990s, the homogeneity and maturity of the political and economic systems increased mainly among South Korea and Japan. Economically the homogeneity of South Korea, China and Japan is increasing, but the political systems are heterogeneous rather than homogeneous since China still maintains a socialist system. In 1991, major countries had non-democratic political systems and non-market economic systems, and the homogeneity of the political and economic systems was low with a medium degree of maturity. Economic homogeneity among the three Northeast Asian countries is increasing, but the political systems remain dissimilar due to the persistence of the socialist system in China. In 2000 and 2007, major countries still had non-democratic political systems

and market systems. The homogeneity of the political and economic systems is low with a high degree of average maturity (2, 3, 3).

Political systems vary from country to country in East Asia. Despite the difference in political systems, most of the East Asian countries employ a market economy and opening-up policy in order to develop their country and stimulate economic growth. So, the economic homogeneity among East Asian countries is increasing, and the prosperity brought by the economic growth then stabilizes the politics. In fact, even though the level of homogeneity in the political system is low, the maturity is high on average (2, 3, 3).

Regional structure of political and security dynamics

The end of World War II led to the independence of Southeast Asian states, but it also led to local social conflicts as well as political and economic turmoil. At the regional level, discussion of cooperation was not even possible due to territorial disputes between the states. In the 1950s, the Cold War situation solidified in the region. In the 1960s, the escalation of the Vietnam War, as well as the rise of China as a regional power, raised a great threat to the regional securities of ASEAN states. In response, ASEAN states opted to deal with the threats of neighboring communist states by tightening regional cooperation. Then, after the end of the Cold War, the rapid rise of the Chinese economy, which followed the path of Japan back in the 1960s, brought a whole new concern about hegemony in Southeast Asia. This chain of events led Southeast Asia to form a regional cooperation. During this time, ASEAN extended its membership to Vietnam, Laos, Myanmar and Cambodia. In 1985, communism loomed as a common threat to ASEAN states, and territorial disputes among the member states eased. Furthermore, the rival competition between Malaysia and Indonesia for regional hegemony subsided. From around 1994, due to the rise of the Chinese economy, ASEAN once again shared common ground to face the issue, and currently there is no territorial dispute or competition for hegemony among member states (4, 4, 4).

For the EU in 1948, the common threat of the Soviet Union and the role of the US worked as a facilitator. In 1952, along with the common threat of the Soviet Union and the role of the US, the disputes of past history and the competition of regional hegemony were converted into positive factors (3, 5, 4).

For Mercosur in 1986, there was no common threat from outside the region, nor serious dispute of history and territory. But the new democratic governments in Brazil and Argentina agreed to abandon the race to military armament sought by their military predecessors. In 1995 and 2007, the competition for regional hegemony was no longer a barrier to

the launching of the Common Market (3, 4, 4). For NAFTA in 1986 and 1994, the economic integration of the EU became a common threat to the countries of Central and South America. There were no current barriers to integration such as the disputes of history and territory or the competition for regional hegemony. (4, 4, 4)

In relation to Northeast Asia's common crisis or threat, the 1997 Asian financial crisis became the momentum for making the countries realize the necessity of regional integration. The positions on the US role confront each other sharply. It seems that the US has a strong opposition to a regional integration move excluding the US. In aspects of their past history, territorial dispute and hegemonic competition, China and Japan have regarded each other as rivals. Among the three countries the disputes of history and territory remain issues. Due to the rapid growth of China, the hegemonic competition between China and Japan is rather reinforcing. In the aspect of regional power balance, the unequally large share of China becomes a barrier. Overall the politics, security and power structure works positively in the direction of contributing to regional integration through the Six-Party Talks on the North Korean nuclear issue. In 2000, the Asian financial crisis became a moment for realizing the necessity of regional integration. In 2007, with lingering historical and territorial disputes between the three countries, North Korea's nuclear issue has become a catalyst for regional cooperation (1, 2, 2).

In East Asia, various forms of cooperation are progressing. However, this cooperation has not settled the old historical and territorial disputes in Northeast Asian countries, while China and Japan are competing for hegemony in East Asia. However, in relation to East Asia's common crisis or threat, the 1997 Asian financial crisis became the momentum for making the countries realize the necessity of regional integration in 2000, and North Korea also was the catalyst for regional cooperation in 2007 (1, 2, 2).

