2

Bilateral Trade and Investment

As in the case of the US-Mexico relationship, free trade between the United States and Korea would create a partnership between countries with great disparities in size and economic development. The United States has the world's largest economy, with a GDP in 2000 of almost $10 trillion. The Korean economy is the world's 13th largest economy, with a GDP in 1999 of about $406 billion—almost as large as Mexico's but less than 5 percent of the US economy's size (table 2.1).

Compared with Mexico, Korea's population is smaller but relatively richer. Korea has 47 million people, half as many as Mexico, but its per capita GDP is almost twice as large as Mexico's. In terms of population, the United States has 273 million people, almost six times larger than Korea's. US per capita GDP was about $34,000 while that of Korea was about $8,800 in 1999.[1] The United States is the world's largest trader, with about $1.7 trillion of merchandise trade in 1999. Korea is the 11th largest economy in terms of trade volume; Korea's merchandise trade totaled $265 billion in 1999, or about one-sixth of US trade. The two countries are distant partners separated by the Pacific Ocean, with 7,000 miles between their capital cities, Seoul and Washington.

1. However, using current purchasing-power parities (ppp) calculated by the OECD, the per capita GDP of Korea is about $16,000, almost half of that of the United States.

Table 2.1 Comparison of US, Korean, and Mexican economies, 1999

Indicator	United States	Korea	Mexico
Nominal GDP (millions of dollars)	9,256,100	406,940	483,353
Population (millions)	273	47	104
Per capita GDP (dollars)			
At market exchange rate	33,900	8,800	4,900
At purchasing power parity*	33,900	15,900	8,100
Trade volume (millions of dollars)	1,754,340	264,495	278,767
Exports	695,210	144,745	136,703
Imports	1,059,130	119,750	142,064

* Based on OECD calculations.

Sources: IMF, *International Financial Statistics*, August 2000; OECD, *OECD in Figures: Statistics for Member Countries*, 2000.

Historically, there have been few instances of developed and developing countries successfully entering into reciprocal free trade agreements. NAFTA is the most prominent example. The Mexico-European Union FTA and the Canada-Chile FTA are two other relevant cases. In addition, negotiations are under way to link 34 developed and developing countries in a Free Trade Area of the Americas. In each case, the developing country undertook substantial economic reforms *before* engaging in free trade talks with industrial country partners. For example, Mexico pursued intensive trade and macroeconomic reforms for five years before it felt prepared to enter into FTA talks with the United States. Mexico's homework paid off; it has successfully carried out its FTA obligations, managed a turbulent adjustment to freer trade (exacerbated by a severe currency crisis at the end of the first year of NAFTA implementation), and subsequently generated robust growth since 1996.

Table 2.1 shows that Korea and Mexico have similar levels of trade and GDP but that Korea is more developed in terms of per capita GDP. Like Mexico in the late 1980s, Korea has pursued important economic reforms (though perhaps not as steadfastly as Mexico) and deepened its democratic processes. Thus there is no overriding reason for Korea to be intimidated by the difference in economic standing if it were to pursue an FTA with the United States.

To reinforce this point, we assessed Korea's ''FTA readiness'' using indicators developed by Hufbauer and Schott (1994) in their examination of economic integration among countries in the Western Hemisphere. Using the same methodology, table 2.2 compares the FTA readiness indicators for major trading countries in the Asia Pacific. Overall, Korea's FTA readiness is slightly worse than that of other developed countries in the region but is comparable to that of Mexico and Chile, which had

Table 2.2 FTA readiness indicators for major trading countries in the Asia Pacific[a]

Country	Price stability[b]	Budget discipline[c]	National saving[d]	External debt[e]	Currency stability[f]	Reliance on trade taxes[g]	Policy sustainability[h]	Market-oriented policies[i]
Asia Pacific								
Australia	5	5	3	3	5	5	5	5
China	5	5	5	5	5	3	1	1
Japan	5	2	4	2	3	5	4.5	4
Korea	**5**	**5**	**5**	**5**	**3**	**4**	**4**	**3**
New Zealand	5	5	3	4	5	5	5	5
Singapore	5	5	5	5	5	5	3.5	5
Latin America								
Mexico	3	5	4	5	3	4	3.6	5
Chile	4	5	3	5	5	3	3.9	5

a. Readiness for economic integration is scored against a set of macroeconomic indicators for the 1990s, as in Hufbauer and Schott (1994). Adapted eight indicators are price stability, budget discipline, national saving, external debt, currency stability, reliance on trade taxes, policy sustainability, and market-oriented policies. Some of these indicators may not be meaningful for developed countries. For example, Japan's external debt score is low, but Japan is, in fact, a net creditor country. Generally, 3-year moving averages of numerical data are used (usually 1996, 1997, 1998).

b. Price stability is evaluated in terms of consumer price fluctuations in each country. A score of 5 is awarded to countries that maintained average inflation rates between zero and 5 percent over the 3-year evaluation period (1996-98), a score of 4 for inflation between 5 and 20 percent, a score of 3 for 20 to 50 percent, a score of 2 for 50 to 100 percent, and a score of 1 for 100 to 200 percent.

c. Budget discipline is evaluated in terms of the public deficit (or surplus) as a percentage of GDP. A score of 5 is awarded to countries with a 1996-98 3-year moving-average deficit of less than 2.5 percent of GDP or a surplus. A score of 4 is awarded for a deficit of 2.5 to 4 percent, a score of 3 for a deficit of 4 to 6 percent, a score of 2 for a 6 to 8 percent deficit, 1 for 8 to 10 percent, and a score of zero for a deficit greater than 10 percent.

d. All figures represent gross national saving rates as a percentage of GDP. A score of 5 is awarded to over 30 percent, 4 to 24 to 30 percent, 3 to 18 to 24 percent, 2 to 12 to 18 percent, 1 to 6 to 12 percent, and 0 for a gross saving to GDP ratio of less than 6 percent.

e. The total external debt (public and private) is assessed as a percentage of exports of goods and services as of the end of 1998 (as of the end of 1997 for Korea and China). A score of 5 is awarded to less than 150 percent debt-to-exports countries, a score of 4 for a debt ratio between 150 and 220 percent, 3 for a 220 to 290 percent debt ratio, 2 for a 290 to 360 percent ratio, and a score of 1 for a 360 to 430 percent debt-export ratio.

