

## CHAPTER 4

# Korea's Intermediate Goods Trade with ASEAN

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**CHAPTER 4**  
**KOREA'S INTERMEDIATE GOODS TRADE**  
**WITH ASEAN**

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**INTRODUCTION**

Southeast Asian countries are known to pursue an externally oriented economic development strategy. In fact, ever since the 1980s, foreign direct investment (FDI) and external trade have been the two engines of their economic development. Korea also continues to maintain an export-oriented economic development plan, and from the 1990s it has actively participated in overseas direct investment (ODI) in Southeast Asia. Prior to this, Japan made even more investment in Southeast Asia and many multinational companies and countries, including the United States and member nations of the EU, also invested in the region. Through this, Southeast Asia became a forward base of manufacturing for export.

An important feature in recent world trade is that a global production network (GPN) where multiple countries participate in the process of producing final consumption goods is quickly being formed, and such activities are mostly concentrated in East Asia. It can be said that the production network of the East Asian region was formed through the active investment of companies from Japan, Korea and Taiwan in the area. Enlargement of the production network due to the fragmentation of

production by companies intensified the intermediate goods trade within East Asian regional trade, and such intensification expanded the share of intermediate goods compared to other production processes such as consumption goods and capital goods. Therefore, it is obvious that Southeast Asia also plays a centrifugal role in the production network.

As Southeast Asia created an axis of GPN and continued its high levels of growth, trade between Korea and the region also grew. On the other hand, the East Asian financial crisis that erupted in 1997, the collapse of the IT bubble in 2001, and the 2009 global financial crisis negatively influenced trade between Korea and Southeast Asia greatly. Meanwhile, Vietnam and other countries in Indochina rose as emerging markets in the 1990s by opening up to foreign countries and making the transition from centrally planned to market economies. Their emergence resulted in not only greater investment but also substantially increased cooperation in trade for Korea-ASEAN economic relations. Of late, Indochinese countries including Vietnam and Thailand, collectively known as the Mekong River Basin Countries (MRBCs), have become the center of attention for prospective investments, and Korean companies are rushing to invest in them.

Therefore, this paper aims to analyze the intermediate goods trade between the two regions in order to explain the production network between Korea and ASEAN.

## **1. OVERVIEW OF KOREA-ASEAN TRADE**

### **1.1. Importance of ASEAN in Korean Trade**

ASEAN achieved high growth during the 1980s and 1990s and received attention as an

East Asian newly emerging market. Korea's trade with ASEAN during the same period maintained a continuous pace of increase, except in 1998 during the East Asian financial crisis and when the IT bubble burst in the early 2000s. Korea-ASEAN trade has recorded double-digit annual growth for the past several years, increasing from approximately 30 billion dollars in 1999 to 90 billion dollars in 2008. Ultimately, ASEAN arose as the third-largest trade market for Korea, after China and the EU. Besides ASEAN's becoming a major export destination exceeding the United States and Japan, hitherto Korea's major traditional trade partners, the region has also become a major source for imports, outstripping the EU and the United States, reconfirming its importance as Korea's major trade partner. On the other hand, ASEAN's share of Korea's world trade has dropped slightly since the mid-1990s, the biggest reason being a rapid increase of imports and exports between Korea and China.

**Table 1: Korea's Trade with ASEAN (1996~2009)**

(Unit: US\$ in millions, %)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Export (a)	20,311	20,365	15,328	17,708	20,134	16,459	18,400	20,253	24,024	27,432	32,066	38,749	49,283	40,979
Growth Rate	44.0	0.3	-24.7	15.5	13.7	-18.2	11.8	10.1	18.6	14.2	16.9	20.8	27.2	-16.8
Import (b)	12,074	12,549	9,135	12,249	18,173	15,916	16,757	18,458	22,383	26,064	29,743	33,110	40,917	34,053
Growth Rate	19.1	3.9	-27.2	34.1	48.4	-12.4	5.3	10.2	21.3	16.4	14.1	11.3	23.6	-16.8
Trade Balance	8,237	7,816	6,193	5,459	1,961	543	1,643	1,795	1,641	1,368	2,323	5,639	8,366	6,926
Total (a+b)	32,385	32,914	24,463	29,957	38,307	32,375	35,157	38,711	46,407	53,496	61,809	71,859	90,200	75,032
Growth Rate	15.2	1.6	-25.7	22.5	27.9	-15.5	8.6	10.1	19.9	15.3	15.5	16.3	25.5	-16.8
Share of World	11.6	11.7	10.8	11.4	11.5	11.1	11.2	10.4	9.7	9.8	9.7	9.9	10.5	10.9

Source: Korea International Trade Association.

Even though the global financial crisis that began in late 2008 caused Korea-ASEAN trade to decline slightly, the region maintains an approximate 10% share of Korea's total world trade. Korea's global trade in 2009 fell approximately 20% due to the crisis, but the country's trade with ASEAN dropped by only about 16%. As the economy has been recovering since the second half of 2009, trade between Korea and ASEAN is back on the rise.

## **1.2. Trade Structure by Country**

When examining Korea's trade with the major ASEAN countries, the largest trade partner in the region (as of 2009) is Singapore at 21.4 billion dollars, followed by Indonesia, Malaysia, Vietnam, Thailand and the Philippines. For exports, the order is Singapore and then Vietnam, Indonesia, the Philippines, Thailand and Malaysia. In terms of imports, the list begins with Indonesia and moves down to Singapore, Malaysia, Thailand and the Philippines. As for the MRBCs, trade volume is especially high with Vietnam, followed by Thailand. Meanwhile, the amount of trade with other countries is low. Korea is showing a trade deficit with countries such as Indonesia, Malaysia and Brunei, from whom it imports huge amounts of oil, natural gas and other natural resources, but maintains a trade surplus with the other countries. Korea is recording trade surpluses with the MRBCs as well.

**Table 2: Korea's Trade with ASEAN by Country (1997~2009)**

(Unit: US\$ in millions, %)

			1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
A S E A N  6	Singapore	Trade	8,214	5,778	7,234	9,371	7,091	7,652	8,726	10,115	12,725	15,376	18,809	24,655	21,489
		Growth Rate	-8.4	-29.7	25.2	29.5	-24.3	7.9	14.0	15.9	25.8	20.8	22.3	31.1	-12.8
	Brunei	Trade	516	358	297	508	468	489	531	725	848	1,228	962	1,794	1,026
		Growth Rate	1.6	-30.6	-17.0	71.0	-7.9	4.5	8.6	36.5	17.0	44.8	-21.7	86.5	-42.8
	Malaysia	Trade	7,639	5,813	6,802	8,393	6,754	7,259	8,101	10,159	10,620	12,469	14,146	15,703	11,899
		Growth Rate	4.1	-23.9	17.0	23.4	-19.5	7.5	11.6	25.4	4.5	17.4	13.4	11.0	-24.2
	Thailand	Trade	3,527	2,259	2,803	3,646	3,437	4,038	4,422	5,600	6,070	7,574	8,257	10,061	7,767
		Growth Rate	-9.2	-36.0	24.1	30.1	-5.7	17.5	9.5	26.6	8.4	24.8	9.0	21.8	-22.8
	Indonesia	Trade	7,648	4,842	6,526	8,791	7,754	7,868	8,590	10,046	13,230	13,723	14,885	19,254	15,264
		Growth Rate	6.1	-36.7	34.8	34.7	-11.8	1.5	9.2	16.9	31.7	3.7	8.5	29.4	-20.7
	Philippines	Trade	3,313	3,639	4,288	5,175	4,354	4,817	4,939	5,499	5,536	6,118	6,858	8,115	7,219
		Growth Rate	33.2	9.8	17.8	20.7	-15.9	10.6	2.5	11.3	0.7	10.5	12.1	18.3	-11.0
C L M V	Vietnam	Trade	1,842	1,545	1,709	2,008	2,118	2,710	3,072	3,929	4,126	4,852	7,152	9,842	9,519
		Growth Rate	0.6	-16.1	10.6	17.5	5.5	28.0	13.4	27.9	5.0	17.6	47.4	37.6	-3.3
	Myanmar	Trade	154	161	203	312	283	199	213	192	176	217	373	360	484
		Growth Rate	4.1	4.5	26.1	53.7	-9.3	-29.7	7.0	-9.9	-8.3	23.3	71.9	-3.5	34.4
	Cambodia	Trade	54	63	85	98	109	118	110	133	150	210	290	308	291
		Growth Rate	0.0	16.7	34.9	15.3	11.2	8.3	-6.8	20.9	12.8	40.0	38.1	6.2	-5.5
	Laos	Trade	9	5	12	5	6	4	8	10	16	41	126	106	74
		Growth Rate	-10.0	-44.4	140.0	-58.3	20.0	-33.3	100.0	25.0	60.0	156.3	207.3	-15.9	-30.2

Source: Korea International Trade Association.

In particular, with Korean companies actively investing in Vietnam, which has recently become a major trading country, there has been an increase in exports of capital goods and intermediate goods. The resulting trade surplus for Korea amounts to approximately 4.8 billion dollars.

**Table 3: Korea's Export/Import and Trade Balance with ASEAN by Country (2009)**

(Unit: US\$ in millions)

		Export	Import	Trade Balance
ASEAN6	Singapore	13,617	7,872	5,745
	Brunei	57	969	-912
	Malaysia	4,325	7,574	-3,249
	Thailand	4,528	3,239	1,289
	Indonesia	6,000	9,264	-3,264
	Philippines	4,567	2,652	1,915
CLMV	Cambodia	273	18	255
	Laos	56	18	38
	Myanmar	406	78	328
	Vietnam	7,149	2,370	4,779

Source: Korea International Trade Association.

