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Outward FDI from ASEAN and Intraregional FDI in ASEAN: Trends and Drivers

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1. INTRODUCTION

Developing-country transnational corporations (TNCs) are increasing its importance in the global economy. Foreign direct investment (FDI) from developing economies becomes remarkable. Particularly those from Asia, are emerging sources of FDI; in 2004 Asia and Oceania contributed more than four-fifths of outward FDI from developing countries (UNCTAD 2005, pp71). This phenomenon reflects that developing country Asian firms have succeeded in global market places, and have elevated its status from domestic market players to become global player.

ASEAN is not exception of this phenomenon. In particular, Singapore-based enterprises are expanding its business opportunities to the global market. Malaysia follows this trend, increasing its presence remarkably not only in ASEAN but also in the rest of the world. These country TNCs are expanding their wings beyond country, first to neighboring countries of ASEAN and then, to the rest of the world. Advancing abroad, just like Japanese and South Korea .firms did in the past, many local enterprises become global players,. We can say that flying geese pattern in which latecomers catch up with forerunners in economic activity has been realized to some extent at firm level.

Outward FDI, including from ASEAN, will continue with regionalization and localization. Due to reduction of border barriers, regionalization which economies are integrated into one has progressed in East Asia, which has lowered its importance of nation relatively for business sector, and raised region instead. In addition, we have to emphasize that, localization in which city-specific advantage attract a specific industry, is striking also (Fujita, Krugman, and Venables 1999). Specific industries have

concentrate on a few cities which have city-specific advantages. For instance, Silicon Valley has been attracting knowledge base FDI from the world, Bangkok and Guangdong attracting automobile related FDI, Bangkok and Shenzhen attracting disc drive, Penang' electronics, Phnom Penh' apparel, Bangalore' software design, and so on.

The above two forces of regionalization and localization have forced firms, either developed country ones or developing country one, to exploit business opportunities and explore location-specific advantages such as skilled and unskilled human resources, agglomeration of suppliers, infrastructure, government investment facilitation measures including tax holiday that are different country by country and /or city by city.

Globalization, more precisely, regionalization and localization, however, raises a question. That is, whether developing country can develop together with developed country? More straightly speaking, whether developing country enterprise can go hand in hand with developed country enterprise in regionalization and localization or not? In this regard, outward FDI from developing country is a hot issue to be studied. This paper aims to study the following issues, focusing on ASEAN. What features outward FDI from ASEAN have? What are driving forces of ASEAN country TNCs? What geographical patterns are observed? What industries did take outward FDI from ASEAN and within ASEAN? The following section will discuss why developing countries TNCs are increasing remarkably in the context of location theory. "Efficiency-seeking" and "market-seeking" forces of FDI are discussed with incorporation of concept of "home market effect" and transportation costs. Section 3 presents status quo of outward FDI from ASEAN. Section 4 will see intra-regional FDI in ASEAN, and find that intra-industry FDI is growing in ASEAN, and FDI to the least developed country (LDC) is increasing. The last section argues policy implication of this study.

2. WHAT DOES DETERMINE OUTWARD FDI?

2.1 Transportation Costs

What does determine outward FDI? FDI is an issue related to location of industry by firm. Geography and Trade (Krugman, 1991a) gives us insight into trade and investment activities of firms. He argues that interaction of market, transportation costs, and fixed investment costs determines location of industry. This hypothesis is supported by a field survey by myself. I asked a question to Managing Director of Soode Johor, a Japanese affiliate, producing parts of hard disc drive, in Malaysia, that what response you would take to the growing hard disc drive production in Shinzen China. At that time, his major customer, Hitachi Global Data Storage was planning to start hard disc drive production in Shinzen or not, he would consider market/production size in China, transportation costs from Johor to Shenzhen, and difference in cost between a new fixed investment in Shinzen and an expansion of investment in Johor.

Krugman's hypothesis regarding location of industry is based on the gravity framework that economic size (market) and geographical distance (transportation costs) plays significant role for trade and investment. Transportation costs in a broad meaning, which includes costs and time for administrative procedure such as custom clearance, does matter for location of industry. Supposing that transportation costs are zero, firms can locate anywhere they wish, and explore location advantages of wage, development of suppliers, research & development capability, investment facilitation measures including corporate tax and import tariff exemptions. Nevertheless, specific industry tends to concentrate in a few cities due to localization forces. Software design is such an industry in which transportation costs are substantially zero, seeking cheap engineers in developing country city on one hand, and establishing high quality research bases in developed countries on the other hand.

On the contrary, if transportation costs are too high, industry will locate to near large market, because firms wish to lower transportation costs. The presence of transport costs gives rise to the "home market effect" for suppliers located near a large market (Fujita 2006). Suppliers locate near a large market can attain economies of scale, and export the goods. In Krugman's word, "country will tend to export those kinds of

products for which they have relatively large domestic market demand" (Krugman 1980). But, when export markets become enough large, suppliers would extend their production facilities to the markets, in order to reduce transportation costs. Otherwise, suppliers would lose it competitiveness in the global market. Put it different, trades are substituted by "market-seeking" FDI due to transportation costs, if conditions are satisfied.

