Chapter 13

Japanese SMEs and International Production/ Distribution Networks in East Asia

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CHAPTER 13

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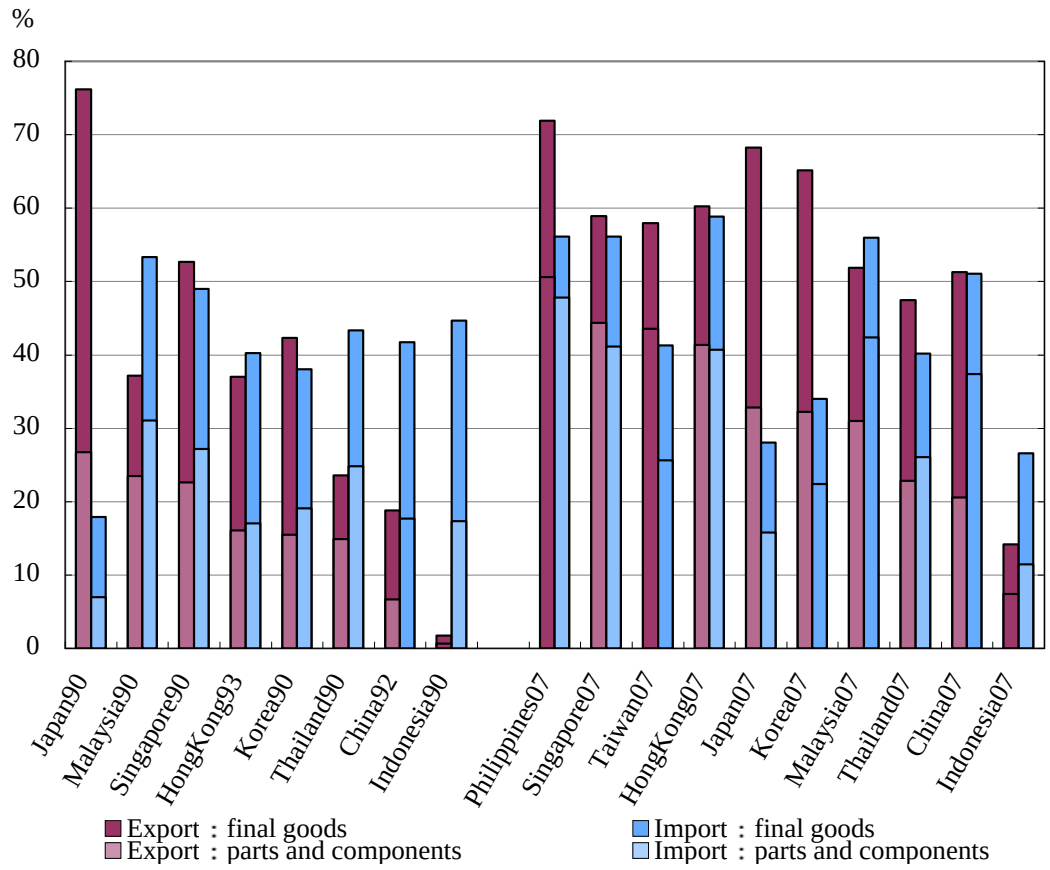
This paper attempts to investigate the mechanisms and features of the development of international production/distribution networks in East Asia, focusing on Japanese SMEs, from the viewpoint of one of the major players in the regional production networks. Our empirical analysis using various surveys and micro data of Japanese firms demonstrates that active FDI in vertical supply chains by SMEs, particularly in recent years, contributes to the formation of agglomeration and industrial clusters and further development of the networks in East Asia. Our analysis also demonstrates that competitive SMEs are likely to expand their operations both domestically and internationally, mainly in East Asia, by effectively being involved in the production/distribution networks in the region. To further develop international production networks and to deeply involve SMEs in the networks, various facilitation measures are important for both hosting and investing countries. All the efforts from various different angles for both sides should encourage SMEs to be an essential part of international production/distribution networks in East Asia, and thereby assist in strengthening their competitiveness by effectively being involved in these networks.

1. Introduction

In East Asia, international production/distribution networks in manufacturing, particularly machinery industries, have been formed since the 1990s and further developed in recent years. In conjunction with the development of production networks in the region, vertical back-and-forth transactions of parts and components have dramatically increased. Figure 1 presents the shares of machinery final goods and intermediate goods in total exports to/imports from the world for East Asian countries. The machinery trade, mainly machinery parts and components, as a share of total trade rapidly expanded from the beginning of the 1990s to 2007 for both exports and imports, which suggests the existence of back-and-forth transactions and export-oriented operations in East Asia. In addition, when countries are listed starting from the highest share of machinery parts and components exports (non-East Asian countries are not presented in Figure 1), most countries with the higher shares of machinery intermediate goods exports are East Asian countries in 2007 whereas they were developed countries at the beginning of the 1990s. This indicates an increasing importance of machinery trade, particularly the machinery parts and components trade, in each economy in absolute and relative terms.

Figure 1. Machinery Final and Intermediate Goods as a Share of Total Trade in East Asian Countries



Data source: author's preparation, using UN Comtrade and World Trade Atlas d

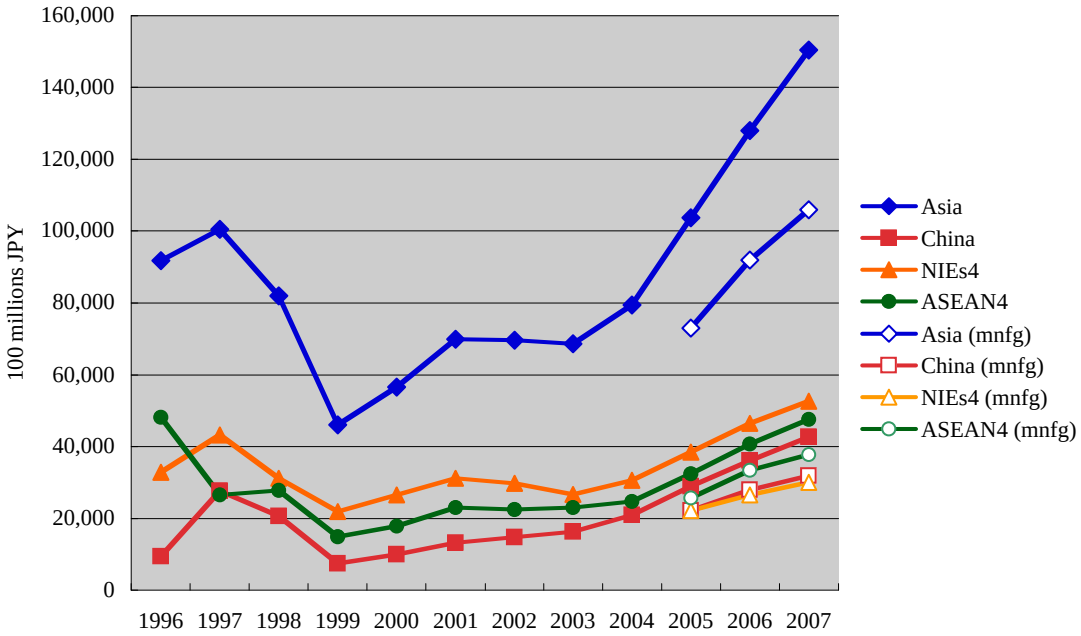
Notes: Machinary industries are HS84-92. The definition of machinery parts and components is based on Ando and Kimura (2005) and the revised versions. Machinary final goods trade is obtained by deleting machinery parts components from total machinery trade.

Such an expansion of back-and-forth transactions of machinery parts and components trade in East Asia is induced by intra-regional transactions. For instance, machinery intermediate goods trade in 2000 and 2007 for China, ASEAN4, NIEs4, and Japan demonstrates that intra-regional trade shares have increased for both exports and imports (except the case of China's exports). These reached the range of 55 percent to 73

percent for exports and from 63 percent to 82 percent for imports. Considering an explosive expansion of trade values *per se* (from 525.7 billions US$ in 2000 to 1099.3 billions US$ in 2007 for exports and from 418.0 billions US$ to 974.1 billions US$ for imports), including China's exports (from 38.2 billions US$ to 250.5 billions US$), it implies how rapidly and explosively back-and-forth transactions of East Asian machinery parts and components have expanded within the region.