### 1.3. Trade Structure by Industry and Characteristic

#### 1.3.1. Structure by industry

When examining Korea's trade with ASEAN by industry, industrial products constitute 97% of exports, compared to 71% of imports, and the percentage is growing in accordance with the level of industrialization of ASEAN. Korean exports have traditionally been focused on industrial products, but with progress made by industries

in ASEAN, the proportion of light industry goods has dropped, while there has been a rapid increase in heavy and chemical goods. The share of IT products marked much growth in 2000 but then dropped again to the low 20% range.

**Table 4: Korea's Export Items to ASEAN by Industry (1990~2009)**

(Unit: US\$ in millions, %)

	1990		1995		2000		2005		2009	
	Volume	Share	Volume	Share	Volume	Share	Volume	Share	Volume	Share
Primary Products	177	3.4	1,405	7.8	518	2.6	407	1.5	962	2.3
Industrial Products	5,039	96.6	16,574	92.2	19,616	97.4	27,025	98.5	40,017	97.7
Light Industry Goods	1,134	21.7	2,718	15.1	2,924	14.5	3,119	11.4	4,051	9.9
Heavy and Chemical Industry Goods	3,906	74.9	13,857	77.1	16,692	82.9	23,906	87.1	35,966	87.8
IT Products	1,216	23.3	5,123	28.5	8,387	41.7	8,955	32.6	9,347	22.8
Others	2,690	51.6	8,734	48.6	8,305	41.2	14,951	54.5	26,618	65.0
Total	5,217	100	17,979	100	20,134	100	27,432	100	40,979	100

Source: Korea International Trade Association.

In the case of imports, industrial products took up only 44% in the early 1990s, with over half of total imports being primary products. Therefore, the structure was such that Korea exported industrial products to ASEAN and imported primary products in return. In 2009, however, due to the growth of ASEAN's industrial sector and investments of Korean companies into that region, the share of imports of industrial products increased to above 70%.

**Table 5: Korea's Import Item from ASEAN by Industry (1990~2009)**

(Unit: US\$ in millions, %)

	1990		1995		2000		2005		2009	
	Volume	Share	Volume	Share	Volume	Share	Volume	Share	Volume	Share
<b>Primary Products</b>	<b>2,852</b>	<b>55.7</b>	<b>3,785</b>	<b>37.3</b>	<b>4,031</b>	<b>22.2</b>	<b>7,089</b>	<b>27.2</b>	<b>9,876</b>	<b>29.0</b>
<i>For Exports</i>	0	0	872	8.6	1,638	9	1,696	6.5	2,518	7.4
<i>For Domestic</i>	2,852	55.7	2,913	28.7	2,393	13.2	5,393	20.7	7,358	21.6
<b>Industrial Products</b>	<b>2,270</b>	<b>44.3</b>	<b>6,352</b>	<b>62.7</b>	<b>14,142</b>	<b>77.8</b>	<b>18,975</b>	<b>72.8</b>	<b>24,177</b>	<b>71.0</b>
<i>For Exports</i>	0	0	2,204	21.7	5,428	29.9	7,827	30	10,309	30.3
<i>For Domestic</i>	2,270	44.3	4,148	40.9	8,715	48	11,148	42.8	13,867	40.7
<b>Light Industry Products</b>	<b>132</b>	<b>2.6</b>	<b>511</b>	<b>5.0</b>	<b>788</b>	<b>4.3</b>	<b>1,103</b>	<b>4.2</b>	<b>2,001</b>	<b>5.9</b>
<i>For Exports</i>	0	0	167	1.6	392	2.2	425	1.6	516	1.5
<i>For Domestic</i>	132	2.6	343	3.4	396	2.2	679	2.6	1,484	4.4
<b>Heavy and Chemical Industry Goods</b>	<b>2,138</b>	<b>41.7</b>	<b>5,842</b>	<b>57.6</b>	<b>13,354</b>	<b>73.5</b>	<b>17,871</b>	<b>68.6</b>	<b>22,176</b>	<b>65.1</b>
<i>For Exports</i>	0	0	2,037	20.1	5,036	27.7	7,403	28.4	9,793	28.8
<i>For Domestic</i>	2,138	41.7	3,805	37.5	8,318	45.8	10,469	40.2	12,383	36.4
IT Products	570	11.1	2,074	20.5	7,104	39.1	8,319	31.9	10,582	31.1
<i>For Exports</i>	0	0	1,149	11.3	3,763	20.7	5,182	19.9	7,108	20.9
<i>For Domestic</i>	570	11.1	925	9.1	3,341	18.4	3,137	12	3,475	10.2
Others	1,568	30.6	3,767	37.2	6,250	34.4	9,553	36.7	11,594	34
<i>For Exports</i>	0	0	888	8.8	1,273	7	2,221	8.5	2,685	7.9
<i>For Domestic</i>	1,568	30.6	2,880	28.4	4,977	27.4	7,332	28.1	8,909	26.2
<b>Total</b>	<b>5,122</b>	<b>100</b>	<b>10,137</b>	<b>100</b>	<b>18,173</b>	<b>100</b>	<b>26,064</b>	<b>100</b>	<b>34,053</b>	<b>100</b>
<i>For Exports</i>	0	0	3,077	30.3	7,066	38.9	9,523	36.5	12,828	37.7
<i>For Domestic</i>	5,122	100	7,061	69.7	11,108	61.1	16,541	63.5	21,226	62.3

Source: Korea International Trade Association

Even until the early 1990s, industrial products imported from ASEAN were mostly for domestic use. Currently, however, there is an increase of imports of raw materials and intermediate goods for exports. There has also been a rapid increase of heavy and chemical industry goods compared to light industry, and an increase in imports of heavy and chemical goods for exports. Among heavy and chemical industrial goods, there has been an especially high increase of imports for IT-related products. Overall, even with the increase of imports for use in exports, 62.3% of all imports are still intended for domestic use.

### **1.3.2. Structure by characteristic**

According to categorization by characteristics of goods, Korea's trade with ASEAN is mainly made up of raw materials and capital goods. In the case of exports, raw materials and capital goods make up over 90% of shipments. Consumption goods' share is the smallest, and it is continuously decreasing. Among consumption goods, the proportion of durable consumption goods is the highest, with the lowest being direct consumption goods. The durable consumption goods are mainly household appliances.

**Table 6: Korea's Export toward ASEAN with Characteristic (1990~2009)**

(Unit: US\$ in millions, %)

	1990		1995		2000		2005		2009	
	Volume	Share	Volume	Share	Volume	Share	Volume	Share	Volume	Share
Raw Materials	2,322	44.5	7,526	41.9	7,287	36.2	11,902	43.4	19,294	47.1
Capital Goods	2,153	41.3	8,413	46.8	10,165	50.5	11,315	41.2	17,928	43.7
Consumption Goods	739	14.2	2,029	11.3	2,673	13.3	4,194	15.3	3,716	9.1
Direct	85	1.6	133	0.7	105	0.5	170	0.6	437	1.1
Durable	516	9.9	1,603	8.9	2,171	10.8	3,538	12.9	2,471	6
Non-durable	137	2.6	292	1.6	398	2	485	1.8	808	2
Others	2	-	11	0.1	9	-	21	0.1	41	0.1
Total	5,217	100	17,979	100	20,134	100	27,432	100	40,979	100

Source: Korea International Trade Association.

For imports, all shipments from ASEAN in the early 1990s were for domestic use, but with the industrial advancement of ASEAN and the deepening of investment and trade relations between the two sides, imports for exports increased to 37%. Imports consist mainly of raw materials and capital goods. Although there were no imports of raw materials and capital goods for exports in the 1990s, these increased to 14.6% and 22.1%, respectively, in 2009. As for consumption goods, although most are still for domestic use, the ratio of direct consumption goods is still the highest.

**Table 7: Korea's Import from ASEAN with Characteristic (1990~2009)**

(Unit: US\$ in millions, %)

	1990		1995		2000		2005		2009	
	Volume	Share	Volume	Share	Volume	Share	Volume	Share	Volume	Share
<b>Raw Materials</b>	<b>4,048</b>	<b>79</b>	<b>6,556</b>	<b>64.7</b>	<b>9,228</b>	<b>50.8</b>	<b>14,349</b>	<b>55.1</b>	<b>18,931</b>	<b>55.6</b>
<i>For Exports</i>	0	-	1,579	15.6	2,874	15.8	3,416	13.1	4,970	14.6
<i>For Domestic</i>	4,048	79	4,977	49.1	6,354	35	10,933	41.9	13,961	41
<b>Capital Goods</b>	<b>777</b>	<b>15.2</b>	<b>2,583</b>	<b>25.5</b>	<b>7,792</b>	<b>42.9</b>	<b>9,668</b>	<b>37.1</b>	<b>11,964</b>	<b>35.1</b>
<i>For Exports</i>	0	-	1,371	13.5	4,018	22.1	5,715	21.9	7,512	22.1
<i>For Domestic</i>	777	15.2	1,212	12	3,774	20.8	3,953	15.2	4,453	13.1
<b>Consumption Goods</b>	<b>295</b>	<b>5.7</b>	<b>987</b>	<b>9.7</b>	<b>1,153</b>	<b>6.3</b>	<b>2,046</b>	<b>7.8</b>	<b>3,157</b>	<b>9.3</b>
<i>For Exports</i>	0	-	127	1.3	174	1	392	1.5	345	1
<i>For Domestic</i>	295	5.7	860	8.5	980	5.4	1,654	6.3	2,812	8.3
Direct Consumption Goods	188	3.7	435	4.3	528	2.9	880	3.4	1,395	4.1
<i>For Exports</i>	0	-	13	0.1	10	0.1	32	0.1	93	0.3
<i>For Domestic</i>	188	3.7	422	4.2	518	2.9	848	3.3	1,302	3.8
Durable Consumption Goods	77	1.5	403	4	425	2.3	751	2.9	856	2.5
<i>For Exports</i>	0	-	100	1	131	0.7	345	1.3	226	0.7
<i>For Domestic</i>	77	1.5	304	3	293	1.6	407	1.6	631	1.9
Non-durable Consumption Goods	29	0.6	149	1.5	201	1.1	414	1.6	907	2.7
<i>For Exports</i>	0	-	14	0.1	32	0.2	15	0.1	27	0.1
<i>For Domestic</i>	29	0.6	135	1.3	168	0.9	399	1.5	879	2.6
<b>Others</b>	<b>2</b>	<b>-</b>	<b>11</b>	<b>0.1</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>0</b>	<b>-</b>
<i>For Exports</i>	0	-	0	-	0	-	0	-	0	-
<i>For Domestic</i>	2	-	11	0.1	1	-	1	-	0	-
<b>Total</b>	<b>5,122</b>	<b>100</b>	<b>10,137</b>	<b>100</b>	<b>18,173</b>	<b>100</b>	<b>26,064</b>	<b>100</b>	<b>34,053</b>	<b>100</b>
<i>For Exports</i>	0	-	3,077	30.3	7,066	38.9	9,523	36.5	12,828	37.7
<i>For Domestic</i>	5,122	100	7,061	69.7	11,108	61.1	16,541	63.5	21,226	62.3