Similarly, due to economies of scale, large scale producers accumulate knowledge and know-how of technology and market information, taking outward FDI for exploring market and export purpose to abroad.

Well then, what role do transportation costs play in conjunction with outward FDI, from developed country to developing country, and or from developing country to developing country? Krugman and Venables (1995) argues that when transportation costs fall enough until the advantage of low wages in the "periphery" (unindustrialized economy) offsets disadvantages in being remote from markets and suppliers of the "core" (industrialized economy), manufacturing in the developed country will move out from the "core" to the "periphery". This argument, which explains "efficiency-seeking" FDI, can be extended to outward FDI from developing country. When transportation costs fall enough until lower wage offset disadvantages of other conditions, manufacturing will move to cheaper labor developing country. Some manufacturing process will be completely moved there.

2.2 Driving Forces and Types of FDI

What are driver forces of outward FDI from developing country? Roughly saying, in general, there are three primary drivers of outward FDI:

- 1. *Driving force 1* : to take advantage of low wage rates (and, more generally, low factor prices) in host countries (efficiency-seeking FDI);
- 2. *Driving forces* 2 : to have better access to the markets of host countries and nearby countries (market-seeking FDI);
- Driving force 3 : to access resources including R&D resources (resource-seeking FDI).

"Efficiency-seeking" FDI can be regarded as one type of "resource-seeking" FDI

since it seeks abundant labor resources. Since "efficiency-seeking" FDI has special implication for location of industry from other "resource-seeking" FDI, the two are to be distinguished. In general, when developed country TNCs set up their overseas production plants in developing countries, driving force 1, namely, "efficiency seeking" is mainly at work in developing country.

When a developing country has a large market, the two driving forces of "efficiency-seeking" and "market-seeking" work together to encourage TNCs to locate production in that country (Fujita 2006). A typical example is China where markets are large and wage rates are low, attracting both "efficiency-seeking" and "market-seeking" FDIs, which has been main engine of China's economic growth.

This is a case of outward FDI from developed country to developing country. How about FDI from ASEAN? Driving forces of outward FDI from developing countries and/or ASEAN are the same with FDI from developed countries. In globalization, we had better not to distinguish between developed country TNCs and developing country TNCs, but between global players that target the world market and local players that target only domestic market.

ASEAN country TNCs are expanding business overseas "efficiency-seeking" FDI as developed country firms have done. Indeed a large number of Singapore TNCs went to Malaysia where wage rates are low, and businessmen can commute by car from Singapore. Singapore and Malaysia TNCs advanced to Thailand, Indonesia, and China. Correspondently, Thai TNCs advanced to Laos where wages are lower, and additionally, language and culture are similar. Commonly these FDI host countries provide cheaper labor than source countries. But, for "efficiency-seeking" purpose, they had overseas operation facilities in neighboring countries, they did not go to a small African country in which transportation and communication costs would be high due to geographical distance.

"Market-seeking" forces work very strong. In fact, targeting low quality markets, ASEAN TNCs went abroad to neighboring markets, large market such as China, the United States, and the new frontier, just as in the 1980s South Korea firms went to new frontier markets such as Middle East, Eastern Europe, Central Asia, Africa, and so on where developed country TNCs did not go.

Taking "resources-seeking" FDI, TNCs either developed ones or developing ones

have explored location-specific advantages in resources, which are different country by country, more precisely, city by city. Malaysia palm oil related firms went Indonesia where lands are available, and import palm and palm oil back to distribute to the world market. Singapore has offered strong financial service skills and excellent infrastructure, and targets leading-edge offshore functions such as remote robotics management, healthcare and genetic diagnostics (A.T. Kearney 2004) and has become one of the key hubs for regional headquarters (UNCTAD 2004, pp204). In fact, Malaysia, Thailand, and other ASEAN TNCs went to Singapore, and some time to Hong Hong, to set up functions of international trade and international financing.

Research & development center-seeking FDI becomes a new phenomenon. Developing-country firms are also setting up R&D activities abroad to access these foreign markets and centres of excellence (UNCTAD, 2005, pp189). Singapore plays as regional design centers, and Penang as training center of ASEAN countries where training costs are cheaper than Singapore. Some ASEAN country TNCs went to the United State, and India where knowledge human resource are available including.

2.3 "Market-seeking Supplier Following" FDI

Above all, "market-seeking" FDI in intermediate goods is one of characteristics of FDI in East Asia where manufacturing processes are split and located across border within the region, and in other words, the so called production fragmentation has developed. When developed country TNCs expand production seeking lower wage countries, host country ASEAN local suppliers follow customers, advancing to the lower wage countries. This type of FDI can be called as "market-seeking supplier following" FDI, which is a mixture of "efficiency-seeking" and "market-seeking" FDI developed in intermediate goods, which has formed international production networks at regional level and/or at global level.

