

1. Introduction

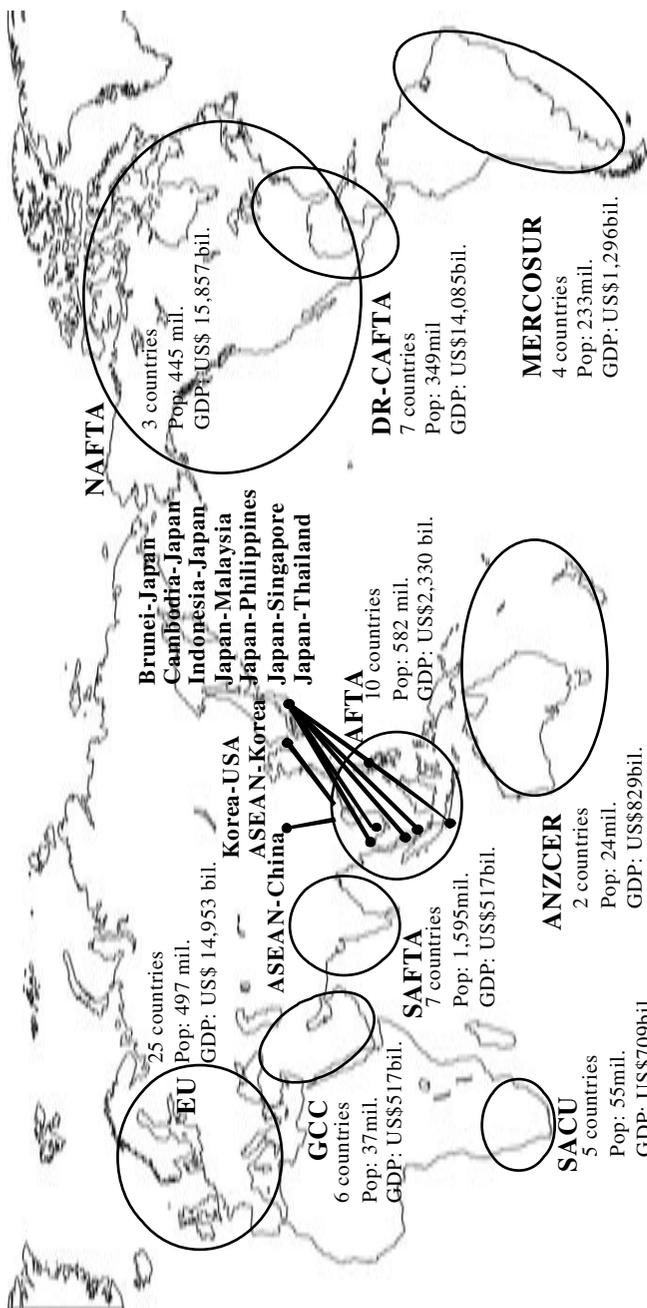
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The past few decades have seen a significant acceleration in the integration of the world economy. This has been mainly the result of reductions in transport and communication costs, the lowering of trade barriers, and an increasing mobility of capital and labor. From the 1990s, these trends in the global market have been reinforced by institutional development based on free trade and economic partnership agreements (FTAs and EPAs) that have been rapidly negotiated among many countries. By the end of 2002, GATT/WTO had received notification of some 250 regional trade agreements (RTAs), including various FTAs and EPAs, and an additional 70 RTAs are reportedly now under negotiation.¹

Due to this progress of economic integration, an increasing number of consumer goods are being imported from all over the world. Also, many producers are operating affiliated factories in various countries and expanding their global networks of input procurement and product distribution. Accordingly, the world export–GDP ratio has risen, on average, from 15.0 percent in 1990 to 26.2 percent in 2005.