Source: Korea International Trade Association.

#### **1.4. Categorization by Item (MTI 3 units)**

There is a higher portion of trade in items related to manufacturing, including IT products, ships and petroleum, with ASEAN countries that have relatively well-developed manufacturing industries such as Singapore, Malaysia, Thailand and the Philippines. On the other hand, in the case of oil-producing countries such as Indonesia and Brunei, there is a high amount of imports of natural resources, including oil and natural gas. Accordingly, the largest product for export by Korea to ASEAN until 2007 was semiconductors, but from 2008, it was replaced by items related to petroleum products such as diesel and gasoline. In fact, petroleum products are the largest export item to Indonesia, which is the biggest oil producer in ASEAN. Meanwhile, there has been an increase in trade of textile products with Myanmar and Cambodia, into which Korean clothing and sewing companies have made significant investment. With Laos, the main exports are related to automobiles.

The major export items of Korea based on MTI 3 digit<sup>1</sup> in 2009 are petroleum (133), semiconductors (831), ships (746) and steel (613), and the major import items are semiconductors (831), natural gas (134), crude oil (131) and coal (132). While exports to ASEAN make up only about 10% of Korea's total export value, items that are on the top of the list of the country's trade with ASEAN have shares higher than 10%, such as petroleum at 27.2% and semiconductors at 18.7%.

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<sup>1</sup> The MTI (Ministry of Trade Industrial) code is used for the standard classification of imports and exports in Korea.

**Table 8: Korea's Main Export Items toward ASEAN with MTI 3 Digit**

(Unit: US\$ in millions, %)

Rank	Code	Article	2006		2007		2008		2009	
			Volume	Share of World	Volume	Share of World	Volume	Share of World	Volume	Share of World
1	133	Petroleum Products	3,731	18.3	5,100	21.3	9,977	26.6	6,256	27.2
2	831	Semiconductors	7,188	19.2	7,381	18.9	6,388	19.5	5,815	18.7
3	746	Ships	1,347	6.1	3,414	12.3	4,965	11.5	3,810	8.4
4	613	Steel	1,477	13.4	1,877	15.2	2,890	18.1	1,997	16.6
5	741	Vehicles	903	2.7	1,002	2.7	1,069	3.1	1,443	5.7
6	214	Plastics	1,039	9.3	1,264	9.7	1,596	10.7	1,429	10.8
7	436	Knit Fabric	780	26.9	1,003	31.7	1,222	37.5	1,243	39.4
8	836	Flat Display	334	2.7	530	3.1	885	4.7	1,189	4.6
9	812	Wireless Telecommunication Terminal Equipment	1,614	6.0	1,501	4.9	1,398	3.9	1,050	3.4
10	813	Computers	806	6.4	945	6.8	731	6.8	529	6.6
Total			32,066	9.9	38,749	10.4	49,283	11.7	40,979	11.3

Source: Korea International Trade Association.

While imports from ASEAN make up about 10% of Korea's total inbound shipments, the top items imported from ASEAN have a much higher share compared to world imports in terms of amount. Therefore, taking into account that Korea's major trade items with ASEAN have a higher percentage than with world trade, it is possible to assess that ASEAN is an important trade partner. Moreover, since the amount and share are both on the rise, it can be expected that the importance of ASEAN as a trade partner of Korea will continue to grow as well.

**Table 9: Korea's Main Import Items from ASEAN with MTI 3 Digit**

(Unit: US\$ in millions, %)

Rank	Code	Article	2006		2007		2008		2009	
			Volume	Share of World	Volume	Share of World	Volume	Share of World	Volume	Share of World
1	831	Semiconductors	6,427	22.9	7,583	24.6	8,420	26.3	8,140	30.6
2	134	Natural Gas	4,911	41.2	4,645	36.7	6,132	31.0	4,209	30.3
3	131	Crude Oil	3,573	6.4	3,022	5.0	4,634	5.4	2,842	5.6
4	132	Coal	974	18.3	1,420	22.0	2,247	17.5	2,435	24.4
5	133	Petroleum Products	955	10.0	1,508	12.6	2,025	11.5	1,663	13.0
6	113	Copper Ore	763	23.2	646	19.3	556	15.8	1,196	36.3
7	813	Computers	1,492	16.5	1,370	13.8	1,219	12.5	1,096	13.6
8	812	Wireless Telecommunication Terminal Equipment	300	8.3	416	10.2	497	9.9	574	13.3
9	622	Copper Products	453	7.9	570	8.6	883	14.0	486	10.9
10	441	Clothes	159	4.4	192	4.6	272	6.7	415	12.8
Total			29,743	9.6	33,110	9.3	40,917	9.4	34,053	10.5

*Source:* Korea International Trade Association.

## **2. KOREA-ASEAN TRADE BY PRODUCTION PROCESS: TRENDS AND FEATURES**

### **2.1. Korea's Exports to ASEAN by Production Process**

When analyzing the structure of Korea's exports to ASEAN by production process, what stands out is that the share of intermediate goods is much higher than that of final goods (see Table 10). This reflects the trading characteristics of ASEAN countries that import intermediate and capital goods from Northeast Asian nations such as Korea, China and Japan, and then produce the final goods and export them to developed economies such as the United States and the EU. However, although the amount of intermediate goods is still high, structural changes in the form of a reducing portion of intermediate goods and an expanding portion of final goods are being detected. For example, while the share of intermediate goods among exports by Korea to ASEAN reached 80.5% in 1998, in 2008 it declined dramatically to 67.2%. In the case of final goods, the portion increased from 18.7% to 31.8%. Despite this, when considering the fact that intermediate goods account for 40% to 50% of Korea's exports to the world, it is evident that intermediate goods' share of the country's exports to ASEAN is still considerably high.

**Table 10: Trend of Export Share of Korea toward ASEAN by Production Process**

(Unit: %)

	Intermediate Goods			Final Goods			Primary Goods
	Semi-finished Goods	Parts & Components	Sub-total	Capital Goods	Consumption Goods	Sub-total	
1998	34.7	45.9	80.5	14.0	4.7	18.7	0.3
1999	32.6	45.7	78.3	14.8	6.0	20.7	0.4
2000	34.5	44.1	78.5	13.8	6.7	20.4	0.5
2001	36.8	36.3	73.2	18.5	7.2	25.8	0.5
2002	35.2	37.1	72.3	20.2	6.5	26.6	0.5
2003	33.2	37.6	70.8	21.0	7.1	28.1	0.4
2004	35.5	37.3	72.8	18.8	7.5	26.3	0.4
2005	36.6	34.2	70.7	20.8	7.5	28.3	0.5
2006	37.4	35.8	73.2	20.2	5.6	25.8	0.5
2007	36.7	32.2	68.9	24.9	5.0	29.9	0.5
2008	40.8	26.4	67.2	27.2	4.6	31.8	0.5

*Note:* Specific gravity does not add up to 100 because there are other products.

*Source:* By the author based on statistics from the UN Comtrade.

While the portion of semi-finished goods among Korea's intermediate goods exports to ASEAN is continuously expanding, the share of parts and components is dropping. The reason for this structural change must be closely analyzed for us to be certain. Meanwhile, it is judged to stem from changes in the role of Southeast Asia in the fragmentation of production by MNCs engaged in manufacture in Korea, China, Japan and Southeast Asia, brought about by the emergence of China as a production base. On the other hand, the weight of capital goods among final goods is also growing, rising sharply from 14.0% in 1998 to 27.2% in 2008.

When examining the structure of Korea's exports to ASEAN by production process, the share of intermediate goods is exceptionally high in most member countries subject to analysis. Additionally, compared to 2000, the portion of semi-finished goods increased overall and the share of parts and components dropped. The portion of intermediate goods (semi-finished goods plus parts and components) dropped in Malaysia, Singapore, Thailand, Myanmar, Cambodia and Laos, but grew in Indonesia, the Philippines and Vietnam. This appears to be related to Korea's recent ODI. In other words, this is because Korean investment is highly active in electronics and machines in Indonesia, the Philippines and Vietnam. In particular, the percentage of semi-finished goods is especially high in Indonesia, Vietnam and Myanmar compared to other countries, and this is judged to be related to these countries recently becoming popular as a processing base. The share of final goods is high in Brunei and Laos, and it has also recently risen sharply in Malaysia and Singapore. While there is a relatively high percentage of capital goods in Singapore and Malaysia, in Brunei consumption goods take up the highest percentage.