(table continued next page)

Table 2.2 FTA readiness indicators for major trading countries in the Asia Pacific *(continued)*

f. For currency stability, the focus is on real exchange rates. High variability in a country's real exchange rate rapidly changes the competitive position of the traded goods sector, alternatively creating conditions of boom and bust. For each nation, we calculate the standard deviation of the 3-year moving averages of the real effective exchange rate index over 1996-98. Real exchange rate fluctuations of less than 5 percent are scored 5, fluctuations of 5 to 10 percent are scored 3, fluctuations of 10 to 30 percent are scored 1, and fluctuations greater than 30 percent are scored 0.

g. To receive a score of 5, a country has to derive less than 4 percent of its public revenue from taxes on international trade on a 3-year moving average (1996-98). Reliance of 4 to 8 percent merits a score of 4; 8 to 12 percent, a score of 3; 12 to 16 percent, a score of 2; 16 to 20 percent, a score of 1; and greater than 20 percent, a score of 0.

h. For policy sustainability, the degree of the nation's democracy and civil/political rights is used. To evaluate the functioning of democracy and civil/political rights, the average of Freedom House ratings for each country throughout the decade and human development figures from the United Nations Development Program are used. The worst score on the Freedom House scale, 7, corresponds to 0 in our scale, 6 corresponds to 1, 5 to 2, 4 to 3, 3 to 3.5, 2 to 4, and the best score on their scale, 1, corresponds to 5 in our scale. As to the human development indicator (HDI) from the UNDP, a score of 5 is given to an index over 0.9, 4 to 0.8 to 0.9, 3 to 0.7 to 0.8, 2 to 0.6 to 0.7, 1 to 0.5 to 0.6, and 0 for the index under 0.5. The total score for the table is the simple average of the two scores.

i. Figures are based on a subjective analysis of market-oriented policies. The information is from various publications and news sources.

Sources: IMF, *International Financial Statistics,* Yearbook 1999 and March 2000, *Government Finance Statistics,* Yearbook 1999, and *World Economic Outlook,* October 1999; OECD, *OECD Economic Outlook,* 1999; World Bank, *Global Development Finance,* 1999; United Nations Development Program (UNDP), *Human Development Indicators,* 1999; Freedom House, *Freedom in the World: The Annual Survey of Political Rights and Civil Liberties 1998-99,* 1999; APEC Secretariat; http://www.apecsec.org; Hufbauer and Schott (1994).

the highest scores among Latin American countries in the Hufbauer and Schott study.

Although Korea seems ready to enter into an FTA, many people could question the feasibility of an FTA between the United States and Korea from the standpoint of the huge physical distance separating them. However, geographic proximity is no longer as important a factor for economic integration as in the past due to the rapid development of transportation and communications technology in recent years. Instead, we assess the revealed readiness for integration, indicated by the existing level of trade and investment linkages between the two economies.

Trade and Investment Flows

Meaningful economic relations between the United States and Korea began in the late 1940s after World War II. As the Korean economy grew, economic relations between the two countries evolved from a donor-recipient relationship involving US aid in the 1950s to a major trading partnership in recent years. The two countries share a very important economic relationship.

For Korea, the United States is its most important trading partner (in both exports and imports). In 1999 Korea's exports to the United States accounted for 20.5 percent of total Korean exports, the highest among Korea's trading partners, followed by Japan with an 11 percent share (table 2.3). To be sure, the US share is well below its recent peak level of 40 percent in 1986, but the US market has become more important again since Korea's economic crisis.[2] In the 1990s, Korean exports to the United States accounted for more than 6 percent of Korea's GDP. Imports from the United States also rank first in Korea's total imports. In 1999 the US share in total Korean imports was about 21 percent, followed by Japan with a 20 percent share. The US import share has consistently been between 20 and 28 percent since the early 1970s. Japan formerly ranked highest in total Korean imports; its share peaked at 41 percent in 1972 but since has declined and has been superceded by the United States as the number-one source of Korean imports since 1996.

Naturally, Korea is not as important a trading partner for the United States as the United States is for Korea.[3] Nevertheless, Korea still ranks

2. A similar trend applies to Korean exports to Japan. The share of Korean exports to Japan peaked at 39 percent of total Korean exports in 1973 and since has declined steadily. In both cases, the trend reflects Korea's diversification of its export market, particularly to China, which now takes up about 10 percent of Korean exports.

3. Neither has trade assumed such a large portion of the US economy. US merchandise exports account for less than 8 percent of GDP, compared with more than 35 percent for Korea (see table 2.1).

Table 2.3 Trade shares of major trading partners of Korea, 1971-99
(percent of total)