Political leadership

In ASEAN, territorial disputes and competition among Malaysia, the Philippines and Indonesia existed in the early post-World War II era, but the threat of the Cold War converted this atmosphere into a cooperative mood. The common threat was the turning point for the formation of ASEAN, and with the leadership of Philippines, Thailand, Singapore and Indonesia it reached the establishment of AFTA. Through summit meetings, ASEAN has increased the level of AFTA economic integration and Indonesia, Malaysia, Singapore, Thailand and the Philippines are showing political leadership in this process. However, there is no further development beyond an FTA such as a customs union or common market. In 1985, ASEAN sought to conclude an FTA with shared leadership and in

1994 implemented the CEPT. After the establishment of AFTA in 2005 it is seeking to deepen regional integration (4, 5, 4).

For Mercosur in 1986, only Brazil and Argentina had a leadership for ultimate integration of the region later on. In 1995, most of the major countries have a leadership for integration with a successful result of institutionalization. Brazil and Argentina seemed to remain the beneficiaries of the integration and have a leadership for integration with no further deepening of regional integration (3, 5, 4).

For NAFTA in 1986, parts of major countries have a leadership for integration to conclude an FTA for the US and Canada. In 1995, most major countries have a leadership for integration with a successful result of institutionalization. In 2007, there is no leadership for additional integration (3, 5, 1).

In Northeast Asia, while President Kim Daejoong proposed the initiatives of three countries in the ASEAN+3 meeting and Roh's government advocated Northeast Asian regional integration, there has been no result, due especially to Japan's disinterest. A genuine international leadership for regional integration is needed. In 1991, the leadership was very low as the member countries suffered from conflicting views over regional leadership or from leadership, if any, limited only to domestic spheres. In 2000, discussions of economic integration focusing on East Asia were activated and the necessity of regional integration among the three countries, at least, was stressed by regional leaders. In 2007, China recently demonstrated some regional leadership by driving the Six-Party Talks forward, but sufficient leadership for regional leadership is still lacking among three countries (1, 2, 3).

Even though ASEAN member countries are moving forward to integration, the Northeast Asian countries lack strong leadership for integration among the three countries. However, each individual country of Northeast Asia is trying to strengthen its relationship with ASEAN. For example, the three countries are competing with each other for integration with ASEAN through the FTA. But there is no strong leadership for integration among Northeast Asian countries and across East Asia. Nonetheless, a good aspect of political leadership is that after 2003 China demonstrated some regional leadership by driving the Six-Party Talks, but sufficient leadership for regional integration is still lacking among East Asian countries (1, 2, 3).

Institutional Integration Index

Sectoral cooperation

In 1992 ASEAN decided to form AFTA through the Singapore Declaration, and codified the time line and implementation process.

ASEAN members were engaged in mutual cooperation in diverse fields but the level of cooperation was quite low. In 1985, the cooperation was focused on political and security, then in 1994, it moved on to economic cooperation through the CEPT. In 2005, the main focus was to deepen AFTA and to create ASEAN communities (3, 4, 5).

In 1952, the sectoral cooperation of the EU developed into multilateral intergovernmental cooperation bodies. In 2007, the sectoral cooperation even developed into the multilateral summits and discussions deepened much more (1, 4, 5).

In 1995, the sectoral cooperation of Mercosur proceeded in more than three fields. In 2007, the cooperation also developed into multilateral intergovernmental bodies (1, 3, 4). In 1986, there was no sectoral cooperation in NAFTA. In 1994, sectoral cooperation proceeded in more than three fields. In 2007, the cooperation developed into multilateral intergovernmental bodies in more than one field (2, 3, 4).

In 1991, sectoral cooperation of Northeast Asia was very limited. The ASEAN Regional Forum (ARF) has assumed the role as the intergovernmental, multilateral cooperative body in security. In the energy sector, there is the Senior Officials Committee on Energy Cooperation in Northeast Asia that was established in 2005, with the organization holding its third session in December of 2007. The multilateral cooperation in the environmental sector is taking place centered on such bodies as the Tripartite Environment Ministers Meeting (TEMM), the Northwest Pacific Action Plan (NOWPAP) and the North-East Asian Sub-regional Programme for Environmental Cooperation (NEASPEC). Discussions concerning logistics activities are taking place within various departments and divisions within Korea's Ministry of Land, Transportation and Maritime Affairs. The 2006 ministerial conference on logistics between Korea, Japan and China represented an improvement over the conference of department heads held previously. However, at this juncture, such conferences cannot be formally considered as multilateral cooperative organizations between governments (1, 3, 3).