**Table 11: Changes of Export Structure of Korea toward ASEAN Countries by Production Process**

(Unit: %)

		Intermediate Goods			Final Goods			Primary Goods
		Semi-finished Goods	Parts & Components	Sub-total	Capital Goods	Consumption Goods	Sub-total	
Indonesia	2000	64.51	16.21	80.72	8.45	10.40	18.85	0.42
	2008	72.95	8.96	81.91	15.43	2.47	17.90	0.18
Malaysia	2000	26.38	59.12	85.50	10.56	3.63	14.19	0.31
	2008	34.86	35.69	70.55	25.69	3.40	29.09	0.37
Philippines	2000	32.41	49.27	81.68	13.56	4.66	18.22	0.10
	2008	51.06	31.38	82.44	12.18	4.87	17.05	0.51
Singapore	2000	20.17	58.19	78.36	16.38	4.70	21.08	0.57
	2008	39.76	26.61	66.37	31.96	1.55	33.51	0.13
Thailand	2000	43.07	35.53	78.60	16.07	5.19	21.26	0.14
	2008	58.47	19.61	78.08	17.64	3.89	21.53	0.40
Brunei	2000	37.87	3.81	41.68	12.11	46.22	58.32	0.00
	2008	18.30	20.92	39.22	28.06	32.72	60.78	0.00
Vietnam	2000	63.34	8.39	71.73	14.65	13.19	27.84	0.43
	2008	70.99	7.15	78.14	13.28	7.96	21.24	0.62
Myanmar	2000	86.34	4.36	90.70	5.30	3.91	9.21	0.09
	2008	71.33	3.65	74.98	14.52	7.86	22.38	2.63
Cambodia	2000	59.10	6.64	65.74	12.02	22.24	34.26	0.00
	2007	52.87	4.90	57.77	22.04	9.45	31.48	10.74
Laos	2000	33.17	19.65	52.82	13.20	33.98	47.18	0.00
	2008	10.57	10.21	20.78	46.43	32.65	79.08	0.14

Note: 1) Specific gravity does not add up to 100 because there are other products.

2) Italics are used when there is no data.

Source: By the author based on statistics from the UN Comtrade.

When examining the structure of Korea's imports from ASEAN countries by production process, the overall share of primary goods (excluding Singapore) rose, and there is a high percentage of intermediate goods (excluding Vietnam and Myanmar). Excluding Singapore, which is a city-state, the increase of import volume and the increase of raw material prices had a big influence on the rise of the share of primary goods. The subject items are mainly energy resources such as oil and natural gas, as well as agricultural and fisheries products. In the case of Brunei and Indonesia, Korea mainly imports oil and natural gas, which allows us to understand the context that belies the dominant share of primary goods. Compared to 2000, the share of intermediate goods in 2008 rose in trade with Malaysia and Singapore. This is especially so concerning the growing share of intermediate goods with Singapore, considered to be the result of intermediary trade. As for the high percentage of semi-finished goods with Indonesia and an exceptionally high percentage of consumption goods with Vietnam, this is judged to be related to investment by Korean companies in these countries. In the case of the MRBCs, excluding Thailand, there is an overall high share of final goods, and this is because the Korean companies that invested in these countries typically take the consumption goods produced there through simple processing and import them back into Korea.

**Table 12: Changes of Import Structure of Korea from ASEAN Countries by Production Process**

(Unit: %)

		Intermediate Goods			Capital Goods			Primary Goods
		Semi-finished Goods	Parts & Components	Sub-total	Capital Goods	Consumption Goods	Sub-total	
Indonesia	2000	66.02	1.64	67.66	1.34	2.15	3.49	28.85
	2008	50.67	1.41	52.08	1.05	4.34	5.39	42.52
Malaysia	2000	28.44	46.09	74.53	9.25	2.28	11.53	13.95
	2008	58.28	18.25	76.53	6.38	2.09	8.47	15.01
Philippines	2000	10.18	64.91	75.09	14.92	7.18	22.10	2.81
	2008	28.13	40.31	68.44	9.02	11.60	20.62	10.94
Singapore	2000	24.83	36.60	61.43	33.39	4.72	38.11	0.47
	2008	18.98	68.87	87.85	7.16	4.37	11.53	0.62
Thailand	2000	27.70	32.95	60.65	17.03	10.96	27.99	11.37
	2008	23.52	21.13	44.65	16.21	16.23	32.44	22.91
Brunei	2001	10.88	<i>0.00</i>	10.88	0.00	0.00	0.00	89.12
	2006	0.00	0.00	0.00	0.00	0.03	0.03	99.97
Vietnam	2000	20.53	4.75	25.28	5.05	57.52	62.57	12.15
	2008	24.00	1.54	25.54	6.43	39.27	45.70	28.75
Myanmar	1992	3.39	<i>0.00</i>	3.39	<i>0.00</i>	75.58	75.58	21.03
Cambodia	2000	45.17	<i>0.00</i>	45.17	0.13	31.56	31.69	23.14
	2008	24.74	0.22	24.96	2.47	62.99	65.46	9.59

Note: 1) Specific gravity does not add up to 100 because there are other products.

2) Italics are used when there is no data.

3) No data for Laos and no data since 1993 for Myanmar.

Source: By the author based on statistics from the UN Comtrade.

## 2.2. ASEAN Countries' Share of Korea's Exports by Production Process

### 2.2.1. Primary goods and final goods

In the case of primary goods, Korea's exports to Southeast Asia, which focused mainly on Singapore, Vietnam and Indonesia in 1998, were diversified to also include Cambodia, the Philippines, Thailand and Malaysia (see Table 13). While the figures for Vietnam have traditionally been the highest, those for the Philippines and Thailand have recently seen rapid growth. The reduction in the share of Singapore is assumed to be due to the fact that exports to many surrounding countries recently began going there directly rather than through Singapore, which served as an intermediary trade port. It is also noticeable that Cambodia's percentage is relatively high.

**Table 13: Portion of Each Country for Korea's Exports toward ASEAN: Primary Goods**

	(Unit: %)		
	1998	2003	2008
Indonesia	18.9	11.4	7.7
Cambodia	13.2	20.5	15.4
Laos	0.0	0.0	0.0
Myanmar	0.2	0.7	3.4
Malaysia	9.8	18.4	11.3
Philippines	2.5	16.7	13.4
Singapore	25.5	14.8	11.3
Thailand	5.6	6.3	12.1
Vietnam	24.3	11.3	25.5
Brunei	0.0	0.0	0.0

*Source:* By the author based on statistics from the UN Comtrade.

Singapore's share of Korea's exports of final goods to ASEAN grew from 33.1% in 1998 to 43.5% in 2008, and it is evident that the dependence on Singapore increased (see Table 14). Among final goods, exports of capital goods have intensified, while Singapore's share of consumption goods has dropped. However, Vietnam's share of Korea's consumption goods exports to Southeast Asia posted significant growth, rising from 24% in 1998 to its highest level of 34% in 2008. As to the percentages of the MRBCs, 20.3% of the total with ASEAN is the figure for capital goods, showing little change since 1998, while for consumption goods it is over 50%.

**Table 14: Portion of Each Country for Korea's Exports toward ASEAN: Final****Goods**

		(Unit: %)		
		1998	2003	2008
Capital Goods	Indonesia	9.2	12.5	11.4
	Cambodia	0.4	0.3	0.6
	Laos	0.0	0.1	0.2
	Myanmar	2.1	1.9	0.3
	Malaysia	22.9	18.3	13.9
	Philippines	11.1	10.7	5.7
	Singapore	36.5	25.6	48.6
	Thailand	10.6	16.6	9.5
	Vietnam	7.2	13.9	9.7
	Brunei	0.0	0.2	0.2
Consumption Goods	Indonesia	15.7	15.2	10.7
	Cambodia	2.8	1.1	1.9
	Laos	0.1	0.2	0.9
	Myanmar	1.1	0.8	1.0
	Malaysia	7.3	28.2	10.8
	Philippines	13.8	8.9	13.3
	Singapore	23.2	17.2	13.8
	Thailand	11.6	9.3	12.3
	Vietnam	23.9	17.8	34.0
	Brunei	0.5	1.4	1.3
Final Goods	Indonesia	10.9	13.2	11.3
	Cambodia	1.0	0.5	0.8
	Laos	0.1	0.1	0.3
	Myanmar	1.9	1.6	0.4
	Malaysia	19.0	20.8	13.4
	Philippines	11.8	10.3	6.8
	Singapore	33.1	23.5	43.5
	Thailand	10.8	14.8	9.9
	Vietnam	11.4	14.9	13.2
	Brunei	0.2	0.5	0.3

Source: By the author based on statistics from the UN Comtrade.

### **2.2.2. Intermediate goods**

Korea's exports of intermediate goods to Southeast Asia have mainly focused on Singapore, Thailand, Vietnam, the Philippines, Malaysia and Indonesia. Even so, the numbers have declined rapidly for Malaysia and the Philippines while increasing for Thailand and Vietnam (see Table 15). As of 2008, the largest share of Korea's exports of intermediate goods to the region went to Singapore (24%), followed by Thailand, Vietnam and Malaysia. For Myanmar and Cambodia, it was a paltry 0.7% and 0.6%, respectively.