Japanese firms are some of the major players in the production networks of the region. Since the late 1990's in particular, Japanese investment in East Asia has accelerated; as Figure 1 describes, an upward trend is vividly observed for direct investment position of Japan (i.e. foreign direct investment (FDI) stock) in East Asia based on the balance of payments statistics. Moreover, a predominant portion of the investment is in manufacturing sectors; the manufacturing share of Japanese direct investment position for 2007 is 70 percent for East Asia as a whole, 75 percent for China, 80 percent for the Association of Southeast Asian Nations (ASEAN) 4 including the Philippines (75 percent), Indonesia (75 percent), Thailand (80 percent), and Malaysia (86 percent), and 57 percent for Newly Industrializing Economies (NIEs) 4 including Taiwan (72 percent), Korea (61 percent), Singapore (58 percent), and Hong Kong (38 percent).

Figure 2. Japanese Direct Investment Position in Asia



Data source: BOJ.

Of course, Japanese small and medium sized enterprises (SMEs) are active in investment in East Asia, particularly in the manufacturing sector. This paper attempts to investigate the mechanism and features of the development of international production/distribution networks, focusing on patterns of exports and investment by SMEs, from the viewpoint of one of major investors in the region, and draw some policy implications. For that purpose, this paper first attempts to uncover the features of overseas activities of Japanese SMEs in terms of destinations of their exports as well as form of exports, partners for direct exports, reasons/purposes of their investment, and so on, based on several surveys. Then, our paper analyzes patterns of FDI by Japanese SMEs, employing the micro data of Japanese firms and previous related studies, from the perspective of international production/distribution networks. We also briefly discuss

economic and policy environment for SMEs.

The rest of the paper is organized as follows: the next section provides overviews of Japanese SMEs in terms of their export and investment patterns. Section 3 investigates the patterns of FDI by Japanese SMEs, based on the firm-level data. This section also discusses patterns of globalizing activities of Japanese firms and their domestic operations. Then, Section 4 briefly discusses economic and policy environment for SMEs, followed by conclusions in Section 5.

2. Overviews of Japanese SMEs and Their Exports and Investment Abroad

This section discusses overviews of Japanese SMEs and their export and investment patterns, using *2009F/Y White Paper on Small and Medium Enterprises in Japan* (SME Agency, 2009a) and *Basic Survey of Small and Medium Enterprises 2009* (SME Agency, 2009b), which are published by the Small and Medium Enterprise Agency. Note that since we do not have an access to the raw data of Basic Survey, we can use only aggregated data. Moreover, the original source of some tables and figures in the *White Paper* is Mitsubishi UFJ Research and Consulting Co., Ltd. (2008). This survey was conducted in March 2008 targeting 55,000 firms, and the return ratio was 15.7%. Therefore, the coverage of firms in this survey may not be so comprehensive as others.

In Japan, the New Small and Medium Enterprise Basic Law defines SMEs as firms

with 300 or less regular workers or capital of no more than 300 millions JP yen, except for the wholesale, retail, and service sectors; regular workers of 100 or less for wholesale and services and 50 or less for retail or capital of no more than 100 millions for wholesales and 50 millions for retail and services.[1] Based on this definition, 99.7% of firms in Japan in all sectors other than primary sectors are classified into SMEs, and almost 70 percent of regular workers in Japan belong to them (Table 1). In addition, over 10 percent of Japanese SMEs and over 20 percent of regular workers in Japanese SMEs are engaged in manufacturing sectors. Clearly, SMEs make up an essential part of manufacturing activities in Japan.

[1] See Table A.1 for features of the SME Basic Law including the definition. In this section, SMEs are defined as such unless specified and large firms are firms other than SMEs.

Table 1. SMEs and Large Firms in Japan, 2006

Industry	All sized firms		SMEs: the number of firms			SMEs: the number of regular workers		
	The number of firms	The number of regular workers		(%by industry)	(%in total)		(%by industry)	(%in total)
Mining	2,086	25,189	2,082	99.8	0.0	22,062	87.6	0.1
Construction	489,645	3,290,238	489,343	99.9	11.7	2,882,090	87.6	10.4
Manufacturing	457,623	9,424,333	455,621	99.6	10.9	5,903,494	62.6	21.2
Electricity, gas, and water supply	567	190,768	537	94.7	0.0	27,477	14.4	0.1
Information and communication	35,052	1,426,491	33,814	96.5	0.8	666,888	46.8	2.4
Transportation	77,403	2,594,245	77,132	99.6	1.8	1,857,903	71.6	6.7
Wholesale	233,846	3,328,161	231,755	99.1	5.5	2,322,118	69.8	8.3
Retail	880,575	6,610,931	877,875	99.7	20.9	4,286,343	64.8	15.4
Finance and insurance	30,256	1,010,855	29,985	99.1	0.7	170,470	16.9	0.6
Real estates	285,812	794,713	285,710	100.0	6.8	698,796	87.9	2.5
Restaurants and lodgings	648,614	3,555,630	647,754	99.9	15.4	2,820,399	79.3	10.1
Medical services	188,752	1,173,472	188,514	99.9	4.5	1,082,606	92.3	3.9
Education services	115,934	544,038	115,803	99.9	2.8	458,300	84.2	1.6
Multi services	3,718	8,395	3,717	100.0	0.1	8,246	98.2	0.0
Other services	760,187	6,149,521	758,077	99.7	18.1	4,628,358	75.3	16.6
Total (excl. primary sectors)	4,210,070	40,126,980	4,197,719	99.7	100.0	27,835,550	69.4	100.0

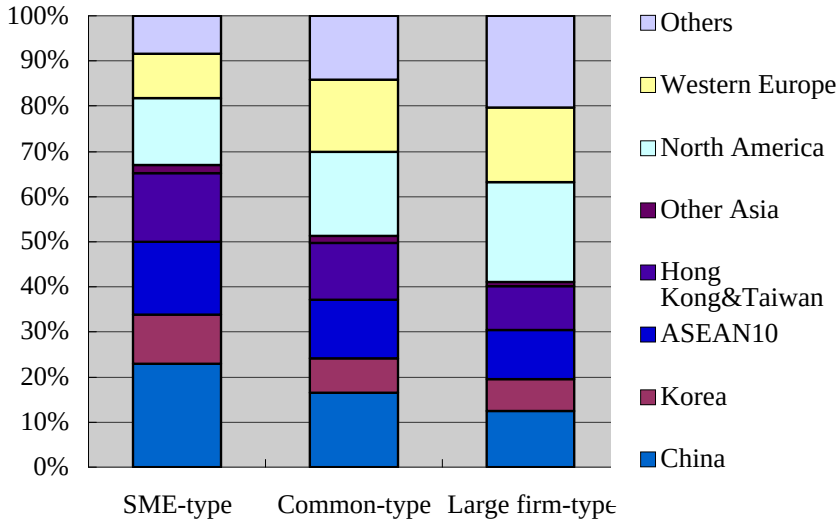
Data source: author's preparation, based on SME Agency (2009a)

Note: The number of firms here includes the number of companies and individual establishments.

How are these SMEs involved in foreign markets through export and investment activities? Figure 3 presents destination shares of exports for three products: SME-type products, large firm-type products, and common-type products.[2] Close to 70 percent of exports of SME-type products, which are produced mainly by SMEs, go to Asian countries including China, Korea, ASEAN10, Hong Kong and Taiwan, and other parts of Asia. Combined with the fact that the corresponding share for large firm-type products is around 40 percent, it suggests that Japanese SMEs, in particular, are closely associated with Asian economies as suppliers of intermediate goods and/or final goods.

Figure 3. Destination Shares of Exports for 3 Types of Products in 2007

Figure 3 Destination shares of exports for 3 types of products



Data source: author's preparation, based on SME Agency (2009a).

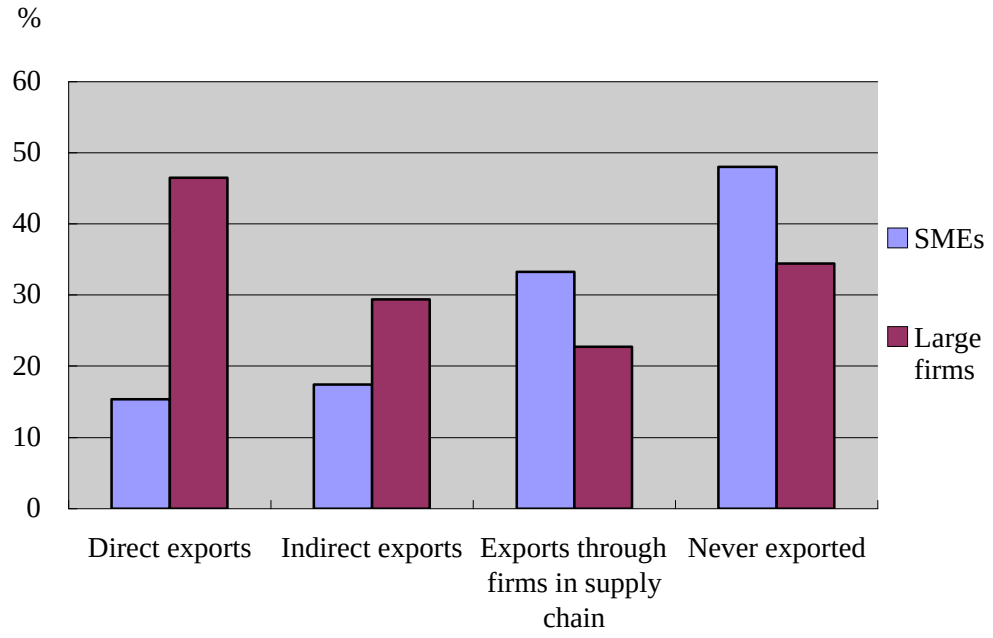
Note: SME-type products (large firm- type products) are defined here as those with 70% or more of total sales by SMEs (large firms) in 2005. Common-type products are those not classified into either SME-type or large firm-type.