	Exports to			Imports from		
Year	United States	Japan	China	United States	Japan	China
1971	49.8	24.5	—	27.5	39.8	—
1972	47.1	25.2	—	25.7	40.9	—
1973	31.7	38.5	—	28.3	40.7	—
1974	33.5	30.9	—	24.8	38.2	—
1975	30.2	25.4	—	25.9	33.5	—
1976	32.3	23.4	—	22.4	35.3	—
1977	31.0	21.4	—	22.6	36.3	—
1978	31.9	20.7	—	20.3	40.0	—
1979	29.1	22.3	—	22.6	32.7	—
1980	26.3	17.4	—	21.9	26.3	—
1981	26.6	16.5	—	23.2	24.4	—
1982	28.6	15.5	—	24.6	21.9	—
1983	33.7	13.9	—	24.0	23.8	—
1984	35.8	15.7	—	22.4	24.9	—
1985	35.5	15.0	—	20.8	24.3	—
1986	40.0	15.6	—	20.7	34.4	—
1987	38.7	17.8	0.4	21.4	33.3	2.1
1988	35.3	19.8	0.6	24.6	30.7	2.7
1989	33.1	21.6	0.7	25.9	28.4	2.8
1990	29.8	19.4	0.9	24.3	26.6	3.2
1991	25.8	17.2	1.4	23.2	25.9	4.2
1992	23.6	15.1	3.5	22.4	23.8	4.6
1993	22.1	14.1	6.3	21.4	23.9	4.7
1994	21.4	14.1	6.5	21.1	24.8	5.3
1995	19.3	13.6	7.3	22.5	24.1	5.5
1996	16.7	12.2	8.8	22.2	20.9	5.7
1997	15.9	10.8	10.0	20.7	19.2	6.9
1998	17.2	9.2	9.0	21.9	18.1	7.0
1999	20.5	11.1	9.5	20.8	20.2	7.4

Note: Until 1987, there was officially no direct trade between China and Korea.

Sources: National Statistical Office of Korea, *Major Statistics of the Korean Economy, 1999*, and Korea Customs Service, http://www.customs.go.kr.

as the sixth largest US trading partner, following the European Union, Canada, Japan, Mexico, and China (table 2.4). In 1999 US trade volume (goods and services) with Korea was $65 billion, with $28 billion in exports and $37 billion in imports. In 1999 US exports to Korea accounted for only 3 percent of total US exports (or 0.31 percent of US GDP), and US imports from Korea accounted for 3 percent of total US imports. Throughout the 1990s, US trade with Korea has been between 2 and 4 percent of total US trade.

Overall, the United States has run a significant trade deficit with Korea since 1998, when US exports to Korea fell sharply due to the Korean economic crisis and the ensuing economic downturn. In 1999, the United

Table 2.4 Goods and services trade: Shares of major trading partners of the United States, 1999

Countries	Exports	Imports	Trade volumes	Balance
European Union-15				
Millions of dollars	226,688	256,887	483,575	−30,199
Percent	23.9	21.5	22.6	
Canada				
Millions of dollars	166,865	213,464	380,329	−46,599
Percent	17.6	17.9	17.8	
Japan				
Millions of dollars	84,809	146,643	231,452	−61.834
Percent	9.0	12.3	10.8	
Mexico				
Millions of dollars	93,925	118,801	212,726	−24,876
Percent	9.9	10.0	9.9	
China				
Millions of dollars	15,251	85,454	100,705	−70,203
Percent	1.6	7.2	4.7	
Korea				
Millions of dollars	28,293	36,818	65,111	−8,525
Percent	3.0	3.1	3.0	
Taiwan				
Millions of dollars	22,500	38,571	61,071	−16,071
Percent	2.4	3.2	2.9	
Singapore				
Millions of dollars	18,992	20,301	39,293	−1,309
Percent	2.0	1.7	1.8	
Hong Kong				
Millions of dollars	14,253	14,177	28,430	76
Percent	1.5	1.2	1.3	
Malaysia				
Millions of dollars	9,678	21,766	31,444	−12,088
Percent	1.0	1.8	1.5	
Rest of world				
Millions of dollars	266,232	239,378	505,610	26,854
Percent	28.1	20.1	23.6	
Total				
Millions of dollars	947,486	1,192,260	2,139,746	−244,774

Note: Figures for service trade are for private transactions only.

Sources: US International Trade Commission, http://www.dataweb.usitc.gov; Bureau of Economic Analysis, US Department of Commerce, http://www.bea.doc.gov; IMF, *Direction of Trade Statistics,* 1999.

States had a $9.4 billion deficit in merchandise trade with Korea, which was only partially offset by its $0.9 billion surplus in bilateral services trade (tables 2.5 and 2.6).[4] The largest US service export items to Korea are travel services, port services, royalties and license fees, education, and other business and professional services (table 2.7). For Korea, travel,

4. However, it should be noted that the United States has averaged a surplus of about $4.5 billion a year in agricultural and raw material trade since 1995.

Table 2.5 US trade in goods and services with Korea, 1995-99 (millions of US dollars)

	1995	1996	1997	1998	1999
US exports to Korea[a]	31,402	34,468	31,952	20,933	28,293
As a share of US GDP	0.43	0.45	0.39	0.25	0.31
As a share of total US exports	4	4	3	2	3
As a share of total Korean imports	20	19	18	18	20
By industry					
Share of agricultural products and raw materials[b]	20	18	16	16	15
Agricultural products only	8	8	6	7	7
Share of manufacturing products[c]	60	59	62	63	67
Share of service[d]	19	23	22	21	19
US imports from Korea[e]	27,518	26,548	27,701	27,833	36,818
As a share of total US imports	3.7	2.8	2.7	2.5	3.0
As a share of total Korean exports	19	17	17	18	22
By industry					
Share of agricultural products and raw materials[b]	2	1	2	2	2
Agricultural products only	1	1	1	1	0
Share of manufacturing products[c]	86	84	82	84	86
Share of service[d]	12	15	16	14	12
Total trade volume (exports + imports)	58,920	61,016	59,653	48,765	65,111
As a share of total Korean trade volume	19	18	18	18	21
As a share of total US trade volume	4	3	3	2	3
By industry					
Share of agricultural products and raw materials[b]	12	11	9	8	7
Agricultural products only	5	5	3	3	3
Share of manufacturing products[c]	72	70	72	75	78
Share of service[d]	16	19	19	17	15

US trade balance with Korea	3,884	7,920	4,251	−6,900	−8,525
By industry					
Balance of agricultural products and raw materials[b]	5,969	5,777	4,658	2,822	3,484
Agricultural products only	2,392	2,590	1,742	1,295	1,831
Balance of manufacturing products[c]	−4,738	−1,862	−2,751	−10,221	−12,890
Balance of service[d]	2,653	4,005	2,344	499	881

FAS = free alongside ship
CIF = cost, insurance, freight

a. Export figures are based on FAS values.

b. Agricultural products consist of SITC codes 0, 1, and 4. Raw materials consist of SITC codes 2 and 3.

c. Manufacturing goods consist of SITC codes 5 to 9.

d. Service trade figures include private service transactions, but exclude government transactions such as military service.

e. Import figures are based on CIF values.