Since its inception in 1997, the ASEAN+3 process has taken various measures to expand and deepen cooperation between the two subregions, and East Asian countries are now taking concrete steps toward achieving the goals of closer integration and overcoming commonly held challenges. Annual summit and ministerial meetings have broadened and deepened the areas of cooperation, including political and security issues, economic, finance and monetary issues and other tracks. In 2007, various cooperation is progressing, but has not been settled (1, 2, 2).

Regional institutions and treaties

When ASEAN was formed, only minimal consent was pursued in terms of regional cooperation because of the diverse motives and interests of the members, and there were no specific plans to create a community. At the beginning ASEAN members were negative about creating and developing a regional body with independent authority and budget, and sought to develop cooperation through minimal institutional devices. ASEAN's cooperation was codified in the form of a declaration which was not specific in that it did not include a set goal, timetable or phases of development. At the initial stage, each member's ASEAN department functioned as a preparatory organ for policy consultation and setting meetings. In 1976, ten years after coming into existence, ASEAN established the ASEAN Secretariat as the first intergovernmental permanent body, but its role was limited to holding annual ministerial meetings and preparing for expert group meetings. The conclusion of AFTA enlarged the function of the secretariat. ASEAN was quite negative about developing into a transnational organization where the sovereignty of nation states could be transferred to a regional organization, as well as other institutional advancements. In 1993, the foreign ministers of 18 Asia-Pacific states participated in the establishment of ASEAN Regional Forum. The ASEAN summit meeting became institutionalized after the 1992 summit meeting in Singapore, and since then, alternating from informal to formal annual meetings, has strengthened the level of ASEAN regional cooperation. In 1994 it established a multilateral FTA and as of 2007 it is pursuing continuous economic integration (2, 3, 3).

In 1948 there was no regional institution or treaty related to trade and investment. The ECSC which was launched in 1952 could be considered to be a treaty related to trade and investment that was more developed than a multilateral customs union. But it was evaluated as being on the same level as a regional FTA because it was limited to the sectors of coal and steel (1, 3, 5).

As for Mercosur, in 1995 there was a regional multilateral FTA. In 2007, there is a regional treaty related to trade and investment and a regional formal institution or body (1, 3, 4).

NAFTA does not have any supra-national institution except for the organization for efficient administration and disputes settlement. In 1986, there was no regional institution or treaty related to trade and investment. In 1994 and 2007, an FTA was established and operated (1, 3, 3).

In Northeast Asia since 1999, summit meetings among the three countries have been held along with ministerial meeting in the fields of diplomacy, logistics and environment. The ASEAN Regional Forum (ARF)

has been playing a limited role in the security field. Since 1990 and up to 2007, there has yet to exist any formal regional organization, conference or FTA (1, 1, 1).

ASEAN Member States negotiate FTAs or Comprehensive Economic Partnerships (CEP) with each individual member plus the three countries of China, Japan and Korea. All FTAs and CEPs cover trade in goods, trade in services, investment and other areas of economic cooperation. However, there is no existence of regional organizations and treaties related to trade and investment over East Asia as a whole. For instance, the Agreements on Trade in Goods and Dispute Settlement Mechanism between ASEAN and China were signed in November 2004 in Vientiane. The Agreement on Trade in Goods has been implemented since July 2005. The Agreement on Trade in Services was signed on the sidelines of the 10th ASEAN–China Summit in January 2007 in Cebu and entered into force on 1 July 2007. Negotiations on the Investment Agreement have been completed and the Agreement was signed in August 2009 in Bangkok, Thailand. As for Korea, the Framework Agreement on Comprehensive Economic Cooperation and Agreement on Dispute Settlement Mechanism between ASEAN and Korea were signed in December 2005 in Kuala Lumpur. The Agreement on Trade in Goods with Korea was signed by nine ASEAN member states and Korea in August 2006 in Kuala Lumpur. The Trade in Goods Agreement has been implemented since 1 June 2007. The Trade in Services Agreement was also signed by nine ASEAN Member States and Korea on the sidelines of the 11th ASEAN–ROK Summit in November 2007 in Singapore (1, 1, 1).