[2] SME-type products (large firm- type products) are defined here as those with 70% or more of total sales by SMEs (large firms) in 2005. Common-type products are those not classified into either SME-type or large firm-type.

Japanese SMEs do not necessarily export their products directly. In Figure 4, the forms of exports are distinguished among direct exports, indirect exports, and exports through firms in supply chains; direct exports are those that undertake customs clearance with the firm's own name, and indirect exports are those conducted by identified domestic trading companies, wholesalers, or export agencies. When products are not exported in any of these three forms, they are classified as the case of "never exported" in this figure. Figure 4 shows that 15 percent of SMEs in the survey export their products directly and 18 percent export indirectly, though they are much lower than in the case of large firms which have corresponding shares of 47 percent and 29 percent, respectively.[3] Moreover, one-third of SMEs supply their products to firms in their downstream who use those products to produce goods to be exported. As a consequence, almost half of SMEs in the survey are somehow involved in export activities (see the portion of "never exported"), and a significant portion of products produced by SMEs are likely to be sold to the market abroad in either way, directly, indirectly, or through business partners in supply chains.

[3] Multiple answers are allowed here.

Figure 4. Form of Exports by SMEs and Large Firms



Data source: SME Agency (2009a) (Original data source: Mitsubishi UFJ Research and Consulting Co., Ltd.(2008)).

Who are the partners of direct exports undertaken by Japanese SMEs? For large firms the major partners are local manufactures (52 percent), Japanese manufactures (45 percent), and local wholesalers (35 percent or 30 percent) (Table 2). On the other hand, the major partners for SMEs are local manufactures (42 percent) and local small and median sized wholesalers (30 percent), followed by Japanese manufactures in the local market (26 percent). This indicates that compared with large firms, Japanese SMEs are more likely to sell their products to indigenous firms including indigenous SMEs, rather than to Japanese firms in the local markets.

Table 2. Partners of Direct Exports

		SMEs	Large firms
Local	major wholesalers	11%	30%
	small and medium sized wholesalers	30%	35%
	retailers	12%	15%
	manufactures	43%	52%
	other traders	9%	15%
Japanese	major whosalers	5%	16%
	small and medium sized wholesalers	7%	10%
	retailers	1%	5%
	manufactures	26%	45%
	other traders	3%	4%
Others		8%	17%

Data source: SME Agency (2009a) (Original data source: Mitsubishi UFJ Research and Consulting Co., Ltd.(2008)).

Notes: multiple answers are allowed. Firms with direct exports only.

Foreign exposure through investment by SMEs is also deeply associated with Asian countries, as is the case of exports. Table 3 demonstrates that most foreign affiliates of SMEs are located in Asia. In addition, over 60 percent of their majority owned affiliates in Asia are engaged in manufacturing activities, mainly in machinery sectors.

Table 3. The Number of SMEs with Foreign Operations by Industry, 2007FY

Industry	The number of firms	The number of firms with foreign operations		The number of majority-owened foreign affiliates			The number of minority-owened foreign affiliates			The number of foreign establishments/offices/factories		
				Total	Asia		Total	Asia		Total	Asia	
			(% in total)			(% in total)			(% in total)			(% in total)
Total	3,756,685	15,252	100.0	9,757	7,743	100.0	10,973	8,874	100.0	5,807	4,327	100.0
Manufacturing total	431,840	6,673	43.7	5,665	4,737	61.2	5,436	4,939	55.7	1,359	1,100	25.4
Food	39,922	448	2.9	152	123	1.6	875	865	9.7	137	115	2.7
Beverages, tabbaco, feed	5,873	39	0.3	32	31	0.4	6	6	0.1	—	—	n.a.
Textiles (excluding textile products)	21,550	165	1.1	110	110	1.4	83	83	0.9	31	31	0.7
Clothing, textile products	29,252	480	3.1	457	457	5.9	415	415	4.7	104	104	2.4
Lumber, wood products (excluding furniture)	13,990	35	0.2	42	40	0.5	4	3	0.0	—	—	n.a.
Furniture, furnishing	23,937	45	0.3	21	17	0.2	31	31	0.3	28	28	0.6
Pulp, paper, processed paper products	9,910	57	0.4	11	9	0.1	46	24	0.3	—	—	n.a.
Printing or other related business	33,890	171	1.1	215	177	2.3	128	128	1.4	43	34	0.8
Chemicals	4,776	355	2.3	411	372	4.8	406	406	4.6	92	92	2.1
Petroleum and coal products	424	3	0.0	3	3	0.0	—	—	n.a.	—	—	n.a.
Plastic products (excluding those listed elsewhere)	18,602	753	4.9	534	218	2.8	1,465	1,254	14.1	11	9	0.2
Rubber products	4,980	91	0.6	157	147	1.9	12	5	0.1	19	12	0.3
Hides and furs	6,224	91	0.6	21	21	0.3	175	175	2.0	—	—	—
Ceramics, earthenware	17,340	190	1.2	104	95	1.2	136	136	1.5	58	53	1.2
Iron and steel	5,039	80	0.5	100	73	0.9	20	20	0.2	—	—	n.a.
Non-ferrous metals	3,670	141	0.9	122	122	1.6	36	36	0.4	8	6	0.1
Metal products	58,432	679	4.4	561	561	7.2	326	326	3.7	—	—	n.a.
General machinery	54,711	1,102	7.2	989	855	11.0	552	410	4.6	149	140	3.2
Electrical machinery	15,009	358	2.3	238	238	3.1	172	123	1.4	61	7	0.2
Information-communications equipment	2,995	142	0.9	156	138	1.8	62	59	0.7	6	3	0.1
Electronic parts, devices	8,414	381	2.5	354	318	4.1	161	153	1.7	366	286	6.6
Transportation machinery	18,160	497	3.3	543	356	4.6	227	186	2.1	142	92	2.1
Precision machinery	8,305	131	0.9	106	62	0.8	24	21	0.2	37	22	0.5
Other manufacturing industries	26,436	240	1.6	227	196	2.5	72	72	0.8	65	65	1.5

Data source: author's calculation, based on SME Agency (2009b).
Note: The number of firms here includes the number of companies and private establishments.

The major reason for their FDI with a highest share is "reduction of production costs due to inexpensive labor forces etc" (52 percent), followed by "local procurement of products, parts, and raw materials" (47 percent) and "market expansion and sales promotion in the local market"(44 percent), for SMEs, while it is "market expansion and sales promotion in the local market" (69 percent) for large firms (Table 4)[4]. Moreover, although we cannot identify whether it is due to *Keiretsu* relationship or not, a quarter of SMEs with foreign operations in the survey go abroad to follow business partners' entry into the foreign market, and 17 percent of those SMEs enter the foreign market according to the request of their business partners. These suggest that SMEs invest in foreign markets, mostly in Asia, in order to engage in manufacturing activities, contributing to the dense supporting industries in the production networks.

Table 4. Reasons for Foreign Operations

	SMEs	Large firms
Market expansion and sales promotion in the local market	44%	69%
Local procurement of products, parts, and raw materials	47%	33%
Gathering local information	21%	26%
Reduction of production costs due to inexpensive labor forces etc	52%	45%
Following to the business partners entering the foreign market	25%	31%
Request of entry to the foreign market from the business partners	17%	17%
Securing excellent human resources	6%	4%
Strengthening networks with local governments	1%	2%
Others	2%	3%

Data source: SME Agency (2009a) (Original data source: Mitsubishi UFJ Research and Consulting Co., Ltd. (2008)).
Note: firms with foreign opertaions only.

[4] Multiple answers seem to be applied, though it is not described in the original source.