Sources: US International Trade Commission, http://www.usitc.gov; Ministry of Finance and Economics of Korea, http://www.mofe.go.kr; Bureau of Economics Analysis, US Department of Commerce, http://www.bea.doc.gov.

Table 2.6 US merchandise trade with Korea, 1995-99 (millions of US dollars, shares in percent)

	1995	1996	1997	1998	1999
US merchandise exports to Korea[a]	25,414	26,582	25,067	16,537	22,954
As a share of US GDP	0.35	0.35	0.31	0.19	0.26
As a share in Total US goods exports	4	4	4	2	3
By industry					
Share of agricultural products and raw materials[b]	25	23	20	20	18
Agricultural products only[c]	10	10	8	9	9
Share of manufacturing products[d]	75	77	80	80	82
US merchandise imports from Korea[e]	24,183	22,667	23,160	23,936	32,359
As a share of total US goods imports	3.3	2.9	2.7	2.6	3.1
By industry					
Share of agricultural products and raw materials[b]	2	2	2	2	2
Agricultural products only[c]	1	1	1	1	1
Share of manufacturing products[d]	98	98	98	98	98
Total merchandise trade volume (exports + imports)	49,597	49,249	48,227	40,473	55,313
As a share of total Korean goods trade	19	18	17	18	21
As a share of total US goods trade	4	3	3	3	3
By industry					
Share of agricultural products and raw materials[b]	14	13	12	10	9
Agricultural products only[c]	5	6	4	4	4
Share of manufacturing products[d]	86	87	88	90	91
US merchandise trade balance with Korea	1,231	3,915	1,907	−7,399	−9,405
By industry					
Balance of agricultural products and raw materials[b]	5,969	5,777	4,658	2,822	3,484
Agricultural products only[c]	2,392	2,590	1,742	1,295	1,831
Balance of manufacturing products[d]	−4,738	−1,862	−2,751	−10,221	−12,890

a. Export figures are based on FAS value.

b. Agricultural products consist of SITC codes 0, 1, and 4.

c. Raw materials consist of SITC codes 2, and 3.

d. Manufacturing goods consist of SITC code 5 to 9.

e. Import figures are based on CIF value.

Sources: US International Trade Commission, http://www.usitc.gov; Ministry of Finance and Economics of Korea, http://www.mofe.go.kr; and Bureau of Economics Analysis, US Department of Commerce, http://www.bea.doc.gov.

Table 2.7 US-Korea service transactions by type, 1993-99 (millions of US dollars)

Sector	US services exports to Korea							US services imports from Korea						
	1993	1994	1995	1996	1997	1998	1999	1993	1994	1995	1996	1997	1998	1999
Travel	840	1,417	1,798	2,345	2,056	991	1,251	668	775	880	945	1,207	1,135	1,244
Passenger fares	130	149	91	308	132	44	20	489	655	777	763	1,083	1,049	1,180
Freight	159	217	286	374	340	206	294	864	938	1,005	1,690	1,502	1,295	1,422
Port services	1,090	1,098	1,248	1,965	1,700	1,345	1,183	40	36	50	260	260	108	129
Royalties and license fees	28	625	909	823	877	962	947	3	11	n.a.	47	39	5	85
Affiliated other private services	50	79	n.a.	242	n.a.	n.a.	155	43	116	115	73	n.a.	n.a.	107
Education	357	403	452	509	547	645	626	1	2	2	3	2	2	2
Financial services	44	65	89	121	159	168	226	6	10	16	19	27	21	33
Insurance (net)*	(2)	5	15	7	6	4	n.a.	(8)	(2)	2	6	4	3	3
Telecommunications	94	96	112	126	127	124	118	183	210	227	238	222	214	145
Business, professional services	374	399	530	539	600	558	454	54	45	71	80	83	109	108
Advertising	5	6	6	6	7	3	3	18	20	27	21	19	18	14
Computer and data processing	43	15	22	30	45	38	40	1	n.a.	4	2	4	1	1
Database and other information	15	17	13	13	19	16	16	n.a.	n.a.	1	1	1	n.a.	2
Research, development, testing	8	12	15	23	35	29	8	2	1	5	2	5	3	8
Management consulting, public relations	3	11	9	10	9	10	15	1	3	9	n.a.	13	10	5
Legal services	24	19	26	48	57	67	96	6	7	10	16	14	17	18
Construction, architecture, mining	125	140	232	137	145	123	45	5	1	n.a.	n.a.	1	n.a.	n.a.
Industrial engineering	7	12	34	32	51	24	38	n.a.	n.a.	n.a.	1	4	5	1
Installation, maintenance of equipment	n.a.	150	146	186	173	136	123	14	4	4	1	3	16	8
Other	n.a.	17	27	54	58	111	72	7	7	11	n.a.	19	n.a.	n.a.
Other services	45	46	63	81	88	93	64	n.a.	n.a.	5	n.a.	n.a.	n.a.	n.a.
Film and tape rentals	31	59	47	88	118	113	83	n.a.	n.a.	5	2	n.a.	n.a.	1
Total	3,240	4,658	5,640	7,528	6,750	5,253	5,339	2,343	2,796	3,155	4,126	4,429	3,941	4,458

* Net means premiums minus losses. The values in parentheses represent cases of losses being greater than premiums.

n.a. = not available

Source: Bureau of Economic Analysis, US Department of Commerce, http://www.bea.doc.gov.

passenger fares, and freight are the important service exports to the United States.