Figure 1.1 shows the major RTAs signed before December 2007.² Two giants, the EU (European Union) and NAFTA (North American Free Trade Agreement), produce respectively US\$15.0 and 15.9 trillion. In Asia, ten ASEAN (Association of South East Asian Nations) countries participate in AFTA (ASEAN Free Trade Area), but their total GDP is about US\$2.3 trillion. This is equivalent to 15 percent of that of the EU and NAFTA. However, China, Japan and Korea, the three large economies in East Asia, are now eagerly establishing FTAs with ASEAN countries and also with each other. If these three countries are included, East Asia accounts for US\$11.3 trillion of GDP. The three major integrated economies that include the EU, NAFTA and East Asia produce about 80 percent of the world's GDP. This is remarkable given that these countries comprise only 46 percent of the world's population.

Economic integration usually proceeds in several steps: (1) trade liberalization; (2) capital/financial liberalization; (3) labor mobilization; and



Note: Circles indicate the member countries of each RTA.

Source: Drawn by authors, based on METI (2006).

Figure 1.1 Major RTAs in the world

Table 1.1 Trade and production in the integrated economies^a

	Year	E. Asia ^b	EU-15	NAFTA	ROW	World
(1) Share of intra-regional trade in total export of each region (%)	1990	39.9	55.1	32.8	25.9	–
	2005	51.1	56.3	34.4	34.3	–
(2) East Asia's share in total import to each region (%)	1990	39.9	9.2	29.6	16.3	20.4
	2005	51.1	11.8	29.8	22.0	27.0
(3) Share in world's exports (%)	1990	20.4	37.5	16.3	25.7	100.0
	2005	27.0	31.8	14.1	27.1	100.0
(4) GDP share (%)	1990	18.9	30.3	29.0	21.8	100.0
	2004	25.9	29.0	34.0	11.1	100.0
(5) GDP per capita at 1990 price (US\$)	1990	2426	18869	17968	1850	4345
	2004	3152	23812	23174	1750	4982
(Growth rate; % annum)		(1.9)	(1.7)	(1.8)	(-0.4)	(1.0)

Notes:

^a All shares in rows (1), (2) and (3) are calculated from import data.

^b East Asia is composed of Brunei, Cambodia, China (including Taiwan), Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

Sources: United Nations (2006), IMF (2007), Republic of China (2005).

(4) currency integration.³ The actual degree of progress in economic integration varies from one group to another. Generally speaking, the EU takes the lead, NAFTA follows, and East Asia comes last. In East Asia, liberalization of trade and investment has been significantly progressing, but labor mobilization and currency integration are still far behind. The path of integration in East Asia is somewhat unusual and has not relied on rigid institutions, as in the EU and NAFTA. It was only after 2002 that FTAs were signed between ASEAN and other East Asian countries,⁴ and FTAs among China, Japan and Korea are still under negotiation. However, this does not mean that integration has been particularly slow. In fact, as shown in the first row of Table 1.1, the share of intra-regional trade in East Asia rapidly increased from 39.9 percent in 1990 to 51.1 percent in 2005, which marked the highest growth rate among the three integrated regions, East Asia, EU and NAFTA. During this period, many multinational enterprises (MNEs) have rapidly expanded their production networks in East Asia, and this has substantially promoted the economic integration of East Asian countries. Thus East Asia's economic integration in this period is often called *de facto* integration.

East Asian countries have significantly gained competitiveness in exports on the basis of *de facto* integration. As shown in row (2) of Table 1.1, during

1990–2005, the share of East Asian products in total imports to each region increased in each of the EU, NAFTA, East Asia and the rest of the world (ROW).⁵ This led to an expansion of East Asia's export share in the world market from 20.4 percent to 27.0 percent, while the EU's and NAFTA's share decreased, as shown in row (3). As further seen in row (4), growth in exports stimulated regional production in East Asia and enlarged its GDP share from 18.9 percent in 1990 to 25.9 percent in 2004. As a result, the average GDP per capita in this region increased 1.3 times from US\$2426 to US\$3152 (both at 1990 prices). The average growth rate in the 14 years was 1.9 percent per annum. This is almost twice that of the world average and higher than any other region in the world.