As for exports of semi-finished goods among the intermediate goods, the share of Singapore is also decreasing, while those of Thailand and Vietnam are increasing. In fact, by 2008 the shares of Thailand, Vietnam and Indonesia had risen sharply. It is also increasing for Myanmar and Laos but in smaller scope. Meanwhile, in the case of parts and components, Malaysia and Singapore maintain the top positions. Even so, recently the portion of Malaysia has fallen sharply, while that of Singapore has largely increased. The portions are increasing rapidly for Thailand and Vietnam, and remain considerably low for Myanmar and Cambodia.

In conclusion, it is evident that Korea's intermediate goods exports to Southeast Asia are becoming diversified from the early focus on Singapore to also include Malaysia, Thailand, Indonesia and Vietnam. When comparing 2008 to 1998, the shares of Indonesia, Vietnam and Thailand are growing, while those of Malaysia and the Philippines are shrinking. In spite of this, Singapore remains at the top in terms of exports of intermediate goods by Korea to Southeast Asia.

**Table 15: Portion of Each Country in Korea's Exports toward ASEAN:****Intermediate Goods**

(Unit: %)

		1998	2003	2008
Semi-finished Goods	Indonesia	22.6	26.8	20.5
	Cambodia	0.5	0.8	0.9
	Laos	0.1	0.0	0.0
	Myanmar	1.0	1.3	1.1
	Malaysia	9.3	12.1	12.2
	Philippines	14.5	11.5	10.3
	Singapore	19.4	10.2	12.5
	Thailand	14.5	15.3	20.6
	Vietnam	17.9	21.9	21.8
	Brunei	0.3	0.1	0.1
Parts & Components	Indonesia	3.3	11.3	6.8
	Cambodia	0.0	0.1	0.2
	Laos	0.0	0.0	0.1
	Myanmar	0.5	0.1	0.1
	Malaysia	38.4	25.8	19.8
	Philippines	24.0	19.9	15.1
	Singapore	26.4	30.7	41.6
	Thailand	6.0	9.1	10.9
	Vietnam	1.4	2.9	5.4
	Brunei	0.0	0.0	0.1
Intermediate Goods	Indonesia	11.6	18.6	15.1
	Cambodia	0.2	0.4	0.6
	Laos	0.0	0.0	0.0
	Myanmar	0.7	0.7	0.7
	Malaysia	25.9	19.3	15.2
	Philippines	19.9	16.0	12.2
	Singapore	23.4	21.1	23.9
	Thailand	9.7	12.0	16.8
	Vietnam	8.5	11.9	15.3
	Brunei	0.1	0.0	0.1

Source: By the author based on statistics from the UN Comtrade.

### **3. KOREA-ASEAN TRADE BY PRODUCTION PROCESS: INDUSTRY**

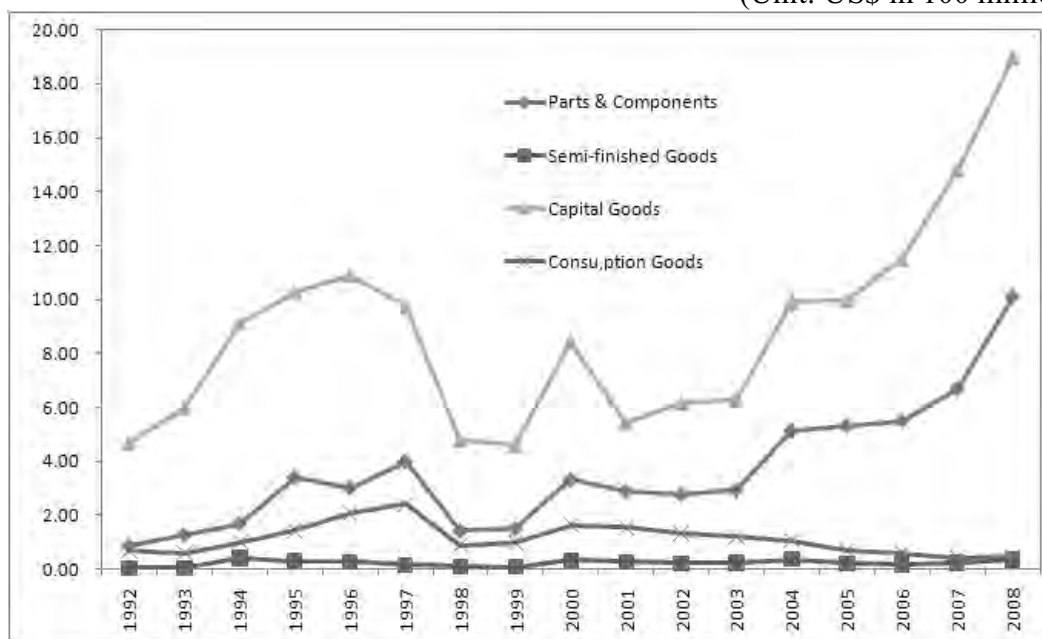
#### **3.1. Machinery Industry**

##### **3.1.1. Machinery and equipment manufacturing industries**

Korea's exports to Southeast Asia in the machinery and equipment manufacturing industries dropped during the East Asian financial crisis and the collapse of the IT bubble, but they have been rising steadily since 2003 (see Figure 1). Coming into the 2000s, a point worth noting is the increase in exports of capital goods and parts and components. Since 2007 after the Korea-ASEAN FTA (KAFTA), there has been a sharp increase in exports of capital goods and parts and components to ASEAN. This was possible through various factors such as the increased economic scale of the two regions, and a closer analysis is warranted to judge whether it is due to the effects of the FTA.

**Figure 1: Korea's Export toward ASEAN by Production Process: Machinery and Equipment Manufacturing Industries**

(Unit: US\$ in 100 millions)



Source: By the author based on statistics from the UN Comtrade.

For the machinery and equipment manufacturing industries, exports consist mostly of capital goods, but their share is dropping as that of parts and components grows steadily. As of 2008, the share of capital goods is 63.6% and that of parts and components is 33.8%. Meanwhile, the share of semi-finished goods and consumption goods is low at about 1%.

In summary, for the machinery and equipment manufacturing industries, it can be said that the fragmentation of production between Korea and ASEAN countries is continuously on the rise.

**Table 16: Share of Korea's Exports toward ASEAN by Production Process:****Machinery and Equipment Manufacturing Industries**

(Unit: %)

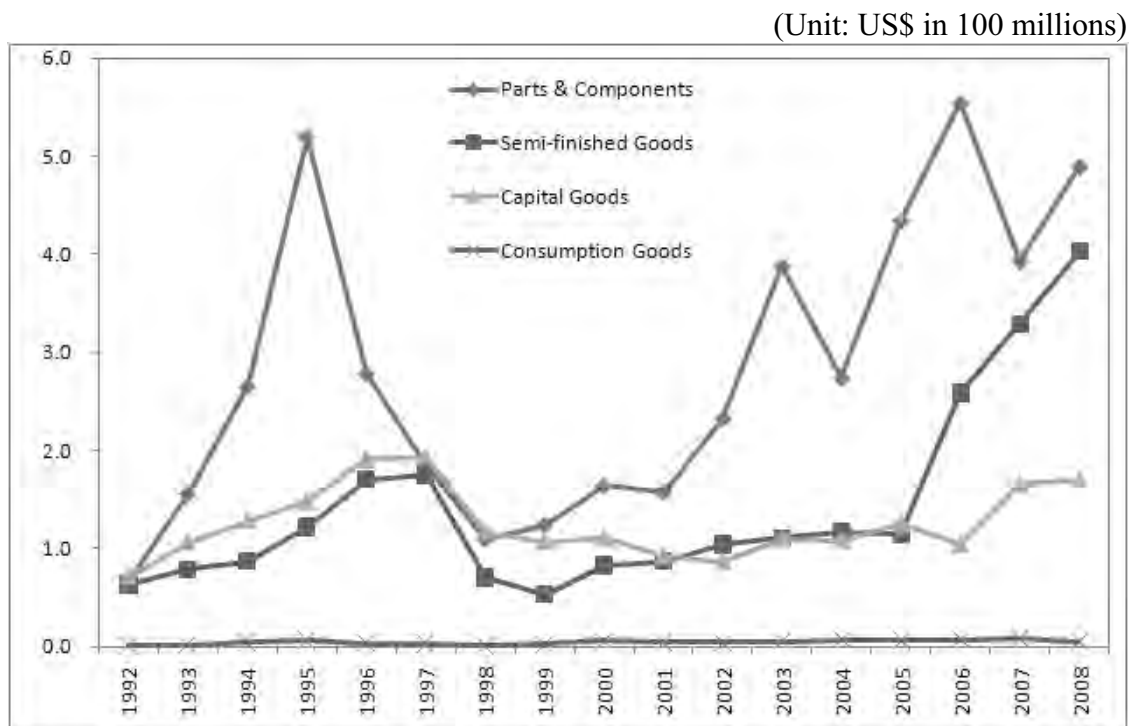
	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	13.8	0.6	74.4	11.1
1993	16.2	0.6	75.7	7.6
1994	13.9	3.4	74.5	8.2
1995	22.1	2.0	66.5	9.4
1996	18.6	1.7	66.9	12.8
1997	24.6	1.0	59.7	14.7
1998	19.9	1.5	66.3	12.3
1999	21.1	1.3	64.0	13.6
2000	24.2	2.4	61.4	12.0
2001	28.5	2.8	53.5	15.2
2002	26.6	2.1	58.6	12.7
2003	27.6	2.3	58.9	11.2
2004	31.1	2.2	60.2	6.4
2005	32.9	1.3	61.5	4.3
2006	31.0	1.0	64.7	3.3
2007	30.2	1.1	66.9	1.8
2008	33.8	1.2	63.6	1.5

Source: By the author based on statistics from the UN Comtrade

### 3.1.2. Electric devices and transformers

Exports of electric devices and transformers to Southeast Asia have continuously increased since 2001, and the East Asian financial crisis marked a turning point for this as well (see Figure 2). Exports of intermediate goods are much higher than those of capital goods, and parts and component exports have increased since 2001. As for semi-finished goods, they began a rapid increase in 2005. Since KAFTA came into effect in 2007, exports of parts and components and semi-finished goods to ASEAN are again rising.