Throughout the 1990s the United States has been the largest source of foreign direct investment (FDI) inflow in Korea, followed by Japan. However, as table 2.8 shows, its share of total FDI in Korea has been declining.[5] At the end of 1999, the US FDI stock in Korea was $8 billion, less than 1 percent of total US FDI stock abroad but about 32 percent of the total FDI stock in Korea.[6]

Historically, and unlike US investment in most of Asia, the dominant modality of US investment in Korea has been through minority stakes in joint ventures rather than fully owned subsidiaries or majority-owned joint ventures. However, this pattern has been changing since the recent economic crisis in Korea; the ensuing liberalization of foreign investment rules has led more US investors to take majority ownership stakes in Korean industry. Continuing this trend will further strengthen US-Korea economic ties. As Noland (1996) reports, increases in FDI serve to increase both the volume of trade and the political resiliency of trade relations between the United States and its trading partners in Asia.

Although FDI in Korea has increased significantly in recent years, traditionally FDI has not been an important part of the Korean economy. For example, Kim (1999) shows that the ratios of FDI inflow to total fixed capital and of FDI stock to GDP in Korea are 1.3 percent and 2.6 percent respectively, much lower than the Southeast Asian country averages (7.4 and 14.6 percent respectively) and the world averages (5.6 and 10.6 percent respectively).

Complementarity of Exports

A bilateral FTA would spur increased trade flows between the two countries. The increase in bilateral trade can result from the substitution of traded goods for higher priced, domestically produced goods (trade creation) and/or the displacement of imports from other countries outside the FTA bloc (trade diversion). For example, if US auto exports to Korea increase as a result of a US-Korea FTA, that increase may be due to a reduction in sales of Korean cars or in sales of European cars in the Korean market or both.

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5. While Japanese and US investments have declined since 1996, investment from Europe, particularly from the Netherlands and Germany, has increased remarkably in recent years as European countries have increasingly recognized the strategic importance of the Korean market. See Kim (2000).

6. As one would expect, Korea's FDI in the United States is not very significant. At the end of 1998, Korea's total FDI stock in the United States was $285 million, which was less than 0.1 percent of the total FDI stock in the United States of $812 billion.

Table 2.8 Foreign direct investment stock in Korea, 1995-99 (millions of US dollars)

Indicator	1995	1996	1997	1998	1999
Stock of US FDI in Korea[a]	5,557	6,508	6,430	7,365	7,925
Stock of total FDI in Korea[b]	10,478	12,491	14,832	19,975	24,405
US share of total FDI in Korea (percent)	53	52	43	37	32
Stock of total US FDI abroad[a]	699,015	795,195	865,531	980,565	1,121,336
Share in total US FDI abroad (percent)	0.79	0.82	0.74	0.75	0.71

a. Foreign direct investment position is on a historical cost basis.

b. The data are from United Nations, *World Investment Report.*

Sources: IMF, *International Financial Statistics,* August 1999 and March 2000; Bureau of Economic Analysis, US Department of Commerce, http://www.bea.doc.gov; United Nations, *World Investment Report*, various years.

Depending on whether the sectoral pattern of bilateral trade is competitive or complementary, an FTA could have different effects on trade flows.[7] In other words, the sources of export growth in bilateral trade resulting from an FTA would vary by sector, depending on the comparative advantage of each country in different sectors. Thus it is important to study the pattern of trade between the United States and Korea in order to assess the impact of an FTA.

Table 2.5 reports sectoral patterns of trade between the United States and Korea. Over the past five years (see Choi 1993 for a study of earlier years), manufactured goods accounted for about 60 percent of US exports to Korea, agriculture and raw materials for a little less than 20 percent, and services for about 20 percent of total US exports to Korea. By contrast, more than 80 percent of US imports from Korea are manufactured products and agricultural imports are insignificant. Not surprisingly, the United States traditionally runs a bilateral trade deficit with Korea in the manufacturing sector and a surplus in the services and agricultural sectors.

A closer look at the bilateral trade pattern of the United States and Korea (table 2.9) reveals that US exports to Korea are mainly concentrated in agricultural and food products, chemicals, machinery products, and travel services. These sectors together account for two-thirds of total US exports to Korea since 1997. In particular, the machinery exports' share is almost half of total US exports to Korea. The most important export item, as shown in table 2.10, is computers, peripherals, and semiconductors, with more than $7 billion of exports in 1999, followed by industrial machinery, chemicals, civilian aircraft, and telecommunications equipment.

Korean exports to the United States are concentrated in textiles and apparel, chemicals and plastics, metal products, machinery, and nonpassenger transportation services (table 2.9). These items account for three-quarters of total Korean exports to the United States since 1997. As in the case of US exports to Korea, machinery products account for more than 50 percent of total Korean exports to the United States. The top six items with more than $1 billion of exports to the United States in 1999 were computers, peripherals, and semiconductors; automobiles; apparel; telecommunications equipment; household goods; and industrial machinery. The largest export items are computers, peripherals, and semiconductors, which account for more than one-third of the total. In 1999 Korea exported more than $12 billion worth of computers, peripherals, and semiconductors to the United States. Semiconductor exports are larger than those of

7. The mere fact that an FTA could increase trade flows does not necessarily mean that an FTA would yield an economic efficiency gain. See appendix A for more discussion on the impact of an FTA on trade creation and diversion and their impact on economic efficiency.