Communication equipment is an industry that international production network has most developed. Figure 1 indicates international procurement of hard disc drive assembler, Hitachi Global Storage (HGS). HGS purchase various parts and components from overseas. Most of first tier suppliers are Japanese affiliates operating in East Asia. ASEAN suppliers followed the assembler and first tier suppliers. For instance, Engtek, a component manufacturer for the disc drive industry, based in Penang, established factories in Dongguan in 1996, the Philippines in 1997, and Thailand in 1998 to meet the demands of its largest customers, Fujitsu, which is aggressively increasing market share. Eventually, Engtek have elevated its status from a mid-size Malaysian company to become global player. (ENG Teknologi Holding, 2000). Due to low transportation costs, HGS purchase the same parts and components both from domestic suppliers and foreign suppliers.





3. PATTERN OF OUTWARD FDI FROM ASEAN

3.1 Outward FDI Pattern

What features does outward FDI from ASEAN have? Answering to this question, at first, outward FDI patterns are examined with comparison of inward FDI.

Figure 2 shows outward and inward FDI patterns of EU15, NAFTA, East Asia, Developing Economies, and ASEAN. The large marks indicate figures in 2004, and small marks in 2000 respectively. Interestingly, EU's outward FDI stock was larger than its inward FDI stock, and its outward FDI increased from 2000 to 2004 rapidly. The

Source: Compiled by author, based on the interview at Hitachi Global Storage Technology (Thailand), August 2005.

figure for 2000 was larger than one of NAFTA in 2004 although inward FDI of both regions were almost similar level. The large EU outward FDI were due to intra-regional FDI. Intra- regional FDI in the EU amounted to 66% of total EU FDI inflows in 2004, which was the same figure of intra-regional trade.

How can the high intra-regional FDI be explained? The gravity type location hypothesis, discussed already, tell us that the EU would be the largest trade and FDI area because it has the second largest market in the world, and transportation costs between the EU nations are low due to geographical proximity, reduction of trade and investment barriers, and the well developed highway networks.



Figure 2. FDI Inward and Outward Stock by Region (2004, US\$ billion)

Source: UNCTAD FDI Online (http://stats.unctad.org/FDI/TableViewer/tableView.aspx). Note: East Asia includes ASEAN10, China, Japan, Korea, Hong Kong, and Taiwan. Large marks indicate figures in 2000.

NAFTA has larger economic size than the EU. But there are only three countries, and therefore both intra regional trade and FDI flows of NAFTA are smaller compared to those of the EU. Looking at NAFTA, in 2000, its outward FDI was small than inward FDI. But, in 2004, its outward FDI becomes larger than its inward FDI.

These facts indicate outward FDI follows inward FDI as industrialization advances. This law seems to be applied to the ASEAN countries. For instance, Singapore is becoming large FDI source country, followed by Malaysia (Figure 3, and Figure 4). Outward FDI from Thailand and the Philippines are increasing also although their outward FDI are still very small (Figure 4).

Figure 3. Inward and Outward FDI Stocks of the ASEAN countries (2004, US\$ billion)



Source: UNCTAD FDI Online (http://stats.unctad.org/FDI/TableViewer/tableView.aspx).



Figure 4. Outward FDI Flows of the ASEAN Countries, US\$ million

Source: UNCTAD FDI Online (http://stats.unctad.org/FDI/TableViewer/tableView.aspx)

3.2 Geographical Distribution of Outward FDI from ASEAN

What geographical distribution patterns are observed for outward FDI from ASEAN? The geographical distribution pattern is subject to the gravity framework that market and geographical distance determine trade and investment. Figure 5 shows share of FDI stock abroad from Malaysia by geographical destination, and total trade values of the destination country which is a proxy of economic size. Malaysia took FDI to Singapore, 15.1% of total outward FDI of Malaysia, higher than figure to the United States, 14.1%. Share of Malaysia FDI to Indonesia and Thailand are larger than those figures to Taiwan and Canada where their trade sizes are larger than Indonesia and Thailand. Malaysia FDI directed to United States was larger than those of Taiwan and Canada.



Figure 5. Share of FDI Stock Abroad from Malaysia by Geographical Destination

Source: FDI data from UNCTAD, and trade data from IMF, Direction of Trade, CDROM 2005.

These evidences support that gravity forces, that is, geographical distance and market, are crucial determinant of outward FDI. In particular, geographical distance plays significant role in geographical distribution of outward FDI.

Thailand provides a good example that ASEAN TNCs went to neighboring countries. Outward FDI to ASEAN countries amounted to 35% of total outward FDI of Thailand in 2004. Among them, FDI to Singapore accounted for 14.3%, followed by the Philippines 7.1%, Vietnam 4.9%, Indonesia 3.5%, Cambodia 2.0%, and Myanmar 1.5%,

Laos 1.4%, and Malaysia 0.8%.

This is the same that Japanese FDI went to Taiwan first, and then to South Korea, and Hong Kong in the 1960s and the 1970s for "efficiency-seeking" and "market-seeking", because of geographical proximity and language. Many Koreans, Hong Konger, Taiwanese spoke Japanese at that time. It was the late 1970s that Japanese firms expanded production facilities to Singapore where American semiconductors operated there at that time and suppliers concentrated.

ASEAN TNCs expanded to neighboring countries where they have comparative advantage in finding market and in doing cheap labor operation, due to low transportation and communication costs for geographical proximity and similar language, culture and custom.