Table 5 demonstrates what SMEs expect in order to expand into foreign markets to sell their products as well as their FDI. According to this table, the following factors including “reduction of tariffs on parts and final products” (52 percent), “strengthening protection of IPRs such as a crackdown on counterfeit goods” (43 percent), “ensuring security and safety” (41 percent), and “speedy procedures for trade and investment” (39 percent) seem to be effective measures for promoting foreign market expansion and FDI for SMEs.

Table 5. Effective Measures to Promote Foreign Market Expansion and FDI for SMEs

Reduction of tariffs on parts and final products	52%
Liberalization of services sectors and transparency of laws and regulations	20%
Strengthening protection of IPRs such as crackdown on counterfeit goods	43%
Improvement of harmonization and transparency of starndards	20%
Non-discriminate and fair system of hosting investment	8%
Speedy procedures for trade and investment	39%
Avoiding dual taxation	23%
Avoiding dual social insurance	8%
Facilitation of procedures to obtain visa	11%
Development of infrastracture such as electricity, water supply, and roads	21%
Industrial cooperation through human resource development etc	17%
Ensuring security and safety	41%

Data source: SME Agency (2009) (Original data source: Mitsubishi UFJ Research and Consulting Co., Ltd.(2008)).
Note: multiple answers are applied.

Before moving to the next section, let us briefly review the voices of Japanese manufacturing firms on how they assess East Asia as a potential destination of their FDI

and what they regard as impediments in such countries for their FDI, although this survey basically covers both SMEs and large firms. The Japan Bank for International Cooperation (JBIC) annually conducts a questionnaire survey for Japanese manufacturing MNEs; one of the key questions of the survey is to list countries which they think are prospective destinations of their FDI in the short term (upcoming 3 years) and to summarize the reasons for their choice as well as the strong and weak points of such countries.[5] The results of the 2009 F/Y questionnaire survey show that China (selected by 353 firms out of 480) is by far the most important possible destination for their FDI, followed by other Asian countries; India (2nd, 278 firms), Vietnam (3rd, 149 firms), Thailand (4th, 110 firms), Indonesia (8th, 52 firms), Korea (9th, 31 firms), Malaysia (10th, 26 firms), Taiwan (11th, 21 firms), the Philippines (13th, 14 firms), and Singapore (18th, 7 firms) (Table 6).[6] It implies that many of the top 20 countries, particularly the top 10 countries, are East Asian countries.

[5] The 2009 F/Y questionnaire survey was conducted in July 2009 for Japanese firms with three or more foreign affiliates including at least one manufacturing foreign affiliate, in which 625 firms out of 1004 returned effective answers. The summarized report is available from the JBIC website, http://www.jbic.go.jp/ja/about/press/2009/1106-01/index.html.

[6] The corresponding countries for only SMEs with no more than 1 billions JP Yen are quite similar: China (1st, 80 firms out of 123), India (2nd, 67 firms), Vietnam (3rd, 45 firms), Thailand (4th, 38 firms), Indonesia (6th, 18 firms), and Malaysia (9th, 9 firms).

Table 6. Strong and Weak Points of Prospective Destination Countries for Japanese Manufacturing FDI

	Ranking [a]									
	1	***2***	***3***	***4***	***5***	***6***	***7***	***7***	***9***	***10***
Number of firms	353	278	149	110	103	95	65	52	31	26
Country	China	India	Vietnam	Thailand	Russia	Brazil	USA	Indonesia	Korea	Malaysia
Strong points [b]	348	275	149	103	95	95	64	50	30	26
	Percent									
Human capital	10	19	22	10	1	2	11	6	13	15
Inexpensive labor	44	39	58	42	8	15	-	46	-	39
Cheap parts and components / raw materials	20	10	7	11	3	5	2	8	7	8
To supply intermediate goods for assemblers	20	19	15	21	9	16	13	32	16	27
Agglomeration/industrial clusters	16	3	2	17	3	3	14	10	26	8
Risk diversion from other countries	1	5	19	10	1	1	-	6	-	8
To export to Japan	13	2	11	11	-	-	-	10	-	15
To export to the third countries	17	7	15	27	2	8	-	26	-	19
Advantage in local procurement	8	3	3	7	6	4	5	6	7	12
Present market size	33	19	9	25	18	18	69	22	58	12
Market potential	85	90	60	48	85	86	44	64	55	42
Rate of returns of market	9	4	3	7	6	3	14	14	13	4
R&D for the local market	3	1	2	4	-	-	11	2	7	-
Development of infrastructure	10	0	3	23	6	3	23	2	26	19
Development of logistics services	2	0	1	10	-	1	14	2	7	4
Investment incentives / deregulation measures	8	1	14	23	2	3	2	4	3	19
Stable policies such as foreign investment	3	3	5	13	-	-	2	2	-	12
Economic/social stability	4	4	11	9	5	5	27	4	23	27

Weak points [c]	336	260	136	104	99	88	60	48	31	24
	Percent									
Underdevelopment of legal system	16	17	24	6	15	10	-	13	-	4
Nontransparency in the legal system	56	29	31	6	33	22	-	27	-	4
Complicated taxation system	13	24	6	7	5	22	-	8	-	4
Nontransparency in the implementation of taxation system	32	22	16	8	16	14	-	21	3	13
Raised tax	21	8	6	11	3	2	7	10	7	8
Restrictions/regulations for foreign capital	25	12	15	15	11	13	-	6	7	4
Complicated and nontransparent administrative procedures for investment	20	14	11	7	22	16	-	8	-	8
Insufficient protection of IPRs	47	8	8	7	4	5	2	13	7	4
Restrictions/regulations on exchange rates and overseas remittance	38	13	13	9	11	8	-	6	10	4
Import restrictions and customs clearance	19	11	9	3	19	15	8	8	7	4
Insufficient human capital for engineering positions	7	10	20	16	11	10	13	25	7	29
Insufficient human capital for managerial positions	21	16	29	30	13	15	23	27	3	25
Rising labor costs in host country	56	17	27	27	12	11	5	27	23	21
Local labor problems	18	20	14	8	5	13	73	15	3	4
Harsh competition with other firms in the local market	50	30	10	39	21	21	-	19	55	17
Difficulty in collecting bill	28	7	4	4	12	3	-	-	-	8
Difficulty in local financing	9	6	3	-	5	6	-	4	-	0
Underdevelopment of indigenous supporting industries	4	12	18	2	6	5	-	10	-	4
Instability of local currency/pricing	3	5	13	6	12	15	-	19	23	-
Insufficient infrastructure	15	47	34	4	17	13	-	35	-	4
Instability of security and society	13	30	7	28	26	28	-	42	-	4
Insufficient information on the host country	2	20	15	4	25	23	-	10	-	13

a. The ranking is based on the number of Japanese manufacturing firms that chose the country as a prospective destination for their FDI in the short run.
b. The figures to the right are the number of Japanese manufacturing firms that answered the question on strong points among those that chose the country as a prospective destination for their FDI.
c. The figures to the right are the number of Japanese manufacturing firms that answered the question on weak points among those that chose the country as a prospective destination for their FDI.
d. This JBIC 2009 F/Y questionnaire survey was conducted in July 2009 for Japanese manufacturing firms with three or more foreign affiliates including at least one manufacturing foreign affiliate, in which 625 firms out of 1004 returned effective answers.
e. Multiple listings of destination countries are allowed.
Source: JBIC (2009).

The reasons for their choices show that “market potential” and “inexpensive labor” are important conditions that attract incoming FDI in most of the East Asian countries. More interestingly, factors related to vertical production chains or intra-regional trade such as “to supply intermediate goods for assemblers”, “to export to the third countries”, “to export to Japan”, and “agglomeration/industrial clustering” are also listed by many firms for most of the countries.[7] These imply that many Japanese manufacturing firms involve vertical production activities and form industrial clusters in East Asia, contributing to the formation of the international production/distribution networks.

Table 6 also presents what Japanese manufacturing firms view as weak points in each prospective destination for FDI. Many firms cite issues such as insufficient human capital for engineering/managerial positions, rising labor costs in host country, harsh competition, non-transparency in the legal system and in the implementation of taxation system, underdevelopment of legal system, restrictions/regulations for foreign capital, insufficient infrastructure, instability of security and society, insufficient information relating to the host country, and other such conditions as weak points of destination countries. The survey confirms that the development of human capital and physical infrastructure, transparency in legal systems and their implementation, particularly of tax-related regulations, and improvement of labor-related issues are key for hosting FDI. This is consistent with the results from another survey on Japanese firms shown in Table A.2 in the Appendix, which clearly presents the importance of further investment

[7] For instance, “to supply intermediate goods for assemblers” is selected by the 20 percent of the firms that list China as a prospective destination for their FDI, 19 percent for India, 15 percent for Vietnam, 21 percent for Thailand, 32 percent for Indonesia, and 27 percent for Malaysia.

facilitation to activate the investment of Japanese firms.