Financial and monetary cooperation

ASEAN had not actively discussed financial and monetary cooperation between members until after the 1997 financial crisis, when it pursued the Ching Mai Initiative at ASEAN+3 level to prepare for a common response to the financial crisis and engaged in discussions for a single currency in the form of the Asian Currency Unit (ACU). In 1985 and 1994 financial monetary cooperation was virtually nonexistent, but in 2007 with the conclusion of currency swap treaties, rudimentary financial and monetary cooperation have been discussed (1, 1, 2).

In the EU since the 1980s the discussions for introducing a common currency and an exchange cooperation has been created. As a result of that the euro was introduced in January 2002, succeeding in establishing a monetary union (1, 1, 5).

Mercosur initially set a goal of attaining a monetary integration by 2005. However, in 1995 and 2007, the financial–monetary cooperation at a primitive level is still being discussed (1, 2, 2). NAFTA does not have any

mechanism in the financial–monetary cooperation so that there is no real result in this field in 2007 (1, 1, 1).

In the case of Northeast Asia, since the financial crisis the financial cooperation has been proceeding within the framework of ASEAN+3. In 1991 there was no financial cooperation in the region. In 2000 and 2007, financial cooperation at the primitive level such as a monetary swap agreement is being discussed (1, 2, 2).

Financial cooperation has been in progress within the framework of ASEAN+3. This led to the creation of a CMI, a bilateral currency-swap agreement, in May 2000, and the ABMI in August 2003. Discussions were held concerning the establishment of a single reserve pool that will be stronger and more secure than the CMI. However, the three Northeast Asian countries have yet to cooperate on foreign exchange policies, and measures for cooperation including the conclusion of currency swap agreements have not been implemented (1, 2, 2).

COMPARISON AND INTERPRETATION

The scores and historical changes in the regional integration index are presented in Table 4.5. As for Northeast Asia, average scores were at a very low level at the initial stage (in 1991) in every field except for the social-cultural index. This is because Northeast Asia was caught up in the sharp conflicts of ideologies and the Cold War, which precluded any momentum for regional integration. But in 2000 there was a big advancement towards integration in the socio-cultural, political and security, and institutional arenas. The increasing shares of intra-regional trade particularly deepened functional integration in the Northeast Asian region. The socio-cultural index increased due to stimulation of peoples' exchange among the countries in Northeast Asia and raised the necessity of regional integration from the political–security perspective. Institutionally, as the necessity of regional cooperation after the financial crisis received due recognition, financial and sectoral cooperation was greatly advanced, thus enabling the continuous advancement in socio-cultural, political–security and functional integration that we saw in 2007. The socio-cultural index increased due to digitization, and the political and security index increased due to political leadership. Recently, China has been displaying improved leadership among the three Northeast Asian countries.

In the case of East Asia, functional integration indices such as intra-regional trade, intra-regional FDI and intra-regional portfolio investment were higher than those of the other regional integration at the initial stage.

Table 4.5 Regional integration indexes

Factors	ASEAN		EU		MERCOSUR		NAFTA		North East Asia		East Asia				
	1985	1994	2007	1948	1952	2007	1986	1994	2007	1991	2000	2007	1994	2000	2007
Functional integration index	2	3	3	3	3	5	2	4	5	2	3	3	4	4	4
	1	2	2	1	1	5	1	3	2	3	1	1	2	3	2
	1	1	2	1	1	5	1	1	1	2	1	1	1	1	1
Socio-cultural index	1.3	2.0	2.3	1.7	1.7	5.0	1.3	1.3	2.7	2.7	3.3	1.3	1.7	2.0	2.7
	4	4	4	3	3	5	3	3	3	3	2	3	2	3	3
	2	3	3	3	3	5	2	3	3	4	2	3	3	2	3
Political-security index	1	2	5	3	5	5	1	1	5	3	4	2	4	5	2
	2.3	3.0	4.0	3.0	3.7	5.0	2.0	2.3	4.0	3.0	3.7	4.0	2.0	3.3	3.7
	2	3	3	4	4	5	3	3	4	3	3	4	2	3	3
Average	4	4	4	3	5	4	3	4	4	4	4	4	4	4	4
	4	5	4	3	5	4	3	5	4	3	5	1	2	3	2
	3.3	4.0	3.7	3.3	4.7	4.3	3.0	4.0	4.0	3.3	4.0	3.0	1.3	2.3	2.7