**Figure 2: Korea's Export toward ASEAN by Production Process: Electric Devices and Transformers**



Source: By the author based on statistics from the UN Comtrade.

Most exports in the electric device and transformer industries consist of parts and components and semi-finished goods. As of 2008, the share of parts and components is 45.8% and that of semi-finished goods is 37.8%.

**Table 17: Share of Korea's Exports toward ASEAN by Production Process:**

**Electric Devices and Transformers**

	(Unit: %)			
	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	32.9	31.3	35.2	0.6
1993	45.5	23.0	31.0	0.5
1994	54.7	18.0	26.4	1.0
1995	65.3	15.3	18.6	0.8
1996	43.3	26.5	29.7	0.6
1997	33.1	31.6	34.8	0.5
1998	36.7	23.5	39.3	0.4
1999	43.4	18.6	37.2	0.8
2000	45.1	22.8	30.4	1.7
2001	46.2	25.5	26.9	1.5
2002	54.3	24.3	20.3	1.0
2003	63.2	18.0	17.9	0.9
2004	54.1	23.1	21.4	1.4
2005	63.8	16.9	18.4	1.0
2006	60.0	27.9	11.3	0.8
2007	43.9	36.7	18.5	0.9
2008	45.8	37.8	15.9	0.5

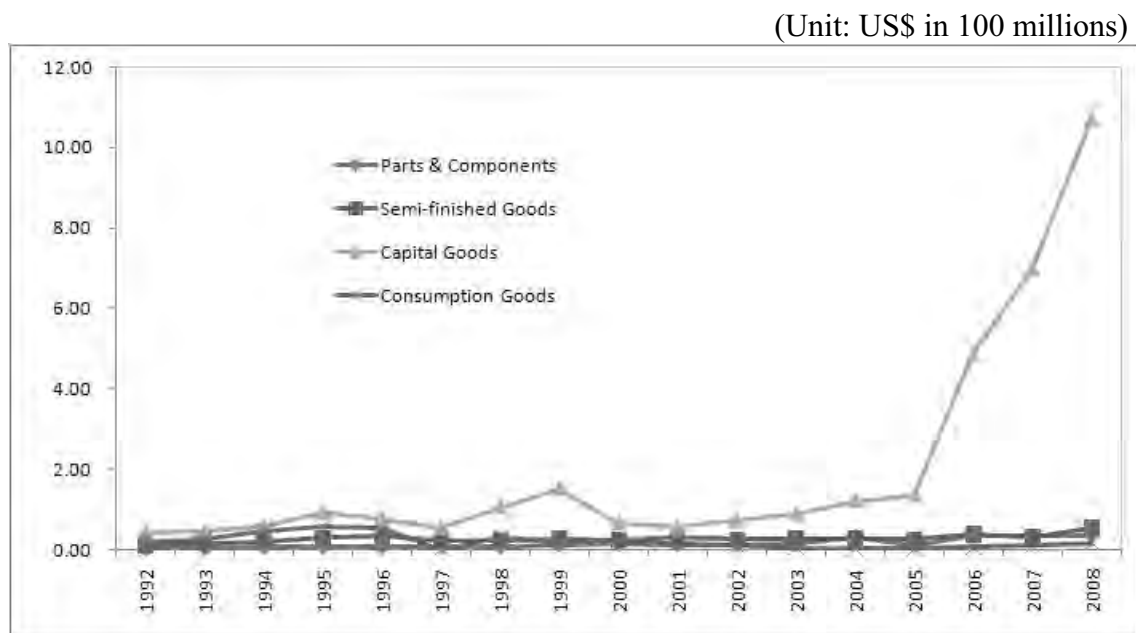
*Source:* By the author based on statistics from the UN Comtrade

In other words, in the case of electric devices and transformers, the share of semi-finished goods is on the increase, while that of final goods is dropping. This means a fragmentation of production between Korea and ASEAN is in progress.

### 3.1.3. Medical precision, optical devices and clock manufacturing industries

Exports by Korea’s medical precision, optical devices and clock manufacturing industries to Southeast Asia remain low, despite a rapid increase since 2005 (see Figure 3). While intermediate goods are low, capital goods have recorded rapid growth. Since the conclusion of KAFTA in 2007, exports to ASEAN have greatly increased, but closer analysis is necessary to judge whether this is due to the effects of the FTA.

**Figure 3: Korea’s Export toward ASEAN by Production Process: Medical Precision, Optical Devices and Clock Manufacturing Industries**



Source: By the author based on statistics from the UN Comtrade.

Most products exported by the medical precision, optical devices and clock manufacturing industries are capital goods, and as of 2008, they took up 90.9% of the total. During the mid-1990s, the share of consumption goods and semi-finished goods increased slightly, but coming into the 2000s, the share of capital goods grew continuously. In other words, for the case of the medical precision, optical devices and clock manufacturing industries, the share of intermediate goods dropped greatly, and it can be said that the fragmentation of production for the two regions has not been achieved.

**Table 18: Share of Korea's Exports to ASEAN by Production Process: Medical Precision, Optical Devices and Clock Manufacturing Industries**

(Unit: %)

	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	3.6	15.3	56.1	25.0
1993	4.7	17.1	49.3	28.8
1994	4.9	15.5	44.0	35.7
1995	4.2	15.9	49.6	30.3
1996	4.0	20.4	44.0	31.6
1997	9.4	24.6	64.7	1.4
1998	4.4	14.2	62.4	19.0
1999	6.1	12.9	71.3	9.7
2000	10.7	19.3	53.6	16.4
2001	10.2	26.2	49.7	13.9
2002	10.5	20.8	59.2	9.5
2003	11.1	19.3	66.1	3.5
2004	17.6	14.7	65.8	2.0
2005	5.7	14.8	77.2	2.2
2006	6.0	6.7	86.1	1.2
2007	4.5	4.0	90.1	1.5
2008	3.0	4.7	90.9	1.4

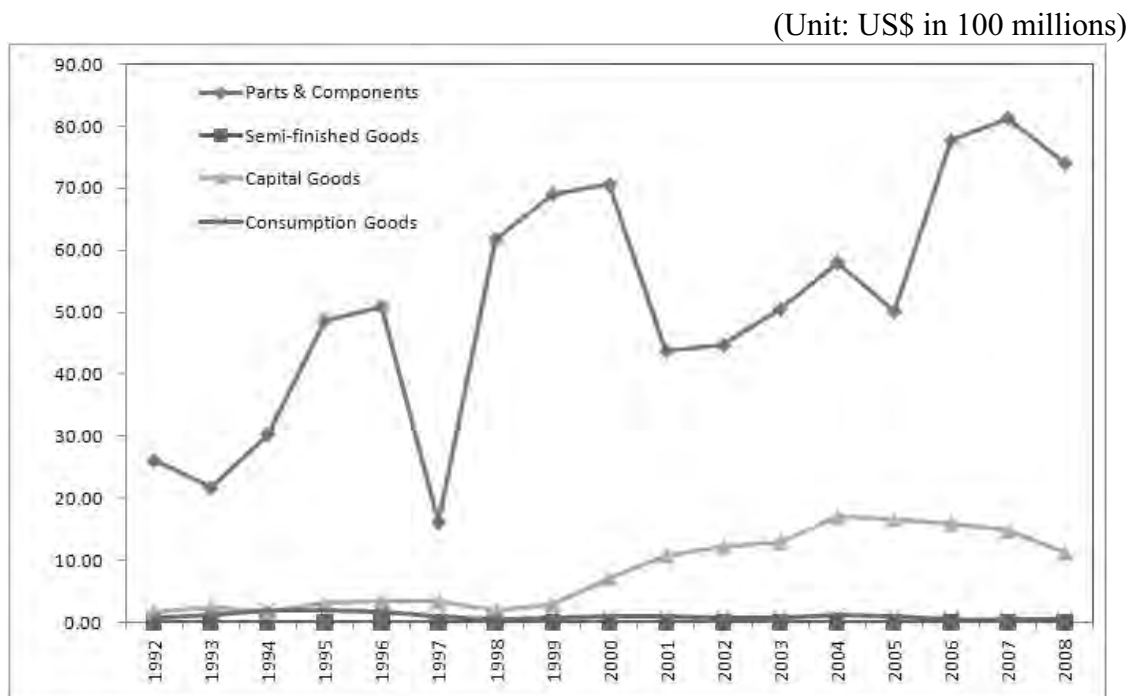
Source: By the author based on statistics from the UN Comtrade.

## 3.2. Electronics Industry

### 3.2.1. Electronic parts, video and audio, and communication equipment industries

Exports in the electronic parts, video and audio, and communication equipment industries to ASEAN have shown fluctuation, but are on the rise in the long-term (see Figure 4). There was a slight decline due to the East Asian financial crisis and the IT bubble burst, and a drop in 2007. Closer analysis is necessary to identify whether this is due to KAFTA or because of the global financial crisis.

**Figure 4: Korea's Exports to ASEAN by Production Process: Electronic Parts, Video and Audio, and Communication Equipment Industries**



Source: By the author based on statistics from the UN Comtrade.