3. Japanese SMEs in International Production/Distribution Networks in East Asia

This section investigates patterns of investment in East Asia by SMEs and globalizing patterns of Japanese firms including SMEs, with a particular emphasis on firms investing in East Asia and international production/distribution networks.[8] The analysis here is based on the firm-level statistics, which is conducted by the Ministry of Economy, Trade, and Industry (METI), Government of Japan: *The Basic Survey of Business Structure and Activity*. This database provides detailed information on (parent) firms located in Japan as well as the number, industry, and regional location of their foreign affiliates with not less than 20 percent Japanese ownership.[9] The samples in the survey covers firms with more than 50 workers, capital of more than 30 million yen, and establishments in mining, manufacturing, wholesale/retail trade, or restaurants.

Table 7 presents the number of SMEs with affiliates in East Asia/North America/Europe and the number of affiliates in East Asia/North America/Europe by the industry of parent firms and by the industry of affiliates.[10] In 2004, 4,590 out of 28,340 firms located in Japan (in the data set) have affiliates abroad, and 3,847 firms among these

[8] This section is based on Ando and Kimura (2010).
[9] Note that the location of foreign affiliates is not identified on the country basis; the questionnaires from *the 1997F/Y Basic Survey* include only East Asia, North America, and Europe as regional categories.
[10] SMEs are here defined as firms with regular workers of less than 300 in this section.

have affiliates in East Asia. When we focus only on SMEs, 1,948 out of 2,364 SMEs that have affiliates abroad have affiliates in East Asia. That is, over 80 percent of Japanese firms going abroad, regardless of whether they are large firms or SMEs, have at least one affiliate in East Asia.

Table 7. Sectoral Patterns of Japanese Parent SMEs and Their Affiliates in East Asia for 2004

Industry of parent firm	Number of parent SMEs	(%)	Number of affiliates by the industry of parent firm	(%)	Share by the industry of affiliate: Manufacturing	(machinery)	Non-manufacturing	(wholesales)
			(a) East Asia					
Manufacuturing	1,280	66%	1,962	62%	84%	(39%)	16%	(12%)
-Machinery	534	27%	916	29%	82%	(76%)	18%	(14%)
Non-manufacturing	668	34%	1,202	38%	35%	(9%)	65%	(55%)
-Wholesales	528	27%	1,094	35%	36%	(9%)	64%	(60%)
Total	1,948	100%	3,164	100%	65%	(28%)	35%	(28%)
			(b) North America					
Manufacuturing	367	60%	386	61%	55%	(29%)	45%	(33%)
-Machinery	195	32%	222	35%	50%	(47%)	50%	(40%)
Non-manufacturing	249	40%	246	39%	11%	(6%)	89%	(66%)
-Wholesales	176	29%	197	31%	13%	(7%)	87%	(78%)
Total	616	100%	632	100%	38%	(20%)	62%	(46%)
			(c) Europe					
Manufacuturing	128	56%	158	56%	48%	(17%)	52%	(43%)
-Machinery	64	28%	88	31%	34%	(31%)	66%	(56%)
Non-manufacturing	101	44%	125	44%	18%	(14%)	82%	(63%)
-Wholesales	81	35%	114	40%	20%	(16%)	80%	(68%)
Total	229	100%	283	100%	35%	(16%)	65%	(52%)

Data source: Ando and Kimura (2010).
Note: The figures for "share" for manufacuring, machinery, non-manufacturing, and wholesales express the shares of manufacturing affiliates, machinery affiliates, non-manufacturing affiliates, and wholesales affiliates in total number of affiliates of SMEs in each sectoral category.

Japanese manufacturing parent firms, particularly machinery parent firms, are active investors in East Asia; close to 70 percent of the Japanese SMEs with affiliates in East Asia are in the manufacturing sector and over 40 percent of them are in machinery industries. Moreover, Japanese manufacturing affiliates, regardless of the industries of their parent SMEs, account for 65 percent of the total Japanese affiliates in the region, while it is 38 percent for North America and 35 percent for Europe. Interestingly, the proportion of manufacturing affiliates in East Asia with parent SMEs (65 percent) is higher than that of manufacturing affiliates in East Asia with all-sized parent firms (61%). This statistic indicates that Japanese SMEs are more likely to be deeply involved in manufacturing activities in East Asia.

A parent firm often conducts various types of operations at the same time and establishes foreign affiliates in order to conduct a subset of those activities. Japanese manufacturing parent SMEs have 84 percent of their total affiliates in East Asia in the manufacturing sector, which is higher than the corresponding portion for all-sized manufacturing parent firms (73 percent). Such investment patterns by SMEs reflect a typical strategy for firms involved in manufacturing activities which are aimed at supplying intermediate goods for other firms and/or for their own affiliates and forming a critical mass of industrial clusters in the manufacturing sector. Japanese manufacturing parent SMEs also have non-manufacturing affiliates in East Asia (16 percent of total affiliates of manufacturing firms), particularly in the wholesales sector (12 percent) to help establish distribution networks by internalizing wholesale trade activities.

In contrast to the case of East Asia, the share of manufacturing affiliates of

manufacturing parent SMEs is low, and the share of their non-manufacturing affiliates is as high as 45 percent for the case of North America and 52 percent for the case of Europe. It suggests that manufacturing investment in North America or Europe by Japanese firms, including SMEs, aims at selling their products or producing goods to be sold there, rather than being involved in dense vertical production chains as is the case in East Asia.

Table 8 presents globalizing patterns of Japanese manufacturing firms in the two-period balanced panel data for 1998-2004, where an increase in the number of foreign affiliates or affiliates in a specific region is regarded as the indication of globalizing activities. During the six years, 15 percent of manufacturing firms (nine percent of manufacturing SMEs) in the sample enlarge their activities aboard. Very close to these proportions, 14 percent of manufacturing firms (eight percent of manufacturing SMEs) in the sample expand their operations in East Asia, suggesting that most of the Japanese globalizing manufacturing firms including SMEs in the sample period enlarged their activities in East Asia. In addition, many firms that established their affiliates for the first time in East Asia during the sample period are SMEs; the share of SMEs in terms of the total number is 62 percent. Their active FDI in recent years also helped in the development of vertical production chains in the region.

Table 8. Globalizing Patterns of Japanese Manufacturing Firms: Share by The Type of Firms

The type of firms	World	East Asia	World	East Asia
	All sized firms		SMEs	
No entry in	74%	78%	84%	87%
Expansion in (i+ii)	15%	14%	9%	8%
- (i) Expansion in	8%	7%	3%	2%
- (ii) Expansion in (with 1st FDI in the region)	7%	7%	6%	6%
Steady in	7%	6%	5%	4%
Shrinkage in	3%	1%	1%	0%
Shrinkage in (withdrawal from the region)	2%	2%	2%	1%
Total	100%	100%	100%	100%

Source: Ando and Kimura (2010).
Note: world includes East Asia.

How Japanese manufacturing firms reorganize domestic operations while they globalize their activities? In the period 1998-2004, 63 percent of manufacturing firms in the balanced panel dataset reduce domestic employment, and aggregate employment in the domestic market drops too (Table 9). The shrinkage of employment has a gradual but steady trend in the manufacturing sector. Even in the manufacturing sector, however, the share of firms reducing domestic employment is relatively low (61 percent) and the average growth rate of domestic employment at the firms level is relatively high (0.0 percent) for firms expanding operations in East Asia (see figures for "Expansion in East Asia (i+ii)" in Table 9), particularly those starting operations in East Asia (by establishing their first affiliate in the region during the sample period) (55 percent and 0.057 percent, respectively), compared with those in other categories. In addition to this, firms establishing their first affiliates in East Asia during the sample period display an increase

in the number of domestic establishments and domestic affiliates as well, rather than diminishing domestic operations.