Sectoral cooperation	3	4	5	1	4	5	1	3	4	2	3	4	1	3	3	1	2	2
Regional organizations and treaties	2	3	3	1	3	5	1	3	4	1	3	3	1	1	1	1	1	1
Financial and monetary cooperation	1	1	2	1	1	5	1	2	2	1	1	1	1	2	2	1	2	2
Average	2.0	2.7	3.3	1.0	2.7	5.0	1.0	2.7	3.3	1.3	2.3	2.7	1.0	2.0	2.0	1.0	1.7	1.7
Regional Integration Index	2.3	2.9	3.3	2.3	3.2	4.8	1.8	2.6	3.2	2.6	3.2	3.3	1.4	2.3	2.6	1.8	2.4	2.6

However, the political and security index was very low compared to other integration indices, largely due to lack of political leadership in East Asia. During the initial development stage of integration of East Asia in 2000, the regional integration index increased in socio-cultural, political and security, and institutional sectors. Regional integration improved in most sectors after the Asian financial crisis, after which the ASEAN+3 (APT) cooperation was initiated. In 2007, the overall score increased, but the functional integration index actually decreased due to the reduction in intra-FDI. A noticeable increase in the socio-cultural index was registered since 2000, as East Asia was swept by the spreading popularity of Korean pop culture known as Hallyu, or the Korean wave. However, the political and security index was still low due to contentious regional dynamics and political leadership. Even with recent demonstration of regional leadership by China, there is still insufficient integration in the political and security arena.

Comparing the level of integration in East Asia with that in Northeast Asia, East Asia displays a lower level of integration than Northeast Asia in two sectors: political and security, and institutional integration indices. Comparing the initial conditions of regional integration, NAFTA stood out at the forefront, while ASEAN and EU belonged to the second group. East Asia fared better than Mercosur, and Mercosur and Northeast Asia were the worst. As for the stage of development of integration, the following ranking list emerged, from highest to lowest: NAFTA, the EU, ASEAN, Mercosur, East Asia, Northeast Asia. A comparison of the index in 2007 showed the EU at the front and NAFTA, ASEAN and Mercosur at level 3. Coming back to Northeast Asia and East Asia, while the level of integration may be low, indices show that the conditions for regional integration have matured.

Certain factors in Northeast Asia have been facilitating socio-cultural integration, namely, the homogeneity of culture, the maturation of civil society and increasing digitization, all of which facilitated regional integration. Functional integration, especially the shares of intra-regional trade and intra-regional foreign direct investment, are not low in spite of the fact that there is no formal regional integration body. The homogeneity and maturity of political and economic systems are increasing steadily along with political leadership. Comparing the initial conditions of other integration bodies, Northeast Asia is faring better than ASEAN and the EU, and much better than Mercosur. However, in terms of the stage of development, Northeast Asia is slightly behind ASEAN, the EU, NAFTA and Mercosur. Initial conditions in East Asia are more favorable compared to Northeast Asia, but the two regions are similar at the development stage.

Table 4.6 Comparison of facilitators and barriers (2007)

	Facilitators	Bottlenecks
ASEAN	<ul style="list-style-type: none"> ● Socio-cultural factor ● Political–security factor ● Institutional factor 	<ul style="list-style-type: none"> ● Functional factor
EU	<ul style="list-style-type: none"> ● Functional factor ● Socio-cultural factor ● Institutional factor ● Political–security factor 	
Mercosur	<ul style="list-style-type: none"> ● Political–security factor ● Socio-cultural factor ● Institutional factor 	<ul style="list-style-type: none"> ● Functional factor
NAFTA	<ul style="list-style-type: none"> ● Socio-cultural factor ● Functional factor ● Political–security factor 	<ul style="list-style-type: none"> ● Institutional factor
NEA	<ul style="list-style-type: none"> ● Socio-cultural factor 	<ul style="list-style-type: none"> ● Functional factor ● Political–security factor ● Institutional factor
East Asia	<ul style="list-style-type: none"> ● Socio-cultural factor 	<ul style="list-style-type: none"> ● Functional factor ● Political–security factor ● Institutional factor

Note: The cases of more than or equal to 3 points in 2007 are classified into facilitators.