There have been comprehensive studies of the economic effects of regional integration in the field of international economics. The neoclassical theory of comparative advantage has shown how trade liberalization can bring about economic growth.⁶ If a country has an advantage in the production of a specific commodity, it can gain advantage by providing other countries with its specialty in exchange for their specialties. Hence international trade enables efficient use of products across borders and thereby leads to better allocation of resources. Traditionally, this kind of analysis has focused on trade of consumer goods, but similar processes may apply to trade of intermediate inputs and components. Nowadays, various firms build up their global production networks by splitting production processes into several elements and relocating these in different countries. As a result of this business movement (often called *fragmentation*), many kinds of parts, components and even R&D outputs are often traded across countries on an intra-firm network. For both types of trade (consumption and production goods), any trade barriers (including tariffs and transport costs) present major obstacles to efficient factor allocation and may deprive the countries of growth opportunities. Economic integration as a result of lowering trade barriers should promote efficiency in international resource allocation and provide a significant source of economic growth.⁷

The traditional theory of comparative advantage also presents an optimistic view of the influences of integration on regional inequalities. Since international trade tends to narrow international gaps in prices of products and production factors, promotion of economic integration should reduce the income differences among member countries. However, there is widespread concern that integration may intensify inequalities among integrated countries as well as among domestic regions in each country.⁸ As is generally known, East Asian countries are quite diversified in economic size, levels of income and industrial technology, as well as in other socio-economic aspects. For example, the coefficient of variation for GDP per capita in East Asia in 2004 was 1.140, three times the coefficient for the

EU-15 in the same year, 0.354.⁹ These large disparities among East Asian countries lead to a fear that countries with unfavorable conditions may be given only a limited opportunity for growth and left behind by the other growing countries in the market under keener competition created by integration. In addition, substantial concerns have been raised about increasing inequalities among domestic regions within each country. As examined in Chapter 2, the differences in regional income in China are significant and expanding, particularly between coastal and inland areas. There is also a large difference in production level. The GDP share of the 11 coastal provinces increased from 53.3 percent in 1990 to 61.3 percent in 2003, while these provinces occupy only 12.4 percent of land in China.¹⁰ These facts have led to serious anxiety relative to whether or not regional disparities in East Asia will become intensified by further integration, with more FTAs and EPAs coming into effect in the near future.

When there are scale economies in production, firms tend to agglomerate, as extensively discussed in spatial economics.¹¹ This may cause regional disparities as discussed above. The basic scenario for the integration–disparity nexus is as follows: suppose industrial technologies are characterized by scale economies. Then, productivity and competitiveness of a firm are crucially dependent on the size of production. Therefore firms will tend to locate in regions with large markets in order to fully exploit the scale benefits. This effect is often called the ‘home market effect’ (HME). Workers and consumers, on the other hand, are attracted to such regions because there are many jobs and a wide variety of consumer goods is easily available. As a result of the circular effects of firm-attraction and consumer-attraction, large industrial agglomerations may appear in which both firms and consumers enjoy location advantages.¹² In such situations, economies will most likely exhibit ‘lumpy’ landscapes with significant regional disparities.¹³

The spatial economic approach allows analysis of the agglomeration forces of integration, which cannot be captured by the neoclassical theory of comparative advantage. Due to the HME noted above, the market expansion caused by economic integration attracts a disproportionately large number of firms to the integrated area and encourages economic growth there. At the same time, firms attracted to that area may agglomerate in some particular countries and regions that have large domestic markets. For example, the growing market in China appears very attractive to many multinational enterprises (MNEs) that plan to locate in East Asia. This powerful attraction sometimes leads to serious fears among other Asian countries, such as members of ASEAN. However, as discussed above, China also encounters a serious internal problem of regional disparity, specifically the rapidly expanding inequality between coastal and

inland areas. If economic disparities among member countries and/or among domestic regions become too wide, East Asian countries may not be able to sustain further progress in economic integration. It is necessary to study how to create a harmonious integration of significantly diversified countries in East Asia, where economic integration is expected to progress further on both *de facto* and *de jure* bases.

This book focuses on economic integration in East Asia from a combined viewpoint of neoclassical and spatial economics. The remainder of the book is composed of three parts: Part I (Chapters 2 and 3) includes a discussion of the book's primary viewpoint relative to Asian economic integration along with a brief review of its theoretical basis. Based on this framework, Part II (Chapters 4–6) includes an overview of the development process and major obstacles to integration in East Asia. These are also compared with the case of EU integration. Part III (Chapters 7–11) is devoted to an examination of specific aspects of Asian integration such as development of intra-regional trade, location behavior of MNEs, and formation of industrial agglomerations.