Figure 6 Share of FDI Stock Abroad from Thailand,

More importantly, Thai TNCs have extended its business to East Asian. Outward FDI from Thailand to Hong Kong and China accounted for 14% and 11% respectively. Thailand's outward FDI directed to East Asia (ASEAN, China, and Hong Kong) increased from 53% in 1995 to 60% in 2004 of its total outward FDI. This figure is almost same with Thailand's intra-regional trade. On the contrary, the share to United State decreased from 23% in 1995 to 13% in 2004. What about 60% of outward FDI went to East Asia means that unit of region, namely, East Asia, is increasing importance

for Thai TNCs.

3.3 Diversification of Geographical Distribution

Outward FDI flow from Malaysia shows a little bit different pattern from those from Thailand. The share of outward FDI from Malaysia to ASEAN decreased from 32.3% in 1995 to 23.2% in 2004 remarkably. Its share to East Asia also decreased from 58.8% in 1995 to 34.2% in 2004. On the other hand, the same figure to the United States increased from 9.1% to 14.1% in the same years. In addition, outward FDI from Malaysia to Africa expanded from 1.2% to 4.5%.



Malaysia experience implies that outward FDI fro developing country TNCs directed to its neighboring countries first, and then to large markets, and markets in which developing country TNCs can expand its business opportunities. This may be because the space of ASEAN is too small for global players that explore location-specific advantages in the world with localization, i.e., Silicon Valley.

This diversification of outward FDI from Malaysia reflects that Malaysia firms have expanded its wings at the world wide. For example, Ingenuity Solutions (Malaysia) have targeted the knowledge base of developed countries such as the United States, when investing in R&D abroad. (UNCTAD, 2005, pp182). Ingenuity Solutions

has extended its software development center to India, and a representative office in the United States, which make it possible to respond needs of customers in the United States.

Thanks to "home market effect", ASEAN giant firms are very active in taking FDI abroad. Most of them are marketing-seeking FDI. A striking example of market-seeking FDI is Proton. Proton is launching a global strategy. In 2002, Proton acquired a British automobile company which has played R&D center, and has import and distribution centers of car and parts in Australia and the United Kingdom, and an assembly line in Indonesia. Felda and KL Kepong, Malaysia firms, which have attained economies of scale, went to Indonesia where labor and land are cheap, to develop palm, and import back to Malaysia. Those products are mainly exported to China, and other countries through their international distribution networks.

Other ASEAN giant firms are extending their business wings also. A Philippine giant, San Miguel, has expanding its business to overseas. San Miguel operates a brewery each in Vietnam, Australia and Indonesia and maintains four breweries in China, including Hong Kong. Overseas packaging facilities include a glass plant and metals-crown plants in China and Vietnam, and plastics plants in China and Indonesia. The Charoen Pokphand (CP) group, a Thai agro based leading company, expanded into Bangladesh, Cambodia, China, Hong Kong, India, Indonesia, Malaysia, Myanmar, Singapore, Taiwan, Turkey, and Vietnam. The CP started seeds business, then through vertical integration, moving into feed mills, poultry, swine and duck breeding and processing. As opportunities developed, the CP Group extended its reach, first in Asia, then in the rest of the world, focusing on the development needs of the people, expanding not only selection of foods but also the logistics and retail distribution links, like the convenience stores, supermarkets and hypermarkets, plus the casual dining outlets, and introducing them on an international level"¹.

Not only big business but also small family businesses have succeeded in the global market places, serving customers in the Asia-Pacific and the world wide location. LKT, a semiconductor business equipment solution company, based in Penang, Malaysia,

¹ see CP group home page (http://www.cpthailand.com/webguest/faq.aspx).

extended production facility to Thailand, and service support center in China, Costa Rica, Singapore, Thailand, and the United States. Pentmaster, a semiconductor manufacturing automation solution company in Penang, has extended office in Ireland, Germany, and the United States, to support customers, and distributors in China, Taiwan, the Philippines, and Singapore.

These ASEAN TNCs, either big business, SMEs, are expanding their business beyond nation, to ASEAN, then to China, the Unites States, Australia, the United Kingdom where they can find markets.

4. INTRA-REGONAL FDI IN ASEAN

4.1 Who is Source and Who is Host?

Intra-regional FDI in ASEAN is not new phenomenon. As discussed in the previous section, ASEAN TNCs went to neighboring ASEAN countries. And then question arises. That is who is source and host of intra-regional FDI? In other words, what patterns intra-regional FDI in ASEAN have?

Table 1 and Table 2 summarize cross border FDI, balance of payment base, within ASEAN countries between 1995 and 2003, compiled from ASEAN Secretary FDI data, Statistics of Foreign Direct Investment in ASEAN Seven Edition, 2005.

Singapore was the largest FDI source and host country of intra-ASEAN FDI. More than 34% of outward FDI was directed to Malaysia, and followed by Thailand, 32%; Vietnam, 10%, and Indonesia, 8%. Singapore' intra-regional FDI in ASEAN concentrated in these four countries.