CONCLUSION

Looking at ASEAN and Mercosur, which are regional integration bodies among developing countries, we can see that the socio-cultural factor, political and security factor, and institutional factor work as major facilitators. On the other hand, the functional factor proved to be a major barrier. In the EU, which is a regional integration body among developed countries, almost all factors work as facilitators. In NAFTA, the institutional factor works as a barrier. In Northeast Asia and East Asia, the socio-cultural factor works as a facilitator whereas the political and security factor and the institutional factor work as barriers (see Table 4.6).

ASEAN and Mercosur record a low score in functional integration, which explains a low maturity of regional integration. The case of NAFTA shows the limit of regional integration among developed and developing countries. Due to the gaps in the homogeneity of political economic systems, the level of economic development and the maturity of civil society, regional integration cannot proceed beyond the level of an FTA.

Comparing the initial conditions of major regional integration bodies, the political and security factor emerges as a facilitator. It shows the importance of the political and security factor as a facilitator. As regional integration proceeds, the socio-cultural factor emerges as an additional facilitating factor. So, the political and security factor and the socio-cultural factor are the important integration drivers at the initial stage.

Currently the socio-cultural factors of Northeast Asia and East Asia are lower than those of the EU and NAFTA, but almost the same as those of ASEAN and Mercosur. The political and security factors of those regions are much lower than those of the EU and Mercosur, and even lower than those of ASEAN and NAFTA. Comparing the initial conditions of the regional integration bodies, the socio-cultural factor of Northeast Asia is higher than those of ASEAN, the EU and Mercosur. But the politico-security factor of Northeast Asia is lower than those of ASEAN, the EU, Mercosur and NAFTA. The political–security factor of East Asia is lower than those of ASEAN, the EU, Mercosur and NAFTA.

Even though the politico-security factor should play an active role for Asian regional integration, it seems that it requires a longer time in order to enhance the homogeneity of political economic systems in East Asia. Also the maturity of the Chinese political economic system cannot be realized in the short run. Therefore, among the important factors for Asian regional integration are the peaceful resolution of North Korea's nuclear issue, resolution of disputes of history and territory, the change of the regional hegemonic competition structure to one of cooperation, and the pursuit of regional integration complying with the interests of the US. Furthermore, there is the importance of political initiative by regional leaders for pursuing regional integration based on the recognition of necessity and significance of Asian regional integration. The degrees of functional integration in Northeast and East Asia are low compared to those of the EU and NAFTA, but they are almost the same as those of the early EU, or ASEAN and Mercosur which are already forming FTAs. Therefore, the functional factor could work as a facilitator. How to develop the functional integration already matured to the institutional integration will be a key factor in Asian regional integration.

There could be many future tasks for enhancing the quality of research. One of them is to elaborate the socio-cultural factor or change some sub-factors reflecting diverse aspects of culture and value in each region. The Asia Values Survey results (Chung, 2009) could be used for this purpose. In this study we assumed that the relative weights among the four indexes and 12 subindexes are equal. In order to derive objective relative weights

for indexes or subindexes, we may use the AHP (analytic hierarchy process) survey method for the experts group. Also, we may separate the institutional index and calculate other indexes as non-institutional indexes in order to emphasize the importance of institutionalization. Finally, we may expand the scope of Asia beyond East Asia, for instance including ASEAN + 6 or up to West Asia.