Table 9. Changes in Domestic Operations of Japanese Manufacturing Firms from 1998 to 2004 by The Type of Firms

	Domestic employment			Domestic establishments		Domestic affiliates	
The type of firms	Share of firms with reduction	Average growth rates at the firm level	Aggregate change	Share of firms with reduction	Aggregate change	Share of firms with reduction	Aggregate change
Manufacturing firms							
No entry in East Asia	63%	-0.021	-111,204	26%	1,860	15%	-571
Expansion in East Asia (i+ii)	61%	0.000	-181,593	40%	-627	31%	437
- (i) Expansion in East Asia	66%	-0.057	-171,659	50%	-775	41%	-143
- (ii) Expansion in East Asia (with 1st FDI in the region)	55%	0.057	-9,934	31%	148	22%	580
Steady in East Asia	69%	-0.076	-46,325	37%	119	34%	-442
Shrinkage in East Asia	74%	-0.085	-64,814	51%	-330	56%	-974
Shrinkage in East Asia (withdrawal from the region)	75%	-0.163	-28,045	41%	-97	47%	-343
Total	63%	-0.025	-431,981	29%	925	20%	-1,893
Manufacturing SMEs							
No entry in East Asia	61%	-0.007	-23,291	23%	527	14%	-394
Expansion in East Asia (i+ii)	51%	0.087	6,906	26%	129	20%	65
- (i) Expansion in East Asia	56%	0.031	696	34%	-26	23%	-14
- (ii) Expansion in East Asia (with 1st FDI in the region)	49%	0.108	6,210	23%	155	18%	79
Steady in East Asia	62%	-0.037	-2,588	29%	-45	24%	-53
Shrinkage in East Asia	67%	0.070	199	33%	8	30%	-6
Shrinkage in East Asia (withdrawal from the region)	69%	-0.103	-1,813	35%	-17	34%	-39
Total	60%	-0.002	-20,587	24%	602	15%	-427

Source: Ando and Kimura (2010).

Notes: The two-period balanced panel data is used. Industry classification and firm size are based on data for 1998.

Such patterns emerge even more clearly for manufacturing SMEs. The share of firms reducing domestic employment is much lower for manufacturing SMEs expanding operations in East Asia than for those not expanding activities in East Asia; the ratios are 51 percent for SMEs expanding operations in East Asia (56 percent for those expanding further and 49 percent for those with the first FDI in the region) while it is 61 percent for

those with no entry, 67 percent for those shrinking, 69 percent for those with exit, and 62 percent for those remaining. Furthermore, manufacturing SMEs expanding operations in East Asia have much higher average growth rates of domestic employment and indeed contribute to net domestic job creation at the aggregate level.

Table 10 presents the results of logit/OLS estimation analyses for manufacturing firms and machinery firms. It demonstrates that larger firms tend to reduce domestic employment. On the other hand, given the size of firm and other controls, globalizing manufacturing firms are unlikely to reduce their domestic employment and tend rather to increase the number, compared with other manufacturing firms (see coefficients for "expansion in East Asia"). Such a tendency is salient for machinery firms who are one of the active players in international production/distribution networks, mainly in the machinery sectors in East Asia. Furthermore, globalizing manufacturing firms, particularly globalizing machinery firms, in East Asia intensify export/import activities within East Asia while sometimes restructuring domestic activities in terms of the number of domestic establishment and domestic affiliates, compared with other firms. All of the above-mentioned features obtained from descriptive and quantitative analysis indicate that intensified globalizing activities of Japanese manufacturing firms through FDI in East Asia seem to be complements of domestic operations, rather than substitutes, and contribute to the further development of production/distribution networks in the region (see Figure 5 for an illustrates an example of complementary operations).[11]

[11] When a firm realizes cost reduction by fragmentation with FDI in lower income countries, it may be able to sell more products at cheaper prices than before. Larger sales requires an increase in the production of both final goods and intermediate inputs including specialized parts and components

Table 10. Production Networking in East Asian and Domestic Operations in 1998-2004

	Dependent variable					
	(1)	(2)	(3)	(4)	(5)	(6)
	d. .employment	d. employment	d. establishment	d. affiliates	exports to E.Asia	imports from E.Asia
Independent variables	[logit]	[OLS]	[logit]	[logit]	[OLS]	[OLS]
a) manufacturing firms						
Constant	1.351 ***	0.315 ***	3.369 ***	4.709 ***	0.003	0.017 **
	(0.196)	(0.035)	(0.198)	(0.228)	(0.005)	(0.008)
Expansion in East Asia	0.415 ***	0.084 ***	-0.088	-0.090	0.028 ***	0.032 ***
(incl. new entry)	(0.067)	(0.012)	(0.069)	(0.075)	(0.002)	(0.003)
Firm size	-0.421 ***	-0.069 ***	-0.497 ***	-0.543 ***	0.000	-0.002 *
	(0.026)	(0.004)	(0.026)	(0.028)	(0.001)	(0.001)
Capital-labor ratio	0.085 ***	0.015 ***	-0.053 **	-0.213 ***	-0.0001	0.000
	(0.023)	(0.004)	(0.024)	(0.030)	(0.001)	(0.001)
Foreign sales ratio	0.246	-0.063	-0.503 **	-0.635 **	0.027 ***	0.041 ***
	(0.242)	(0.044)	(0.245)	(0.264)	(0.006)	(0.011)
In-house R&D ratio	3.341 ***	0.546 ***	-0.867	-0.863	0.095 ***	0.011
	(1.093)	(0.189)	(1.149)	(1.297)	(0.028)	(0.049)
Advertisement ratio	-1.101	0.352	-4.147 ***	-4.690 ***	-0.040	-0.049
	(1.430)	(0.252)	(1.379)	(1.471)	(0.035)	(0.059)
Foreign capital ratio	0.00041 *	0.00007 *	0.00011	0.00153 ***	0.00001	0.00356
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.062)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-6495		-5832	-4700		
Adj R2		0.034			0.056	0.027
Number of observations	10218	10218	10218	10218	10218	10036
b) machinery firms						
Constant	1.744 ***	0.327 ***	3.325 ***	4.994 ***	0.004	0.020 *
	(0.234)	(0.041)	(0.244)	(0.287)	(0.008)	(0.012)
Expansion in East Asia	0.409 ***	0.069 ***	-0.094	-0.007	0.033 ***	0.030 ***
(incl. new entry)	(0.094)	(0.017)	(0.097)	(0.110)	(0.003)	(0.005)
Firm size	-0.419 ***	-0.065 ***	-0.372 ***	-0.551 ***	0.002	0.001
	(0.040)	(0.007)	(0.039)	(0.045)	(0.001)	(0.002)
Capital-labor ratio	0.091 **	0.013 *	-0.052	-0.136 ***	0.0009	0.002
	(0.038)	(0.007)	(0.042)	(0.052)	(0.001)	(0.002)
Foreign sales ratio	0.183	-0.087 *	-0.595 **	-0.739 **	0.030 ***	0.057 ***
	(0.288)	(0.053)	(0.287)	(0.313)	(0.010)	(0.015)
In-house R&D ratio	2.583 *	0.632 **	-2.334	-1.571	0.086 *	-0.102
	(1.418)	(0.264)	(1.451)	(1.684)	(0.050)	(0.076)
Advertisement ratio	-0.945	-0.432	-14.694 **	-19.346 ***	-0.091	0.250
	(6.108)	(1.135)	(6.231)	(6.784)	(0.214)	(0.327)
Foreign capital ratio	0.00048	0.00007	0.00019	0.00129 **	0.00001	0.00002
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-2487		-2228	-1745		
Adj R2		0.035			0.048	0.024
Number of observations	3903	3903	3903	3903	3903	3846

Data source: Ando and Kimura (2010).

Notes: figures in parenthesis are standard deviation. *** indicates that the results are statistically significant at the 1 percent level, ** at the 5 percent level, and * at the 10 percent level. Regressions are as follows:

(1) dependent variable: 1 if a firm does not reduce the number of domestic employments and 0 otherwise

(2) dependent variable: growth rate of the number of domestic employment

(3) dependent variable: 1 if a firm does not reduce the number of domestic establishments and 0 otherwise