Chapter 2 includes a comparison of the spatial economic approach with the neoclassical view of comparative advantage. With the presence of scale economies, industrial agglomeration appears at various levels of geography from small business districts to the core–periphery structure at the global scale. We shall see that the industrial structure and trade pattern in East Asia switched in the early 1990s from the traditional flying-geese pattern with a single core (Japan) to the multi-cored intra-regional division of labor. Agglomeration economies appeared more significantly in the latter phase, reflecting substantial reduction of trade costs.

Chapter 3 provides theoretical bases of the two views discussed in Chapter 2. In particular, two major effects of economic integration, 'specialization' and 'agglomeration' of industries, are examined. Specialization forces represent the influences of comparative advantages and tend to cause the dispersion of industries among integrated countries. By contrast, agglomeration forces are caused by scale economies in production (via the HME) and create regional disparities among integrated economies and among domestic regions within each country. It should be noted that the views of spatial economics and comparative advantage theory are not mutually exclusive. In fact, both specialization and agglomeration forces may be at work simultaneously, and the total effect on regional disparity is determined by their relative size.

Maintaining the above viewpoints, the recent development of industrial clusters in East Asia is discussed in Chapter 4. An overview of 12 major clusters in the area called the 'Asian Triangle' is presented, with special attention to the expansion of global production networks of MNEs.

Industrial zones, capacity-building, and anchor firms appear to be primary development keys for building a successful industrial cluster. For further promotion of economic integration in East Asia, it seems essential to develop cluster-to-cluster linkages.

An overview of the development of institutional and political frameworks for East Asian integration is presented in Chapter 5. In addition, major issues that China, Japan and members of ASEAN currently encounter in promotion of economic integration in this area are examined. It appears that ASEAN countries must develop 'soft' infrastructures for system harmonization (such as establishment of intellectual property rights) and coordination of infrastructures (such as international road networks). These may then enable a facilitation of trade and investment in the area by significantly reducing trade costs and lead times. China also needs to set up soft infrastructures, including rules to secure transparency. In addition, international coordination is necessary for energy and environmental issues which are becoming more and more serious as a result of the rapid growth of the Chinese economy. Japan should contribute to such joint efforts, utilizing its long experience in energy saving and environmental preservation. Japanese ODA (official development assistance) has been biased toward hard infrastructures, but higher priority must be given to soft infrastructures in the areas noted above.

Chapter 6 includes a comparison of the above states and trends of East Asian integration with the European experience. Economic integration of the EU is reviewed, and the key similarities and differences between European and Asian models are discussed. Europe has been able to achieve 'deep integration' because of the vision of a united Europe, the political balance within Europe, and the development of the institutions of the EU. None of these features is present in Asia. Complementarities among Asian economies create gains from trade liberalization, but it seems unlikely that Asia will follow the European path of 'deep integration' or attain the consequent economic benefits. In this sense, East Asia needs to find its own path to a harmonious integration.

To look more closely at individual issues in East Asian integration, we first examine in Chapter 7 the structure and determinants of the intra-regional trade during 1985–2004, the period when *de facto* economic integration rapidly progressed in East Asia. The result of analysis shows that the key determinants of intra-regional trade differ by industry, and this yields a complicated pattern of trade in East Asia. Roughly speaking, the HME plays a significant role in determining the trade patterns of the chemical products sector and the transport equipment sector, but a trickling-down dispersion pattern (like the flying-geese pattern) is observed in the machinery sector.

Chapters 8 and 9 examine the location choice of, respectively, Korean and Japanese MNEs in East Asia. As discussed in Chapter 4, expansion of production networks of MNEs has a large influence on intra-regional trade in East Asia and also on the formation of industrial clusters in certain sectors that have significant HMEs. Therefore investigation of location choices of MNEs should provide essential information to anticipate the consequence of further progress in economic integration and also develop a prescription for harmonious integration. Generally speaking, MNEs of the two countries are attracted to large markets and low-cost sites, but Korean firms exhibit a particular tendency to locate in the three northeast provinces of China.