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APPENDIX

FUNCTIONAL INTEGRATION INDEX

- The share of intra-trade
 - 1 less than 10%
 - 2 less than 20%
 - 3 less than 30%
 - 4 less than 40%
 - 5 less than 50%
- The share of intra-foreign direct investment
 - 1 less than 10%
 - 2 less than 20%
 - 3 less than 30%
 - 4 less than 40%
 - 5 less than 50%
- The share of intra-portfolio investment
 - 1 less than 10%
 - 2 less than 20%
 - 3 less than 30%
 - 4 less than 40%
 - 5 less than 50%

SOCIO-CULTURAL INTEGRATION INDEX

- Cultural homogeneity (shared history, religion, language, ethnicity, and so on)
 - 1 No sense of identity as a region
 - 2 Existence of identity or recognition as a region due to regional proximity
 - 3 Existence of identity due to homogeneous history, religion, or language
 - 4 High level of community awareness due to spontaneous efforts of members besides homogeneous history, religion, language or the like
 - 5 Institutionalization of community awareness due to spontaneous efforts of members besides homogeneous history, religion, language or the like
- Average maturity of civil society
 - 1 A pre-modern society: no civil society

- 2 The inception of civil society in terms of formal aspects such as laws and institutions
 - 3 The onset of spontaneous political participation and NGO activities by citizens
 - 4 Active spontaneous political participation and NGO activities by citizens besides formal aspects such as laws and institutions
 - 5 Active spontaneous political participation and NGO activities by citizens. Government by law established besides formal aspects such as laws and institutions
- Level of information literacy
 - 1 The number of phone/mobile phone users is less than 100 in 1,000
 - 2 The number of phone/mobile phone users is less than 200 in 1,000
 - 3 The number of phone/mobile phone users is less than 300 in 1,000
 - 4 The number of phone/mobile phone users is less than 400 in 1,000
 - 5 The number of phone/mobile phone users is more than 400 in 1,000

POLITICAL AND SECURITY INDEX

- Homogeneity and maturity of politico-economic system
 - 1 No democratic system and no market economy with lowest level of homogeneity and maturity of political and economic systems
 - 2 Major countries possess no democratic system and no market economy. Also characterized by
 - i) High level of homogeneity but low level of maturity or
 - ii) Low level of homogeneity and intermediate level of maturity
 - 3 Major countries still employ no democratic system yet do employ market economy. The level of homogeneity is low but that of maturity is high on average.
 - 4 Democratic system and market economy. Also characterized by

- i) High level of homogeneity and intermediate level of maturity or
 - ii) Intermediate level of homogeneity and on average, high level of maturity
- 5 Democratic political system and market economy in play. High level of homogeneity and maturity.
- Regional structure of political and security dynamics (the existence of common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States)
 - 1 No positive factor exists in terms of common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States
 - 2 One positive factor exists among common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States
 - 3 Two positive factors exist among common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States
 - 4 Three positive factors exist among common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States
 - 5 All four positive factors exist: common crises or threats, historical or territorial disputes, regional hegemony disputes, and the role of the United States
- Political leadership
 - 1 Very low level of political leadership: leadership of conflict or nation-oriented leadership
 - 2 Leadership for integration from some member countries
 - 3 Leadership for integration from some but major countries facing opposition from other major countries
 - 4 Leadership for integration in some major countries
 - 5 Leadership for integration in most major countries and institutionalization was achieved

INSTITUTIONAL INTEGRATION INDEX

- Sectoral cooperation (political and security, economy, and society and culture)

- 1 Non-existent cooperation
 - 2 Cooperation in elementary level
 - 3 Cooperation conducted in 3 or more fields
 - 4 Cooperation was formalized as a multilateral government conference (Summit and Ministerial meeting)
 - 5 Cooperation was formalized as a multilateral government conference (Summit and Ministerial meeting), proceeding with deeper level discussions of cooperation
- The existence of regional organizations and treaties related to trade and investment
 - 1 No existence of regional organizations and treaties related to trade and investment
 - 2 Existence of official regional organization/meeting bodies
 - 3 Existence of multilateral FTA
 - 4 Existence of treaties related to trade and investment at least at the level of customs union, along with an official regional organization/meeting bodies
 - 5 Existence of treaties related to trade and investment at least at the level of common market, along with an official organization which decides common policies of member countries
 - Financial and monetary cooperation
 - 1 Neither financial nor monetary cooperation
 - 2 Elementary level of financial and monetary cooperation, such as signing of the currency swap agreement
 - 3 Cooperation in exchange rate policies
 - 4 Common exchange rate policy conducted
 - 5 Common currency is introduced