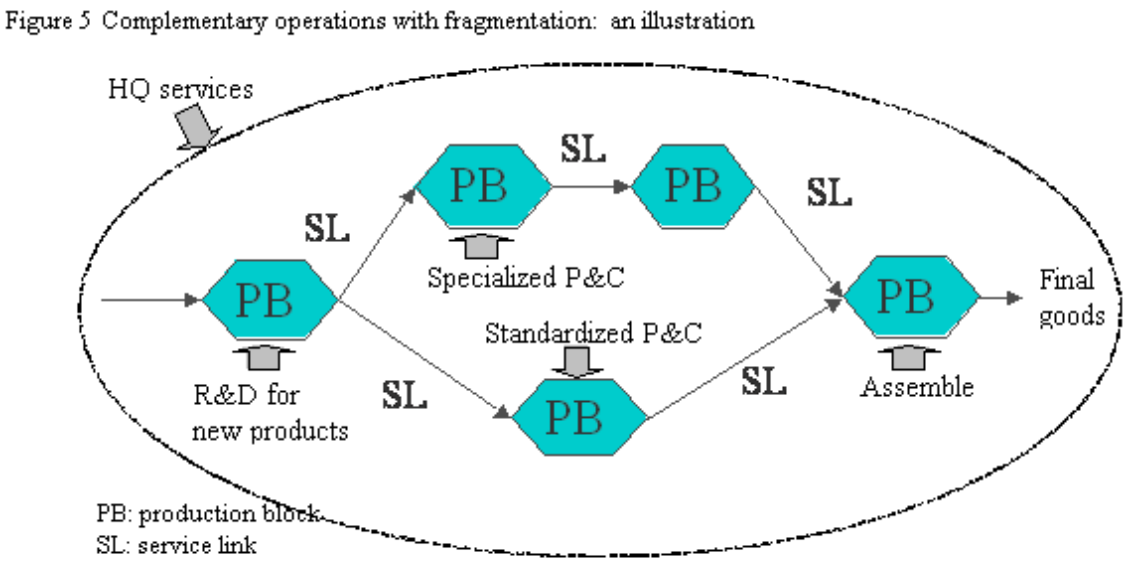
(4) dependent variable: 1 if a firm does not reduce the number of domestic affiliates and 0 otherwise

(5) dependent variable: a change in the ratio of expoprts to East Asia in total sales

(6) dependent variable: a change in the ratio of imports from East Asia in total purchases

(P&C), as well as larger research and development (R&D) activities for new products and more extensive headquarter (HQ) services. If the firm shifts home activities to those that are complementary to activities abroad in the production networks, it would rather expand domestic employment even if it might reduce employment on assembly lines.

Figure 5. Complementary Operations with Fragmentation: an Illustration



Source: Ando and Kimura (2010).

At the end of this section, let us discuss some of the features of transactions by Japanese machinery firms in East Asia, based on another METI database. Table 11 presents shares of (a) by-destination sales in total sales and those of (b) by-origin purchases in total purchases by Japanese machinery affiliates in East Asia (total), NIEs4, ASEAN4, and China, with a distinction between intra-firm transactions and arm's length transactions at each destination/origin. Two interesting insights emerge. Firstly, their transactions with other East Asian countries (i.e. East Asian countries other than Japan and the host country) have increased relatively on both the sales and purchases sides, which implies the development of production networks in the 1990s. More precisely, most of the sales and purchases by Japanese affiliates in East Asia are transactions among Japan, local market, and other East Asian countries. In addition, the shares of transactions with other East Asian countries tend to become larger over time; in the case of the machinery industry, such transactions were 20 percent of sales and purchases in 2001, up from nine percent of sales and eight percent of purchases in 1992. Combined with an

explosive increase in the value of transactions, these suggest the presence and development of strong intra-regional production networks involving not only the local market but also other East Asian countries through back-and-forth transactions of intermediate goods.

Table 11. Intra-firm and Arm's Length Transactions by Japanese Machinery Affairs in East Asia

		East Asia		NIES4		ASEAN4		China	
		1992	2001	1992	2001	1992	2001	1992	2001
Number of affiliates		715	2,121	343	644	286	791	54	552
(a) Sales									
Values (billion JPY)		5,202	14,826	2,770	5,213	2,125	6,399	114	2,427
Share in total by destination (%)									
(i)	**Japan**	**17**	**29**	**19**	**31**	**15**	**30**	**40**	**30**
	Intra-firm	15	23	18	20	13	27	40	25
	Arm's length	2	6	1	10	2	4	0	5
(ii)	**Local**	**66**	**40**	**64**	**44**	**66**	**31**	**46**	**45**
	Intra-firm	5	5	4	5	7	7	0	4
	Arm's length	61	35	60	40	59	23	46	41
(iii)	**Other East Asia**	**9**	**20**	**10**	**14**	**10**	**25**	**11**	**18**
	Intra-firm	5	10	3	7	7	12	11	15
	Arm's length	4	10	7	8	2	13	0	4
(i+ii+iii)	**East Asia (total)**	**92**	**89**	**93**	**89**	**91**	**86**	**97**	**93**
	Intra-firm	25	39	25	32	27	46	51	44
	Arm's length	67	50	68	58	64	40	46	49
(b) Purchases									
Values (billion JPY)		2,466	10,417	1,140	3,733	1,204	4,560	54	1,626
Share in total by origin (%)									
(i)	**Japan**	**46**	**38**	**47**	**40**	**44**	**36**	**76**	**38**
	Intra-firm	39	27	39	32	39	23	71	24
	Arm's length	7	11	9	8	5	13	5	14
(ii)	**Local**	**43**	**40**	**42**	**38**	**45**	**41**	**21**	**43**
	Intra-firm	1	4	1	3	1	5	5	3
	Arm's length	43	36	41	34	44	35	16	40
(iii)	**Other East Asia**	**8**	**20**	**10**	**21**	**8**	**22**	**2**	**18**
	Intra-firm	5	9	9	11	2	8	2	12
	Arm's length	3	11	1	10	6	14	0	6
(i+ii+iii)	**East Asia (total)**	**98**	**99**	**99**	**99**	**97**	**98**	**98**	**99**
	Intra-firm	45	40	48	46	42	36	78	39
	Arm's length	53	59	51	53	56	62	20	60

Data source: author's preparation, based on Ando and Kimura (2006).
Note: Figures for 'Share in total by destination/origin' express sales to/purchases from each destination/origin as a percentage of total sales/purchases by Japanese affiliates in corresponding regions/countries.

Secondly, arm's length transactions have been more actively utilized than before,

reflecting development of agglomeration and supporting industry. As the table shows, arm's length transactions have been performed more often than before, particularly when selling goods to/purchasing goods from Japan and other East Asian countries. In addition, purchases from Japan tend to be shifted to intra-firm and arm's length purchases from other East Asian countries. Purchases from Japan by Japanese machinery affiliates in China, above all, seem to be replaced by arm's length purchases in the local market as well as intra-firm and arm's length purchases from other East Asian countries. While intra-firm purchases from Japan as a percentage of total purchases by Japanese machinery affiliates in China decreased from 71 percent in 1992 to 24 percent in 2001, arm's length purchases in the local market increased from 16 percent in 1992 to 40 percent in 2001, eventually reaching the level of ASEAN4/NIES4 in terms of share of arm's length purchases in the local market and that of local purchases in total. Considering the fact that operations by Japanese firms in China seriously started in the latter half of the 1990s, such a rapid shift suggests the formation of local vertical links in agglomeration in China, reflecting the lowering of service link costs as well as more developed industrial clusters involving MNEs and indigenous firms becoming more competitive than before. Although it is still often too much emphasized that the activities of Japanese MNEs depends heavily on *Keiretsu* or *Shitauke* relationships, firms in East Asia, including Japanese firms, have been effectively utilizing both intra-firm and arm's length transactions.

4. Economic and Policy Environment for SMEs[12]

Up to the 1980s, an important component of the Japanese economic system was the subcontracting system (*shitauke* in Japanese) or long-term relationships between large downstream assemblers and upstream SMEs. However, the inter-firm relationship of Japanese firms has drastically changed since Japanese firms started to actively conduct FDI in the mid-1980s. It is often observed that both large assemblers and SMEs partake in FDI together to form a certain size of agglomeration in Southeast Asia or China. Even in such cases, upstream-downstream relationships become more competitive, non-exclusive ones. With strict cost consideration, many Japanese firms are now open to extend their production chains to firms with other nationalities, as long as the technological level meets demand. Thus, going abroad provided good opportunities to nullify the old inefficient subcontracting system and to construct new inter-firm relationships with improved efficiency. This was a type of mechanism for accelerating efficient turnovers of SMEs.

At the same time, outward FDI by larger-sized assemblers activated a self-selection mechanism for smaller-sized suppliers of parts and components, initially connected with assemblers in the long-term subcontracting system, forcing them to decide whether or not they would go abroad with large assemblers. As a result, competitive SMEs went abroad, while weak ones could not. Through such a mechanism, FDI by competitive Japanese SMEs became an essential part of East Asia's international production/distribution

[12] See also Ando and Kimura (2005) and Kimura and Ando (2006).

networks.