Most exports in the electronic parts, video and audio, and communication equipment industries consist of parts and components. Since 2001, however, the share of capital goods has risen slightly. In 2008, parts and components accounted for 86.4%, and thus it can be said that the fragmentation of production between the two regions is highly active for the electronic parts, video and audio, and communication equipment industries.

**Table 19: Share of Korea's Exports toward ASEAN by Production Process:**

**Electronic Parts, Video and Audio, and Communication Equipment Industries**

(Unit: %)

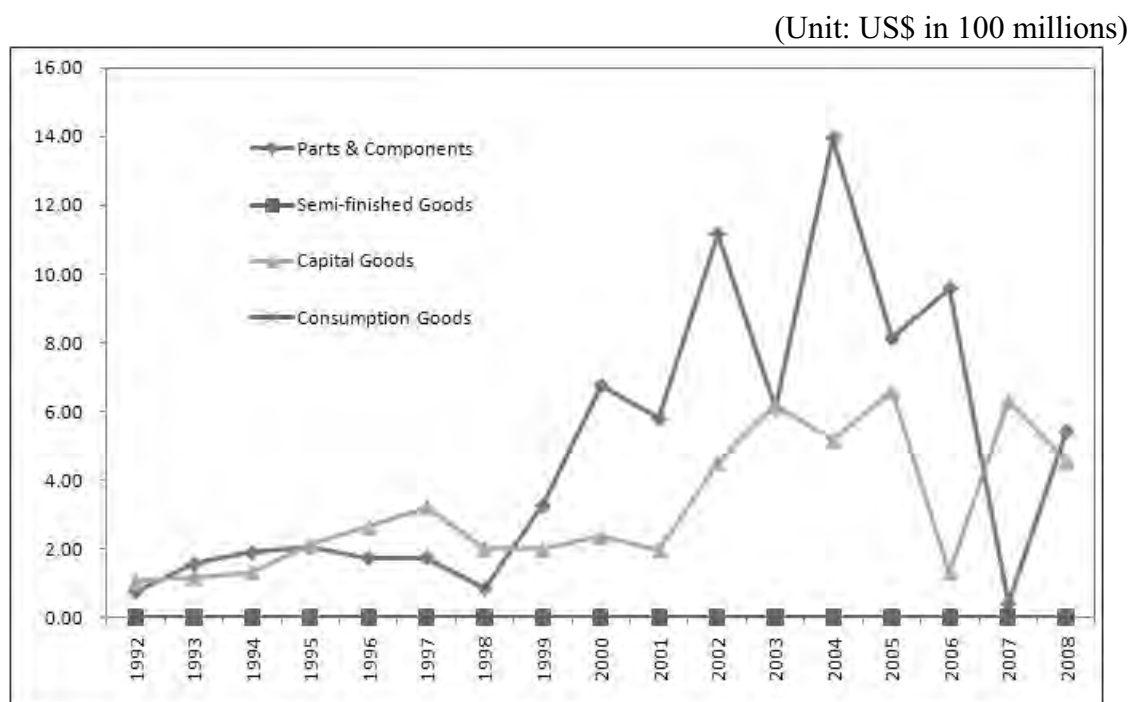
	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	92.0	0.0	5.7	2.3
1993	85.9	0.0	9.9	4.2
1994	89.7	0.0	4.8	5.6
1995	90.8	0.0	5.6	3.5
1996	91.1	0.0	6.1	2.9
1997	78.7	0.0	16.7	4.6
1998	96.4	0.0	2.9	0.7
1999	95.0	0.0	4.0	1.1
2000	89.9	0.0	9.0	1.1
2001	79.1	0.0	19.5	1.5
2002	77.6	0.0	21.2	1.3
2003	78.6	0.0	20.2	1.2
2004	76.2	0.0	22.4	1.4
2005	74.1	0.0	24.6	1.4
2006	82.5	0.0	17.0	0.6
2007	84.3	0.0	15.4	0.4
2008	86.4	0.0	13.1	0.5

*Source:* By the author based on statistics from the UN Comtrade.

### 3.2.2. Computer and office appliance manufacturing industries

Exports in the computer and office appliance manufacturing industries to ASEAN were on the rise up to 2005, but since then have begun to decline (see Figure 5). There are almost no exports of semi-finished goods and consumption goods, and one feature of note is that the rate of increase for parts and components and capital goods has a trade-off relationship.

**Figure 5: Korea's Exports to ASEAN by Production Process: Computer and Office Appliance Manufacturing Industries**



Source: By the author based on statistics from the UN Comtrade.

Most exports in the computer and office appliance manufacturing industries were parts and components and capital goods up until 1998, and the share of parts and components from the East Asian financial crisis to 2006 was very high. The portion of

parts and components dropped since then, and as of 2008 was 54.2%, while capital goods accounted for 45.8%.

Accordingly, in the case of the computer and office appliance manufacturing industries, there has been slight activity in the fragmentation of production between Korea and ASEAN, and it is evident that this has decreased since 2006.

**Table 20: Share of Korea's Exports toward ASEAN by Production Process:**

**Computer and Office Appliance Manufacturing Industries**

(Unit: %)

	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	41.7	0.0	58.3	0.0
1993	57.5	0.0	42.5	0.0
1994	58.8	0.0	41.2	0.0
1995	48.9	0.0	51.1	0.0
1996	39.7	0.0	60.3	0.0
1997	35.1	0.0	64.9	0.0
1998	29.5	0.0	70.5	0.0
1999	62.1	0.0	37.9	0.0
2000	74.2	0.0	25.8	0.0
2001	74.6	0.0	25.4	0.0
2002	71.3	0.0	28.7	0.0
2003	49.6	0.0	50.4	0.0
2004	73.0	0.0	27.1	0.0
2005	55.2	0.0	44.8	0.0
2006	87.9	0.0	12.1	0.0
2007	6.1	0.0	93.9	0.0
2008	54.2	0.0	45.8	0.0

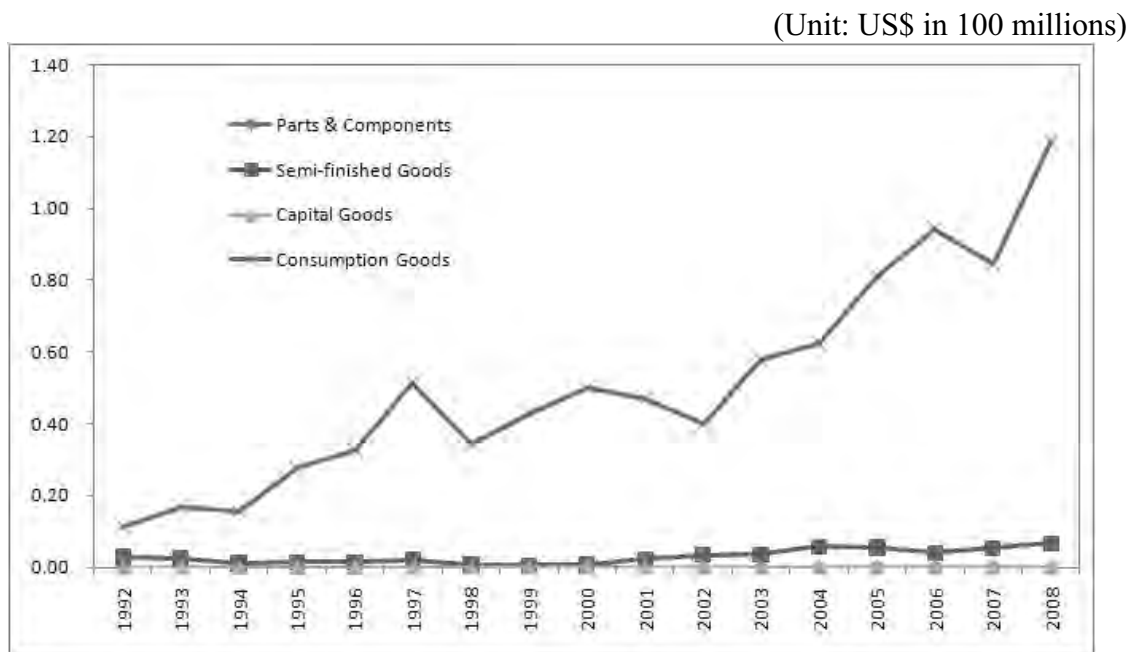
*Source:* By the author based on statistics from the UN Comtrade.

### 3.3. Sewing, Fiber and Clothing Industries

#### 3.3.1. Clothes sewing and fur clothing manufacturing industries

Exports in the clothes sewing and fur clothing manufacturing industries to ASEAN have continuously increased since 2002 (see Figure 6). ASEAN is a popular processing base for fibers and sewing, but this is highly dependent on imports for clothing and fur clothing. Since KAFTA went into effect in 2007, exports to ASEAN have risen sharply, but closer analysis is necessary to assess whether this is due to the effects of the FTA.

**Figure 6: Korea's Export toward ASEAN by Production Process: Clothes Sewing and Fur Manufacturing Industries**



Source: By the author based on statistics from the UN Comtrade.

Most exports in the clothes sewing and fur clothing manufacturing industries are made up of consumption goods. As of 2008, the share of consumption goods was 94.6%, and this represents that there is no fragmentation of production between the two regions.