Table 2.9 US-Korea trade by major industry, 1997-99

Selected industry	1997 Millions of dollars	1997 Percent	1998 Millions of dollars	1998 Percent	1999 Millions of dollars	1999 Percent
US exports to Korea, FAS value						
Agricultural and food products	2,815	9	2,212	11	1,857	7
Chemicals	2,515	8	1,635	8	2,073	7
Machinery	13,141	41	9,025	43	13,935	49
Travel services	2,056	6	991	5	1,251	4
Subtotal	20,527	64	13,863	66	19,116	68
Total	31,952	100	20,933	100	28,293	100
US imports from Korea, CIF value						
Textiles and apparel	2,368	9	2,718	10	3,479	9
Chemicals and plastics	1,189	4	1,372	5	406	1
Metals	819	3	1,430	5	1,268	3
Machinery	15,802	57	15,033	54	21,075	57
Nonpassenger transportation	1,762	6	1,403	5	1,551	4
Subtotal	21,940	79	21,956	79	27,779	75
Total	27,701	100	27,833	100	36,818	100

CIF = cost, insurance, freight
FAS = free alongside ship

Sources: US International Trade Commission, http://www.usitc.gov; and US Department of Commerce, *Cross-border Service Exports and Imports by Type and Country, 1997*, http://www.bea.doc.gov.

computers and their parts. In 1999 Korea exported $6.6 billion worth of semiconductors to the United States.[8]

Overall, the two countries show a complementary trade pattern in most sectors, with the notable exceptions of telecommunications equipment, computers, and semiconductors, where bilateral trade seems highly competitive.[9] The trade pattern between the United States and Korea in agriculture and services industries seems to indicate that US firms have a comparative advantage in those industries. In the manufacturing sector, the two countries exchange different goods. Korea mainly exports some light

8. Korea is the world's largest producer of memory chips. For example, in 1999, Korea had a global market share of about 40 percent in dynamic random access memory semiconductors (DRAMS), worth almost $6 billion (*Korea Trade and Industry*, September-October 2000, 40-41).

9. However, Korea mainly produces and exports relatively standard memory chips, while the United States produces and exports relatively more high-tech processors and program chips (Yang 2000). Thus, by looking at more disaggregated data, these industries could turn out to be complementary.

Table 2.10 Top 10 items in US-Korea trade, 1998 and 1999 (millions of US dollars)

1998		1999	
US exports to Korea			
213 Computers, peripherals, and semiconductors	4,180	213 Computers, peripherals, and semiconductors	7,251
211 Industrial and service machinery, n.e.c.	1,655	211 Industrial and service machinery, n.e.c.	2,458
125 Chemicals, excluding medicinals and food additives	1,194	125 Chemicals, excluding medicinals and food additives	1,563
500 Military-type goods	1,140	220 Civilian aircraft, engines, parts	1,188
220 Civilian aircraft, engines, parts	815	214 Telecommunications equipment	933
214 Telecommunications equipment	648	500 Military-type goods	851
002 Feedstuff	568	003 Other agricultural foods	757
200 Electric and electricity generating equipment	468	200 Electric and electricity generating equipment	751
003 Other agricultural foods	413	002 Feedstuff	626
101 Other agricultural materials for industry and farming	391	302 Parts, engines, bodies, and chassis	554
Subtotal	11,577	Subtotal	16,937
Total	16,538	Total	22,953
As a share of total merchandise exports to Korea	70 percent	As a share of total merchandise exports to Korea	74 percent
US imports from Korea			
213 Computers, peripherals and semiconductors	8,711	213 Computers, peripherals and semiconductors	12,216
400 Apparel, footwear, and household goods	2,538	300 Passenger cars, new and used	3,003
300 Passenger cars, new and used	1,773	400 Apparel, footwear, and household goods	2,763
410 Household goods	1,911	214 Telecommunications equipment	2,132
214 Telecommunications equipment	1,080	410 Household goods	1,492
141 Iron and steel mill products—semifinished	1,013	211 Industrial and service machinery, n.e.c.	1,095
121 Textile supplies and related materials	927	302 Parts, engines, bodies, and chassis	975
211 Industrial and service machinery, n.e.c.	924	121 Textile supplies and related materials	932
302 Parts, engines, bodies, and chassis	792	412 Home entertainment equipment	856
200 Electric and electricity generating equipment	575	141 Iron and steel mill products—semifinished	791
Subtotal	19,530	Subtotal	26,258
Total	24,804	Total	32,359
As a share of total merchandise imports from Korea	79 percent	As a share of total merchandise imports from Korea	81 percent

n.e.c. = not elsewhere classified

Note: Figures are based on end-use three-digit code.

Sources: Data have been compiled from tariff and trade data from the US Department of Commerce, the US Treasury, and the US International Trade Commission, http://www.usitc.gov.

manufacturing goods such as textiles, apparel, footwear, and household goods, in which Korea traditionally has had a comparative advantage. Korea also exports to the United States some heavy industry items such as steel and automobiles. On the other hand, as one would expect, the United States mainly exports to Korea industrial machinery, civilian aircraft, military goods, and chemicals—products and sectors where US firms are traditionally strong.

To further investigate the comparative advantage of each country in different sectors, we calculated measures of revealed comparative advantage (RCA). This measure is defined as the ratio of a country's share in world exports in a particular product category to the country's share in total world exports. A value greater than one for a particular industry indicates revealed comparative advantage in that industry; a value less than one denotes relative disadvantage. For the United States and Korea, RCA indices are measured for 1995-97, as shown in table 2.11.

The RCA measures show that Korea and the United States have very different structures of comparative advantage. Korea has comparative advantage in textiles and apparel, plastics, leather and rubber products, steel, telecommunications equipment, office and electrical machinery, and transport equipment. Korea's highest indices are in leather products, textiles, and electrical machinery. By contrast, the United States has a relative comparative advantage in food and tobacco products, chemicals, most machinery, and military hardware. The highest indices of the United States are in food and tobacco products, power-generating equipment, transport equipment, professional and scientific instruments, and military hardware. Thus, by this measure, the United States and Korea have comparative advantage in different sectors.