Let us take a success story of overseas activities by competitive SMEs; a success in developing its market abroad through local productions of high value added products (SME Agency, 2009a). Kyoshin Kogyo Co., Ltd is a small and medium sized parts supplier; its main products are pressed and resin molded goods, such as tab and taping terminals that are used as input terminals mounted on printed circuit boards for home appliances and car electronics. Besides having three factories in Japan, it set up a plant in the Tan Thuan export processing zone (EPZ) in Vietnam utilizing the advantage of EPZ in 1995, and established a sales office in Singapore. The trigger for its investment in Vietnam was the overseas presence of its business partners, numbering in as many as 700 Japanese companies. Although firms in general would tend to produce labor-intensive products thereby making use of the inexpensive labor force in Vietnam, Kyoshin Kogyo attempted to specialize in parts requiring high-level technology, to which other firms face difficulties in catching up. Since it supplies parts requiring high-level technology, which are thought to be impossible to purchase within Vietnam, it could expand the market. As a result, 40 percent of its products manufactured at the Vietnam plant are sold in the local market, 30 percent are exported to Japan, and the remaining 30 percent are exported to other countries such as Thailand, Malaysia, Singapore, China, and Hong Kong.

The Japanese Government has consistently supported, both explicitly and implicitly, outward FDI by Japanese firms. In particular, FDI facilitation measures for SMEs have been important because they had not necessarily been experienced players in the arena of global operations. Government's support for outward FDI consisted of three policy lines.

First, the government provided mildly concessionary financing arrangements for outward FDI through governmental financial institutions such as the Export-Import Bank (currently Japan Bank for International Cooperation (JBIC)) and Japan Finance Corporation for Small Business. The concessionarity itself, which conformed to OECD guidelines and other international norms, was probably not very important; rather, such financing was used to encourage private financial institutions to co-finance the main portion of investment through reducing information-gathering cost. Second, Japan External Trade Organization (JETRO) and industrial organizations played an important role in helping investing firms to gather necessary local information and facilitate investment. Although not in the governmental sector, general trading companies (GTCs) also worked as important channels to facilitate investment; they sometimes even constructed and managed industrial estates in East Asian countries. Third, though not necessarily planned and implemented on purpose, the Japanese ODA program and other economic/technical cooperation were active in fostering supporting industries in host countries, indirectly helping Japanese FDI.

5. Conclusion

This paper has attempted to investigate the mechanisms and features of the development of international production/distribution networks in East Asia, focusing on SMEs, from the viewpoint of one of the major players in the regional production

networks. Our analysis demonstrates that active FDI in vertical supply chains by SMEs, particularly in recent years, contributes to the formation of agglomeration and industrial clusters and further development of the networks in East Asia. Our analysis also demonstrates that competitive SMEs are likely to expand their operations both domestically and internationally, mainly in East Asia, by effectively being involved in the production/distribution networks in the region.

To further develop international production networks and to deeply involve SMEs in the networks, various facilitation measures are important for both hosting and investing countries. On the host country side, besides reduction of tariffs on parts and final products, factors such as strengthening protection of IPRs, ensuring security and safety, and speedy procedures for trade and investment seem to be effective measures to help promote foreign market expansion and FDI for SMEs. Moreover, regardless of whether large firms or SMEs, the development of human capital and physical infrastructure, transparency in legal systems and their implementation, particularly of tax-related regulations, and improvement of labor-related issues are keys for hosting FDI. On the investing side, providing various financing arrangements would help SMEs seeking investment to obtain financial resources. Furthermore, an assistance of investing firms, particularly investing SMEs, in gathering necessary local information is crucial to facilitate investment. All of these efforts from various different angles for both hosting and investing countries should encourage SMEs to be an essential part of East Asia's international production/distribution networks, and thereby assist in strengthening their competitiveness by effectively being involved in these networks.

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Table A.1 Outline of the Small and Medium Enterprise Basic Law

	The Previous Small and Medium Enterprise Basic Law			The New Small and Medium Enterprise Basic Law		
[Policy Concept]	**Rectify the Gap between LE & SMEs in terms of productivity**			**Developing and growing a wide range of independent SMEs for greater economic vitality** (Expectation of SMEs) - Creation of New Business - Promotion of Market Competition - Increase of Attractive Job Opportunities - Vitalization of Regional Economy		
[Policy System]	**Upgrading in Structure of SMEs (Improving Productivity)** - Modernization of Facilities - Improvement of Technology - Rationalization of Business Management - Optimization of Corporate Scale - Arrangement of Joint Operation for Business - Commercial and Services Sectors - Change of Business - Labor Related Policies			**Supporting Self-help Efforts for Business Innovation and Start-ups (Support for Ambitious Enterprises)** - Promoting Business Innovation (Support for Technology, Equipment, Intangible Management Resources, etc.) - Promoting Start-ups (Information Services, Training, Programs, Facilitating Fund Supply, etc.) - Promotion of Venture (R&D, Supportive Human Resources, Fund Raising through Stocks, Bonds, etc.)		
	Rectification of Disadvantages (Improving Trading Conditions) - Prevention of Excessive Competition - Rationalization of Transaction with Subcontracting - Securing Opportunities of Business Activities - Ensuring Opportunities for Procurement of Receiving Orders from Government etc. - Export Promotion - Coordination of Relation with Import Goods			**Strengthening of Management Base (Enhancement of Management Resources)** - Ensuring Managerial Resources Equipment Technology (SBIR, Collaboration among Ind., Univ. and Gov., etc.) Human Resources, Information Establishing Core Support Center, etc. - Facilitating Collaboration and Joint Operation - Vitalization of Industrial and Commercial Agglomeration - Labor Related Policies - Rationalization of Transaction - Ensuring Opportunities for Procurement of Receiving Orders from Government etc.		
				Facilitating Apt Responses by Enterprise for Abrupt Environmental Change (Providing Necessary Safety Net) Stabilizing Business Management and Facilitating Change of Business, etc. Provision of Mutual Relief System, and Legal System of Bankruptcy		
	Finance and Taxation (Common Policy Tools) Facilitating Appropriate Fund Lending Enhancement of Business Capital, and Optimizing Tax Burden			**Finance and Taxation (Common Measures)** Facilitating Fund Supply Enhancement of its Capital in Enterprise, and Optimizing Tax Burden => Establishing Various Ways to Supply Fund including Direct Financing		
	Consideration for Small-Scale enterprises			Consideration for Small-Scale enterprises		
[Definition]	Industries	Capital Size (million yen)	Number of regular workers	Industries	Capital size (million yen)	Number of regular workers
	Manufacturing and Others	100 or less	300 or less	Manufacturing and Others	300 or less	300 or less
	Wholesale	30 or less	100 or less	Wholesale	100 or less	100 or less
	Retail	10 or less	50 or less	Retail	50 or less	50 or less
	Services	10 or less	50 or less	Services	50 or less	100 or less

Source: the website of small and medium enterprise agency (http://www.chusho.meti.go.jp/sme_english/outline/02/01.html).

Table A.2 Investment climate in ASEAN10 economies in 2008: the number of incidents by category and country

	Brunei	Cambodia	Indonesia	Laos	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	Total	Share by category (%)
(a) The number of Japanese affiliates in each country	**1**	**10**	**659**	**6**	**759**	**10**	**419**	**991**	**1,577**	**332**	**4,764**	
(b) Issues to be solved for FDI liberalization and facilitation												
FDI liberalization	**0**	**0**	**14**	**0**	**11**	**7**	**9**	**1**	**15**	**9**	**66**	**21%**
i) Restrictions on foreign entry	0	0	10	0	5	2	6	0	8	4	35	11%
ii) Performance requirements	0	0	2	0	3	0	0	0	2	2	9	3%
iii) Restrictions on overseas remittances and controls on foreign currency transactions	0	0	0	0	1	5	2	0	3	2	13	4%
iv) Restrictions on the movement of people and employment requirements	0	0	2	0	2	0	1	1	2	1	9	3%
FDI facilitation	**0**	**16**	**28**	**4**	**33**	**21**	**48**	**6**	**45**	**49**	**250**	**79%**
v) Lack of transparency in policies and regulations concerning investment (institutional problems)	0	5	5	1	8	8	11	0	14	12	64	20%
vi) Complicated and/or delayed procedures with respect to investment-related regulations (implementation problems)	0	5	11	1	10	7	16	0	20	18	88	28%
vii) Insufficient protection of intellectual property rights	0	0	2	0	3	0	3	0	2	1	11	3%
viii) Labor regulations and related practices excessively favorable to workers	0	0	2	0	5	0	10	3	3	4	27	9%
ix) Underdeveloped infrastructure, shortages of human resources, and insufficient investment incentives	0	6	6	2	7	5	8	3	5	11	53	17%
x) Restricted competition and price controls	0	0	2	0	0	1	0	0	1	3	7	2%
Total	**0**	**16**	**42**	**4**	**44**	**28**	**57**	**7**	**60**	**58**	**316**	**100%**

Source: Urata and Ando (2009).

Note: see the original source for the details.