Chapters 10 and 11 include examination of key factors in the formation of industrial agglomeration in China and ASEAN respectively. An overview of the evolution of provincial trade and production in China since 1978 is provided in Chapter 10, and causes of industrial agglomeration, using provincial panel data gathered in the period 1987–2001, are explored. Trade liberalization policies and the size of regional markets appear to play significant roles in the development of industrial agglomeration. The HME in ASEAN countries is investigated in Chapter 11. As previously discussed, presence of the HME provides a key for creation of an agglomeration and is also a source of regional disparity. The size of the HME in each industry is measured by assuming equilibrium in a spatial economic model. Results suggest that the HME is relatively large in the sectors of: (1) textile and leather products; (2) pulp, paper and printing; and (3) transport equipment. This is consistent with the findings in Chapter 7.

NOTES

1. More than 170 notified RTAs are currently in force. For details, see http://www.wto.org/english/tratop_e/region_e.htm.
2. In addition to the RTAs shown in Figure 1.1, ASEAN–Japan EPA was concluded in November 2007. It will become effective in autumn 2008.
3. Trade liberalization involves both commodity and service trades. Hence liberalization policies include institution-building such as the establishment of intellectual property rights as well as the lowering of trade barriers.
4. With the exception of those within China (such as Hong Kong, China and Macau, China), the effective FTAs in East Asia as of August 2007 are: (1) AFTA (came into effect in January 1992; ASEAN 10 members); (2) Japan–Singapore (November 2002); (3) ASEAN–China (July 2005); (4) Japan–Malaysia (July 2006); (5) ASEAN–Korea (July 2006); (6) Korea–Singapore (March 2006); (7) Japan–Philippines (September 2006); (8) Japan–Thailand (April 2007); (9) Brunei–Japan (June 2007); (10) Cambodia–Japan (June 2007); and (11) Indonesia–Japan (August 2007). In addition, ASEAN–Japan is scheduled to come into force in autumn 2008.
5. In Table 1.1, values for the EU are given for 15 rather than 25 countries because the EU expanded from 15 to 25 members in 2005. The number of member countries further increased to 27 with the entry of Bulgaria and Romania in January 2007.

6. Chapter 3 includes more details on neoclassical and spatial economics.
7. If there are significant trade costs, equilibrium factor prices may differ among countries. In such cases, international transfer of production factors generally improves allocation efficiency. For details, see Chapter 3.
8. There is no clear evidence of expansion of income difference among the EU-15 in 1990–2004. In this period, the ratio of the highest to the lowest GDP per capita in the EU-15 expanded from 4.06 to 4.32, and the coefficient of variation rose slightly, from 0.350 to 0.354. However, the Gini coefficient decreased from 0.112 to 0.087.
9. The average GDP per capita of Cambodia, Laos and Myanmar was US\$283 in 2004. For Japan, it was US\$36 501. The max–min ratio of GDP per capita in 2004 was 166.7 in East Asia and 4.32 in the EU-15. The Gini coefficient was 0.668 in East Asia and 0.087 in the EU-15. Both indices clearly show that income disparity was much larger in East Asia than in the EU-15.
10. The 11 provinces include Beijing, Tianjin, Hebei, Shanxi, Liaoning, Shanghai, Jiangsu, Zhejiang, Shandong, Fujian and Guangdong.
11. In this book, the terms ‘spatial economics’ and ‘new economic geography’ are used interchangeably. For details of studies in this field, see Fujita et al. (1999), Fujita and Thisse (2002) and Baldwin et al. (2003).
12. Workers and consumers may not have easy mobility across the country. However, as discussed in Chapter 3, regional disparity can be created solely by the mobility of firms with scale economies. Further, as seen in Chapter 2, a similar circular mechanism can be generated between producers of final and intermediate goods, both of which are internationally mobile.
13. In addition to agglomeration, some authors argue that there are other forces, such as those related to political economic factors, that contribute to the globalization–inequality nexus. See Nissanke and Thorbecke (2006), for example.

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