Malaysia and Indonesia were the second and third largest source of intra-ASEAN FDI. Interestingly, most of outward FDI from Malaysia and Indonesia directed to Singapore. Concretely saying, about 67% of FDI from Malaysia directed to Singapore and 86% of FDI from Indonesia to Singapore. Singapore has functions of trade payment and fund management that surplus dollars are operated there, which has promoted trade of ASEAN countries. Singapore has played functions of R&D and design centers in ASEAN also. In particular, Malaysia firms have set up center of excellences function

there. Bogasari International (Indonesia, food processing) chose Singapore, in part due to the country's favourable R&D incentive schemes for foreign investors (UNCTAD 2005, pp182). Against Singapore, Malaysia has played training center of ASEAN since training costs are cheaper.

(199)	5-200	3, USA	millio	, i i j						(US	\$ million)
Host country	BRN	CAM	INE	LAO	MAL	MYA	PHL	SIG	THL	VET	Total
Source country											
Brunei (BRN)	-	-	-27	-	298	-	-	176	0	-	448
Cambodia (CAM)	-	-	0	0	3	-	-	5	9	1	17
Indonesia (INE)	55	-	1	-	309	30	39	3157	43	59	3691
Laos (LAO)	-	-	0	-	0	-	-	1	5	6	12
Malaysia (MAL)	205	-	328	95	0	65	85	2830	134	492	4234
Myanmar (MYA)	-	-	0	0	0	-	-	45	2	-	48
Philippines (PHL)	4	-	13	-	92	4	-	43	29	49	234
Singapore (SIG)	1109	-	1401	10	6082	746	1086	0	5616	1708	17760
Thailand (THL)	8	-	140	151	186	194	29	303	0	382	1393
Vietanm (VET)	0	-	0	4	38	-	-	13	3	-	58
Total	1380	_	1957	261	7000	1030	1220	6575	5840	2606	2780/

Table 1. Intra-ASEAN FDI Flows by Source and Host Country (1995-2003, US\$ million)

Source: Compiled from ASEAN Secretary FDI data, "Statistics of Foreign Direct Investment in ASEAN Seven Edition, 2005.

(1995	-2003	8, %)									
Host country	BRN	CAM	INE	LAO	MAL	MYA	PHL	SIG	THL	VET	Total
Source country											
Brunei (BRN)	-	-	-6.0	-	66.7	-	-	39.3	0.0	-	100.0
Cambodia (CAM)	-	-	0.0	0.2	15.8	-	-	28.1	52.3	3.6	100.0

Table 2. Share of Intra-ASEAN FDI Flows by Source and Host Country (1995-2003, %)

-

0.0

0.0

Malaysia (MAL) 4.8 -7.7 2.2 0.0 1.5 2.0 66.8 3.2 11.6 100.0 Myanmar (MYA) 95.4 100.0 0.0 0.1 1.0 3.5 --Philippines (PHL) 1.5 5.7 39.5 1.6 18.6 12.3 20.9 100.0 Singapore (SIG) 6.2 _ 7.9 0.1 34.2 4.2 6.1 0.0 31.6 9.6 100.0 Thailand (THL) 0.5 10.1 10.9 13.4 13.9 2.0 21.8 0.0 27.4 100.0 -Vietanm (VET) 0.3 0.0 7.4 65.5 22.4 4.4 100.0 Total 9.7 4.9 6.7 0.9 25.1 3.7 4.4 23.6 20.9 100.0

8.4

1.3

0.8

1.0

85.5

11.2

1.2

39.4

1.6

48.1

100.0

100.0

Source: Compiled from ASEAN Secretary FDI data, "Statistics of Foreign Direct Investment in ASEAN Seven Edition, 2005.

4.2 What Industries Are Taking Intra-ASEAN FDI?

1.5

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Indonesia (INE)

Laos (LAO)

What industries did take intra-ASEAN FDI? Table 3 compares approval based FDI inflows to ASEAN in manufacturing industry, from extra- and intra- ASEAN, by industrial sector, during the period between 1999 and 2003, provided by the ASEAN

Secretary. Unfortunately, the figures for Singapore are excluded due to data available.

		1 (110 4 1111)	04 6 01	
Source Country	Value of Proje	ct (US\$ million)	% of Share	by Industry
Sectors / ISIC Code	Extra-ASEAN	Intra-ASEAN	Extra-ASEAN	Intra-ASEAN
15 Food & Beverages	2,351	1,084	4	18
16 Tobacco Products	75	16	0	0
17 Textiles	1,891	173	3	3
18 Wearing Apparel	1,432	129	2	2
19 Tanning of Leather	850	36	1	1
20 Wood & Wood Products	1,452	174	2	3
21 Paper & Paper Products	1,961	589	3	10
22 Publishing, Printing	146	19	0	0
23 Refined Petroleum	12,982	166	21	3
24 Chemicals Products	4,961	431	8	7
25 Rubber & Plastics Products	5,007	437	8	7
26 Other Non-Metallic Mineral	2,240	106	4	2
27 Basic Metals	2,580	172	4	3
28 Fabricated Metal	1,489	290	2	5
29 Machinery & Equipment	1,989	333	3	5
30 OfficeMachinery	395	25	1	0
31 Electrical Machinery	1,489	94	2	2
32 Communication Equipment	14,623	1,404	23	23
33 Precision Instruments	541	99	1	2
34 Motor Vehicles	1,858	164	3	3
35 Other Transport Equipment	1,561	66	2	1
36 Furniture	705	67	1	1
37 Recycling	45	7	0	0
Others	439	7	1	0
TOTAL	63.061	6.090	100	100

Table 3. FDI Inflows from Extra- and Intra-ASEAN in Manufacturing Industry (approved base) by Industrial Sector (1999 - 2003)

Source: Compiled from ASEAN Secretary FDI data, "Statistics of Foreign Direct Investment in ASEAN Seven Edition, 2005.