It should be noted that these RCA indices are measures of one country's comparative advantage in a particular industry in the world export market. Thus these RCA indices are global or world RCAs. However, for many countries comparative advantage differs in different country markets. In other words, a country may have a comparative advantage in a particular industry in the world export market but not in a particular country market for some reason. For example, the United States may have an RCA index greater than one in the world export market or in Japan but an RCA index of less than one in Korea. Since the bilateral trade pattern is being analyzed here, we also investigate the comparative advantage of the United States and Korea in each other's markets, not in the global market. For this purpose, a variation of the global RCA is used to measure local RCA indices for the US and Korean markets. This local RCA measure is defined as the ratio of a country's export share in total (from all countries) exports of a particular commodity in a particular country market to that exporting country's share in total (all commodities from all countries) exports to that importing-country market.

Table 2.11 United States and Korea: Revealed comparative advantage of exports in the global market, all industries 1995-97

SITC two-digit category	United States				Korea			
	1995	1996	1997	Average, 1995-97	1995	1996	1997	Average, 1995-97
00-Live animals chiefly for food	0.44	0.45	0.60	0.49	0.00	0.00	0.00	0.00
01-Meat and meat preparations	1.17	1.24	1.19	1.20	0.09	0.18	0.24	0.17
02-Dairy products and birds' eggs	0.20	0.17	0.20	0.19	0.00	0.00	0.00	0.00
03-Fish, crustaceans, mollusks, aquatic invertebrates, and preparations thereof	0.59	0.52	0.46	0.52	1.29	1.22	1.10	1.21
04-Cereals and cereal preparations	2.41	2.37	1.77	2.18	0.15	0.17	0.12	0.15
05-Vegetables and fruit	0.91	0.92	0.90	0.91	0.19	0.14	0.14	0.16
06-Sugar, sugar preparations, and honey	0.27	0.28	0.28	0.28	0.52	0.53	0.46	0.50
07-Coffee, tea, cocoa, spices, manufactures thereof	0.22	0.23	0.23	0.23	0.06	0.09	0.05	0.07
08-Feeding stuff for animals (not including unmilled cereals)	1.58	1.52	1.59	1.56	0.06	0.05	0.07	0.06
09-Misc. edible products and preparations	1.07	1.20	1.24	1.17	0.26	0.32	0.34	0.31
11-Beverages	0.38	0.35	0.36	0.36	0.12	0.18	0.16	0.15
12-Tobacco and tobacco manufactures	2.40	2.12	2.04	2.19	0.08	0.08	0.01	0.06
21-Hides,skins and furskins, raw	2.08	1.91	1.85	1.95	0.13	0.08	0.06	0.09
22-Oil seeds and oleaginous fruit	3.98	4.23	3.80	4.00	0.00	0.00	0.00	0.00
23-Crude rubber (including synthetic and reclaimed)	0.85	0.88	0.93	0.89	0.48	0.59	0.86	0.64
24-Cork and wood	1.28	1.23	1.07	1.19	0.02	0.01	0.02	0.02
25-Pulp and waste paper	1.97	1.88	1.75	1.87	0.02	0.00	0.00	0.01
26-Textile fibers (except wool tops and other combed wool) and their wastes (not manufactured into yarn or fabric)	1.75	1.45	1.38	1.53	1.59	1.46	1.80	1.62
27-Crude fertilizers (imports only), except those of division 56, and crude materials (excluding coal, petroleum, and precious stones)	0.97	0.95	0.97	0.97	0.33	0.36	0.40	0.36
28-Metalliferous ores and metal scrap	1.08	0.86	0.79	0.91	0.05	0.04	0.09	0.06
29-Crude animal and vegetable materials, n.e.s.	0.61	0.61	0.63	0.62	0.73	0.62	0.62	0.66
32-Coal, coke, and briquettes	1.56	1.45	1.24	1.42	0.00	0.00	0.02	0.01
33-Petroleum, petroleum products, and related materials	0.20	0.19	0.21	0.20	0.36	0.44	0.50	0.44
34-Gas, natural and manufactured	0.19	0.13	0.11	0.14	0.06	0.05	0.07	0.06

35-Electric current	0.05	0.06	0.12	0.08	0.00	0.00	0.00	0.00
41-Animal oils and fats	3.13	2.58	2.29	2.67	0.04	0.03	0.08	0.05
42-Fixed vegetable oils and fats, crude, refined or fractionated	0.68	0.47	0.56	0.57	0.02	0.03	0.02	0.03
43-Animal/vegetable oils/fats, processed; waxes and inedible mixtures or preparations of animal/vegetable fats/oils, n.e.s.	0.37	0.41	0.46	0.41	0.06	0.08	0.14	0.10
51-Organic chemicals	1.26	1.15	1.18	1.20	0.96	0.98	0.94	0.96
52-Inorganic chemicals	1.18	1.20	1.29	1.22	0.34	0.37	0.38	0.36
53-Dyeing, tanning, and coloring materials	0.71	0.73	0.79	0.74	0.55	0.62	0.70	0.62
54-Medicinal and pharmaceutical products	0.78	0.80	0.79	0.79	0.14	0.15	0.13	0.14
55-Essential oils and resinoids and perfume materials; toilet, polishing, and cleansing preparations	0.94	0.98	1.00	0.98	0.15	0.17	0.12	0.15
56-Fertilizers, manufactured	1.75	1.41	1.55	1.57	0.63	0.65	0.50	0.59
57-Explosives and pyrotechnic products								
58-Artificial resins, plastic materials, cellulose esters	1.07	1.11	1.13	1.10	1.60	1.62	1.84	1.69
59-Chemical materials and products, n.e.s.	1.37	1.37	1.45	1.40	0.29	0.40	0.34	0.35
61-Leather, leather manufacturers, n.e.s. and dressed furskins	0.39	0.41	0.46	0.42	3.15	3.35	3.30	3.27
62-Rubber manufactures, n.e.s.	0.80	0.81	0.93	0.85	1.60	1.77	1.40	1.59
63-Cork and wood manufactures (excluding furniture)	0.55	0.56	0.58	0.56	0.20	0.17	0.15	0.17
64-Paper, paperboard, articles thereof	0.84	0.90	0.91	0.89	0.47	0.53	0.70	0.56
65-Textile yarn, fabrics, made-up articles, related products	0.39	0.42	0.45	0.42	3.04	3.19	2.49	2.91
66-Nonmetallic mineral manufactures, n.e.s.	0.55	0.59	0.61	0.58	0.26	0.25	0.26	0.26
67-Iron and steel	0.35	0.34	0.37	0.35	1.48	1.52	1.53	1.51
68-Nonferrous metals	0.64	0.62	0.59	0.62	0.44	0.42	0.48	0.44
69-Manufactures of metal, n.e.s.	0.82	0.89	0.92	0.88	1.35	0.92	0.85	1.04
71-Power generating machinery and equipment	1.63	1.57	1.70	1.63	0.41	0.23	0.28	0.30
72-Machinery specialized for particular industries	1.29	1.34	1.45	1.36	0.61	0.70	0.57	0.63
73-Metalworking machinery	1.03	1.05	1.09	1.05	0.47	0.60	0.83	0.63
74-General industrial machinery & equipment, n.e.s., and machine parts, n.e.s.	1.06	1.08	1.17	1.10	0.61	0.63	0.67	0.64
75-Office machines and automatic data processing machines	1.50	1.44	1.39	1.44	0.83	0.86	1.34	1.01
76-Telecommunications and sound recording and reproducing apparatus and equipment	0.93	0.93	1.02	0.98	1.88	1.85	1.32	1.69