**Table 21: Share of Korea's Exports toward ASEAN by Production Process:  
Clothes Sewing and Fur Manufacturing Industries**

	(Unit: %)			
	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	0.0	20.7	0.0	79.3
1993	0.0	12.5	0.0	87.5
1994	0.0	6.8	0.0	93.2
1995	0.0	4.9	0.0	95.1
1996	0.0	4.4	0.0	95.6
1997	0.0	3.7	0.0	96.3
1998	0.0	2.2	0.0	97.8
1999	0.0	1.1	0.0	98.9
2000	0.0	1.5	0.0	98.5
2001	0.0	4.7	0.0	95.3
2002	0.0	7.9	0.0	92.1
2003	0.0	5.9	0.0	94.1
2004	0.0	8.5	0.0	91.5
2005	0.0	6.4	0.0	93.6
2006	0.0	4.1	0.0	95.9
2007	0.0	5.9	0.0	94.1
2008	0.0	5.4	0.0	94.6

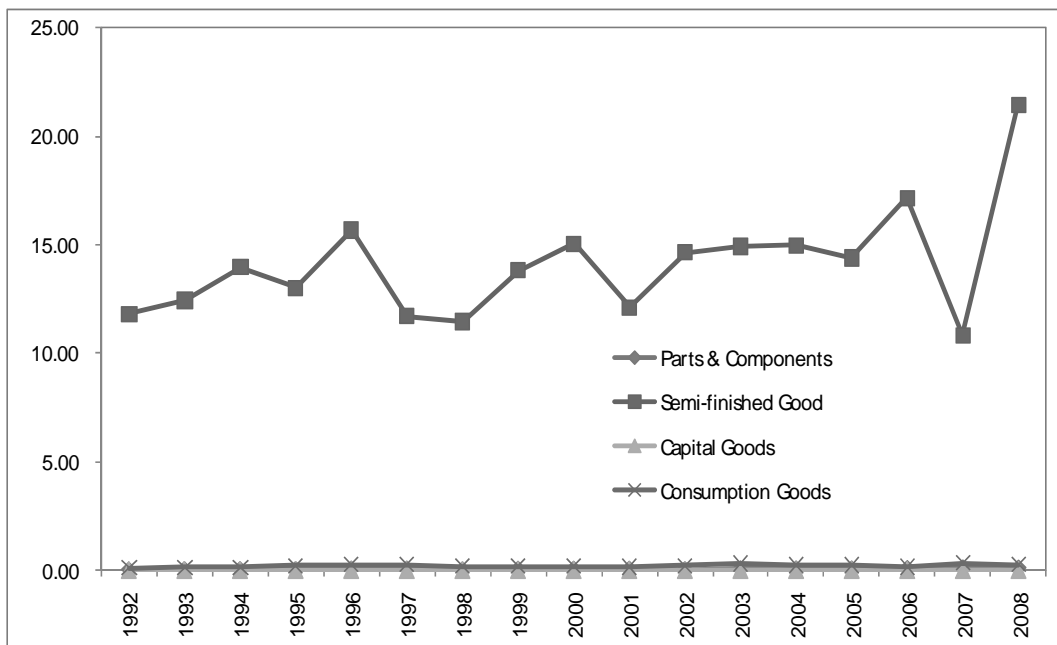
*Source:* By the author based on statistics from the UN Comtrade.

### 3.3.2. Fiber products manufacturing industry (excluding clothes sewing)

Exports in the fiber products manufacturing industry (excluding clothes sewing) to ASEAN remained constant through 2006 and since 2007 have been on the rise (see Figure 7). In particular, most are semi-finished goods, and this is due to the fact that ASEAN is popular as a processing base for fibers and sewing, and also because many Korean companies have actively entered those countries. However, closer analysis is necessary to judge whether the increased exports since 2007, when KAFTA went into effect, was due to the effects of the FTA.

**Figure 7: Korea's Exports to ASEAN by Production Process: Fiber Products Manufacturing Industry (excluding clothes sewing)**

(Unit: US\$ in 100 millions)



Source: By the author based on statistics from the UN Comtrade.

Most exports in the fiber products manufacturing industry (excluding clothes sewing) are semi-finished goods. As of 2008, the share of semi-finished goods was 98.4%. This shows that the fragmentation of production between the two regions is active in the case of the fiber products manufacturing industry.

**Table 22: Share of Korea's Exports to ASEAN by Production Process: Fiber Products Manufacturing Industry (excluding clothes sewing)**

	(Unit: %)			
	Parts & Components	Semi-finished Goods	Capital Goods	Consumption Goods
1992	0.1	99.0	0.0	0.9
1993	0.2	98.9	0.0	0.9
1994	0.2	99.0	0.0	0.8
1995	0.2	98.3	0.0	1.4
1996	0.3	98.2	0.0	1.4
1997	0.5	97.6	0.0	1.9
1998	0.1	98.4	0.0	1.5
1999	0.3	98.6	0.0	1.1
2000	0.3	98.6	0.0	1.1
2001	0.4	98.5	0.0	1.2
2002	0.2	98.5	0.0	1.3
2003	0.4	97.7	0.0	1.9
2004	0.4	98.1	0.0	1.5
2005	0.4	98.2	0.0	1.4
2006	0.5	98.8	0.0	0.8
2007	1.0	96.3	0.0	2.7
2008	0.5	98.4	0.0	1.1

*Source:* By the author based on statistics from the UN Comtrade.

## **4. ASSESSMENT AND POLICY RECOMMENDATIONS**

### **4.1. Assessment**

When examining the results from analysis of the intermediate goods trade between Korea and ASEAN, we see that the intermediate goods exports of Korea are diversifying from a focus on Singapore spreading out now to Malaysia, Thailand, Indonesia and Vietnam. This is a very encouraging sign. In particular, based on each country's share of exports of intermediate goods to ASEAN, the importance of Indonesia, Vietnam and Thailand is rising, while the shares of Malaysia and the Philippines are dropping. This can be considered evidence of structural changes connected with the formation of a production network of Korean companies within ASEAN.

As for exports of intermediate and final goods to ASEAN, the level of dependency on Singapore has intensified, and it is necessary to judge whether such a trend is advisable in terms of export stability with ASEAN. To judge this, there is a need to closely analyze exports to Singapore by categorizing exports directly to Singapore and exports made as intermediary trade.

In the case of the MRBCs, which are rising as an emerging market, there has been little trade with Korea despite high growth potential, although Thailand and Vietnam could be considered exceptions. However, in the case of intermediate goods exports from Korea, a high share is shown due to the substantial level of ODI by Korea. While there has been a high share of capital goods in Laos recently, other countries have a substantial share in semi-finished goods. Meanwhile, in the case of Korea's imports, there is a high share of primary goods and capital goods. This is due to the abundant

natural resources of these countries (excluding Thailand) and exports to Korea by Korean companies located there.

Results from analysis of data on Korea's exports to ASEAN by industry show that for the machine industry and the electronics industry, the share of intermediate goods is high and that of intermediate goods in the fiber and clothing industries is relatively low. In other words, while the fragmentation of production between Korea and ASEAN is active in the machine industry and the electronics industry, it is low in the fiber and clothing industries. To be more exact, in the case of the machinery and equipment manufacturing industries, the electric device and transformer industries (excluding medical precision, optical devices and clock manufacturing), the share of intermediate goods is high. Therefore, the fragmentation of production between the two regions is highly active. However, in the case of the machinery and equipment manufacturing industries, exports of intermediate goods are growing continuously, although the level is still relatively low. In the case of the electric device and transformer industries, most trade between the two regions is made up of intermediate goods, and therefore there is a close relationship with fragmentation of production. For the electronics industry, in the case of the electronic parts, video and audio, and communication equipment industries, most of Korea's exports to ASEAN are intermediate goods, and therefore are related to fragmentation of production. In the case of the computer and office appliance manufacturing industries, the share of intermediate goods is either dropping or stagnant.

Meanwhile, in the case of the sewing, fiber and clothing industries, there is a large difference in the level of fragmentation of production depending on the industry. Because there is little export of intermediate goods from the clothes sewing and fur

clothing manufacturing industries, there is almost no fragmentation of production. However, because the share is very high for the fiber products manufacturing industry (excluding clothing), it is evident that the level of fragmentation of production is high.

#### **4.2. Policy Recommendations for Expansion on Economic Cooperation**

ASEAN's importance in Korea's exports is still high even with the intensification of export dependency on China, and this suggests the need to continuously strengthen the external economic policies of ASEAN. First, we should pay attention to the fact that during the past 10 years, Korea's market share in ASEAN has dropped slightly and become stagnant. Above all else, economies such as Korea, China, Japan and recently the EU have been pursuing FTAs with ASEAN. Therefore, it can be expected that competition among different countries for the ASEAN market will heat up.

Next, although the relative importance of CLMV countries is still low compared to the ASEAN 6 (Indonesia, Malaysia, the Philippines, Singapore, Thailand and Brunei), with the quick growth of CLMV countries there is a need to strengthen efforts by companies and the government to increase their market share. In Cambodia, Laos and Myanmar, which are emerging markets not unlike Vietnam, Korea's market share is very low, and therefore there is a need to analyze why, and to establish a strategy to increase market share. The fact that the market share is quickly being reduced in Vietnam is something that we should particularly be worried about.

Third, it can be seen from the production process assessment that Korea's exports to ASEAN are excessively reliant on intermediate goods, and therefore more attention should be given to expanding exports of consumption goods for local consumers. The fact that intermediate goods trade accounts for most of Korea's exports is the result of

Korea establishing a production network with ASEAN countries, and therefore cannot be considered negative. However, there is a need for greater interest in ASEAN not only as a frontline base for exports but also as a market for final goods sales in the long run.

Lastly, in order for the MRBCs to further promote intermediate goods trade with Korea, they must foster labor-intensive industries that can utilize the abundant labor force, attract more FDI through improved investment environments, cultivate private domestic sectors, and improve the quality of workers through better education and training. Through such processes, the MRBCs can advance their industrialization and by participating in the East Asian production network, they will be able not only to upgrade their national economies but also offer the opportunity to accelerate economic integration within East Asia.

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