Communication equipment industry dominated the largest share of intra-ASEAN FDI inflows, accounting for 23% of total intra-ASEAN FDI inflows. Coincidentally, the share is same with FDI inflow from extra ASEAN region. Why did communication industry take the largest FDI to the ASEAN countries? Many developed country TNCs in communication equipment industry had moved production sites to Singapore first, and then expanded from Singapore into Malaysia, Thailand, the Philippines, and China, seeking cheap labor. Foreign assemblers moved few manufacturing processes first, and then gradually moved other processes, and finally expanded assembly process into Malaysia, Thailand, and the Philippines. Many foreign suppliers who have operated in Singapore followed their customers to expand into those countries, in order to respond needs of customers speedy. Inevitably, Singapore local suppliers did follow the assemblers.

Communication equipment has characteristic of low transportation costs.

Transportation costs in parts and components related to communication equipment are only 2-3% of purchased goods by air², which are lower than any other industries, since its cubic measurement and weight of are very small. On the other hand, the sales prices of communication devices fall about 1.5% every month. Considering that sales prices falls about 1.5% every month, transportation costs amounting to 2-3% of purchased part costs are not high.

Interestingly, a low transportation cost industry, such as communication equipment industry, produces not only large international trade but also a large FDI. This evidence may suggest that FDI substitutes partly trade.

Electrical machinery, office machinery, and precision machinery are similar type industry with communication equipment. But, due to higher transportation costs compared to communication equipment, their combined shares are just only 4% of intra ASEAN FDI. ASEAN firms in machinery & equipment and fabricated metal in which are backward linkage industries of communication equipment, electrical machinery, office machinery and precision machinery, are aggressively advancing to beyond border within the region, seeking cheap labor, and seeking market and supplier following.

Food and beverage industry of intra-ASEAN FDI reached at 1084 US\$ million, accounted for 18% of total intra-ASEAN FDI. Intra-ASEAN FDI in food and beverage industry concentrated in Indonesia, 56% of them; Malaysia, 29%; Vietnam, 15%; and Thailand, 5% (see Table 4).

Paper & paper products accounted for 10% of total intra-ASEAN FDI, followed by chemical products, and rubber & plastic products for 7% respectively. Intra-ASEAN FDI in food industry, paper & paper products, chemical products, and rubber & plastic products are market seeking FDI and natural resource seeking FDI, and/or mixture of the two.

Motor vehicle industry is one of typical market seeking FDI. In particular, Malaysia automobile industries have advanced abroad due to "home market effect". Proton, Malaysia automobile assemble, expanded to Indonesia. Malaysia automobile part supplier, Ingress Autoventures has established a joint-venture company with Katayama Kogyo Co. Ltd., Japan. Beginning with two facilities in Rayong in 2003, a third facility

² Filed study result by author. Normally, transportation costs are covered by buyer side.

in Ayutthaya began operations in 2005. In order to expand and diversify the Groups operations, PT Ingress Malindo (IMV), Malaysia automobile supplier, was formed in Indonesia in August 2003. The plant is located at Jababeka Industrial Estate, a location prominent to this industry in the Cikarang Selatan area. Malaysia automobile supplier, Auto Parts Holdings Sdn Bhd, a wholly-owneed subsidiary of APM Automotive, signed a joint-venture agreement with P.T.Mekar Armada Jaya to manufacture and distribute automotive bus and train seating products in Indonesia in 2001, and has entered into a joint venture, with Hefei Winking Asset Co.Ltd. in 2002, to produce and distribute automotive seats, interior parts and metal components in China. Thailand automobile supplier, Thai Summit Group expanded to Malaysia. Thai motor cycles supplier, New Chip Xeng advanced to Laos in 1991.

ASEAN textile and apparel industry expanded across nation within the region also. FDIs in apparel industry are market seeking, but FDIs in apparel in Cambodia, Myanmar, and Vietnam are efficiency seeking FDI. Similar language and culture, and geographical proximities are very important. For instance, 58% of FDI to Laos cam from Thailand between 1999 and 2003 (Table4).

Host Country	Brunei	Combodia	Indonosia		Malayeia	Myonmor	Dhilippinoe	Thailand	Viot Nom	
Sectors / ISIC Code	Darussalam	Camboula	Indonesia	Lau PDR	ivialaysia	wyannan	Fillippines	Thallanu	viet main	ASEAN
15 Food & Beverages	0.2	0.3	56.3	0.6	22.9	0.0	0.0	4.9	14.6	100.0
16 Tobacco Products	0.0	0.0	11.7	0.0	82.2	0.0	0.0	0.0	0.0	100.0
17 Textiles	0.0	0.0	68.8	0.0	22.8	0.3	0.6	4.9	2.6	100.0
18 Wearing Apparel	6.4	0.0	25.8	0.2	15.9	5.4	2.1	5.4	20.3	100.0
19 Tanning of Leather	0.0	0.0	29.8	2.5	6.8	0.0	2.4	19.6	38.9	100.0
20 Wood & Wood Products	0.0	0.0	37.1	2.2	32.2	2.0	9.3	2.4	14.8	100.0
21 Paper & Paper Products	0.0	0.0	83.7	0.1	3.0	1.4	3.0	2.7	5.5	100.0
22 Publishing, Printing	0.9	0.0	10.0	2.1	47.7	0.0	0.1	19.7	15.2	100.0
23 Refined Petroleum	0.0	0.0	20.5	1.5	78.0	0.0	0.0	0.0	0.0	100.0
24 Chemicals Products	0.0	0.0	12.0	0.1	31.9	0.0	1.7	48.4	5.8	100.0
25 Rubber & Plastics Products	0.1	0.0	20.9	0.3	22.2	0.0	1.0	46.6	8.5	100.0
26 Other Non-Metallic Mineral	2.0	0.0	1.7	0.6	50.6	0.0	16.7	5.5	22.9	100.0
27 Basic Metals	0.4	0.0	27.6	0.0	30.6	0.0	2.1	25.4	13.9	100.0
28 Fabricated Metal	0.9	0.0	10.2	0.1	44.3	0.1	2.7	26.1	15.6	100.0
29 Machinery & Equipment	0.0	0.0	9.0	0.0	30.7	0.0	0.2	54.3	5.8	100.0
30 OfficeMachinery	0.0	0.0	27.9	3.0	0.0	0.0	45.2	0.0	23.9	100.0
31 Electrical Machinery	0.0	0.0	6.8	0.4	55.7	0.0	4.5	13.3	19.4	100.0
32 Communication Equipment	0.0	0.0	4.7	0.0	55.5	0.0	10.8	28.6	0.4	100.0
33 Precision Instruments	0.0	0.0	28.3	2.2	60.4	0.0	6.6	2.6	0.0	100.0
34 Motor Vehicles	0.0	0.0	37.7	0.2	0.1	0.0	2.4	27.7	31.9	100.0
35 Other Transport Equipment	0.0	0.0	59.5	0.8	28.8	0.0	0.0	8.4	2.4	100.0
36 Furniture	0.5	0.0	16.8	2.5	33.5	5.2	2.1	5.1	34.3	100.0
37 Recycling	0.0	0.0	0.0	3.7	0.0	0.0	30.7	65.5	0.0	100.0
Others	0.0	0.0	0.0	0.0	46.6	0.0	1.5	0.0	0.0	100.0
TOTAL	0.3	0.0	30.2	0.4	33.6	0.4	4.3	21.2	9.0	100.0

Table 4. Share of Intra-ASEAN FDI Flows in Manufacturing Industry (approved base) by Host Countries and Industrial Sector (1999-2003, %)

Source: Compiled from ASEAN Secretary FDI data, "Statistics of Foreign Direct Investment in ASEAN Seven Edition, 2005.

4.3 Two-Way Intra-Industry FDI in ASEAN

Looking at approval base FDI inflow data cross tabulation by industry and by country, it can be observed that two way intra-industry FDI has emerged in ASEAN. ASEAN TNCs in communication equipment industry have mutually invested. Malaysia advanced to Thailand, Indonesia, and the Philippines; meanwhile Thailand expanded to Malaysia, and the Philippines, thus, two way intra-industry FDI between Malaysia and Thailand just like between the EU countries.

Two-way of intra-industry FDI has developed well in food industry where local suppliers have developed; between Malaysia and Thailand, between Indonesia and Malaysia, between Indonesia and Thailand, and between Thailand and the Philippines. Two-way intra-industry FDI has seen in automobile industry between Thailand and Malaysia.

These intra-ASEAN FDI suggest that ASEAN firms are exploring markets mutually, and location advantages that each country has provided in labor, natural resources, infrastructure, corporate tax exemption. It can be said that there is high possibility of further development of intra-industry FDI in industries in which indigenous firms are developing if transportation costs are further decline and capacity building for manufacturing is enhanced further.

4.4 FDI to ASEAN LDCS

Vietnam is increasing FDI since Laos-Viet Nam Joint Venture established in 2000 to extend loans to invest by Vietnam's firms in Laos. Vietnam is increasing FDI in Laos. Nine projects have been carried out in Laos so far.

ASEAN apparel industry went to Cambodia, Laos, and Vietnam for export purpose to the third country. Food industry went to Cambodia, Laos, Vietnam and Malaysia for export to the third country and home markets.

Myanmar takes investment in Indonesia. These projects were taken by residents in Indonesia.

5. POLICY IMPLICATIONS

Outward FDI from developing country is a proxy indicator to measure how much developing country enterprises have played important role in the world market places, and developing country benefit from globalization where border barriers are reduced.

The success of some Asian economies is no coincidence. Active and coherent policies with a long-term vision are necessary (UNCTAD, 2005, pp255). They are favorable policy measures with a view to attractiveness for FDI, industry-specific policies to form industrial clusters. In this regards, what are active and coherent policies in promoting outward FDI. TNCs consider market, and costs (production costs and transportation costs) in taking outward FDI.

Market access is an issue to be challenged by ASEAN to increase intra-regional FDI in ASEAN. Most of ASEAN governments have provided special privileges to exempt intermediate goods for export production purpose. Thanks to easy market access in intermediate goods, trades of intermediate goods have developed, forming international production networks. Trades in such industry have substituted partly by FDI. Considering this point, improvement of market access is necessary policy to stimulate intra-regional FDI.

Market accesses to the ASEAN countries, however, are still not so good. The trade regime of East Asia is still far from free trade. East Asian countries are imposing substantial trade barriers (see Fouquin, Hiratsuka. and Kimura, 2006). For instance, simple average applied tariff rates for all products are 7.2 % in Indonesia, 8.6% in Malaysia, 7.1 % in the Philippines, 12.0 percent in Thailand, and 18.5 percent in Vietnam. Notably, East Asian countries tend to impose high tariffs on the imports of agricultural products, textiles and clothing, and other light industrial products in addition to transport equipment. Furthermore, substantial barriers in services trade still remain in East Asia. For example, the number of service sectors with significant liberalization under the GATS commitments is 75 for Thailand and Malaysia, 51 for the Philippines and only 47 for Indonesia. These figures reflect that these countries are still protecting their domestic service industries. Improvement of market access will lead to expand intra-ASEAN trade and FDI.

Production costs are can be reduced by enhancing capacity building in infrastructure

(road, sea and air ports, communication, and so on), institutions (streamlining procedure of trade, investment and registration, deregulation of capital participation, tax privilege and other investment facilitation measures), and human resources (skill labor training centre, laboratory, and university).

Transportation costs are decreasing due to development of infrastructure both by public and private sectors, investment by forwarders for electric procuring system and warehouses, and tax reduction at the AFTA and WTO). Road transportation across countries within ASEAN has not prevailed yet like the EU, which has bottlenecked for further reduction of transportation costs in ASEAN. METI of Japan investigated the transportation costs by truck, ship, and air between Bangkok and Hanoi, and between Hanoi and Guangzhou, and found that transportation by truck was practical but had problems. First, container cargo has to be transferred from a truck to another truck at the border. Second, custom office procedures are very complicated at the border, consuming much of time.

	All Goods	Agriculture excluding Fish	Fish and Fish Products	Petroleum Oils	Wood, Pulp, Paper and Furniture	Textiles and Clothing	Footwear and Travel Goods	Metals	Chemical & Photographic Supplies	Transport Equipment	Non-Electric Machinery	Electric Machinery	Mineral Products, Precious Stones & Metals	Manufactured Articles, n.e.s
Vietnam	18.5	27.7	27.7	16.8	15.7	37.3	18.7	9.4	7.2	13.9	7.2	13.3	13.6	14.1
Thailand	12.0	25.8	8.4	2.6	11.4	17.0	16.0	9.0	4.6	20.3	4.8	9.3	5.6	13.3
Korea	11.9	46.2	16.8	5.8	2.6	9.8	8.9	4.7	6.0	6.0	6.0	5.5	5.9	6.2
China	11.3	16.8	12.2	6.3	7.0	15.2	13.6	7.4	7.4	15.9	8.6	9.9	9.4	12.3
Malaysia	8.6	3.0	1.9	0.5	2.7	12.4	12.9	17.4	5.3	36.9	6.0	8.7	9.6	7.4
Indonesia	7.2	8.6	5.0	5.0	4.1	10.5	6.6	8.1	5.5	17.0	2.3	6.1	4.6	7.7
Japan	7.1	20.9	6.0	3.6	1.6	6.7	17.3	0.8	2.5	0.1	0.0	0.2	0.9	1.3
Philippines	7.1	7.9	8.4	2.9	6.4	11.4	6.6	5.4	4.9	17.0	2.5	4.5	5.1	4.8
the United Stat	5.1	9.8	2.0	2.5	1.1	9.6	7.0	2.1	3.8	2.6	1.3	2.0	3.7	3.2
Australia	4.3	1.4	0.0	0.0	3.8	12.8	6.9	3.4	1.9	5.3	3.4	3.2	1.7	2.0
Canada	3.9	4.0	1.4	3.1	1.6	9.0	5.6	1.9	2.9	5.2	1.7	2.4	2.0	3.1
New Zealand	3.4	2.1	0.6	1.3	1.3	7.8	6.2	3.0	1.5	5.3	3.7	3.6	1.7	3.0
Singapore	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 5. Simple Average Applied Tariff rates by Products (2004,

Source: Tariff Summary Report 2004, APEC Electronic Individual Action Plan, http://www.apec-iap.org

Table 6. Transportation from Bangkok to Hanoi								
	Volume	Transit Time	Costs					
By Ship	1 TEU	10-15 days	1,000					
By Air	3334kg	2-3 days	4,000					
By Truck	1 TEU	4 days	2,500					
			–					

Source: METI, 2005, "Senkuteki Kamotsu Toushi Kankyou Seibi Jitushi Jigyou.

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