(table continued next page)

Table 2.11 United States and Korea: Revealed comparative advantage of exports in the global market, all industries 1995-97 *(continued)*

SITC two-digit category	United States				Korea			
	1995	1996	1997	Average, 1995-97	1995	1996	1997	Average, 1995-97
77-Electrical machinery, apparatus, and appliance	1.28	1.29	1.30	1.29	2.67	2.33	2.21	2.40
78-Road vehicles (including air cushion vehicles)	0.94	0.94	0.95	0.94	0.91	1.08	0.77	0.92
79-Other transport equipment	2.00	2.28	2.68	2.32	1.99	2.40	0.60	1.66
81-Sanitary, plumbing, heating, and lighting fixtures and fittings	0.51	0.48	0.54	0.51	0.29	0.29	0.22	0.27
82-Furniture and parts thereof	0.68	0.68	0.73	0.70	0.18	0.17	0.16	0.17
83-Travel goods, handbags, and similair containers	0.16	0.19	0.19	0.18	1.83	1.44	1.25	1.50
84-Articles of apparel and clothing accessories	0.35	0.37	0.36	0.36	1.23	1.01	0.87	1.03
85-Footwear	0.12	0.11	0.11	0.11	1.20	0.84	0.70	0.92
87-Professional, scientific, and controlling instruments and apparatus, n.e.s.	2.08	2.14	2.15	2.12	0.39	0.36	0.43	0.39
88-Photographic apparatus, optical goods, watches and clocks	0.66	0.72	0.70	0.69	0.54	0.56	0.55	0.55
89-Miscellaneous manufactured articles, n.e.s.	1.09	1.10	1.10	1.10	0.84	0.84	0.70	0.80
91-Postal packages, not classified according to kind								
93-Special transactions & commodities, not classified according to kind	1.23	1.29	1.08	1.20	0.00	0.00	0.38	0.13
94-Animals, live, n.e.s., including zoo animals	0.78	0.94	1.01	0.91	1.13	0.80	0.03	0.65
95-Armoured fighting vehicles, arms of war	4.76	4.70	4.47	4.64	0.23	0.19	0.18	0.20
96-Coin (other than gold), not being legal tender								
97-Gold, nonmonetary	2.07	2.08	1.79	1.98	4.62	8.00	3.88	5.50
99-Non-identified products					0.00	0.00	6.26	2.09

SITC = Standard International Trade Classification.

n.e.s. = not elsewhere specified

Source: Authors' calculations based on the World Trade Analyzer database.

The results indicate, as shown in table 2.12, that the US RCA indices of exports to the Korean market are somewhat different from its global RCA structure. In the Korean market, US exports have revealed comparative advantage in live animals for food, vegetables and fruits, paper products, and road vehicles, whereas they do not in the global market. But US exports do not have revealed comparative advantage in wood products in the Korean market, whereas they do in the global market. The Korean RCA indices of exports to the US market are also somewhat different from Korea's global RCA structure. In the US market, Korean exports do not have revealed comparative advantage in fish, leather, and other transport equipment, whereas they do in the global market.

From the bilateral trade pattern and revealed comparative advantage between the United States and Korea, the two countries appear to have a complementary trade pattern in most industries.[10] But each has revealed comparative advantage—both in the global market and in each other's markets—in fibers, plastics, and office and electrical machines. These, of course, are the industries where the two countries compete. However, an investigation of the trade pattern using more disaggregated data would likely show complementarity in these sectors. Just as in the case of computer chips trade, where the United States mainly exports high-tech processors and chips and Korea mainly exports ''commodity'' memory chips, the two countries are not likely to compete head-to-head or product-to-product in those sectors where they both have comparative advantage.

Indeed, Korea's level of intraindustry trade with the United States has always been lower than that with its global trading partners, although Korea's intraindustry trade has rapidly increased throughout the 1990s both in terms of its trade with the United States and with its global trading partners (table 2.13). This pattern implies the complementarity of Korea's trade with the United States, relative to Korea's trade with other trading partners. The intraindustry trade of differentiated products tends to increase as economies develop and the demands of firms and consumers become more complex and diversified. This has important implications for a bilateral FTA since both theory and empirical evidence suggest that a given expansion of trade should cause less dislocation and subsequently fewer trade conflicts, if it is intraindustry trade rather than interindustry trade.[11]

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10. Statistically speaking, we cannot conclude that the two countries have a complementary trade pattern overall because a statistical test shows that sectoral RCA structures between Korea and the United States are not significantly different. A test of Spearman rank correlation coefficient shows that we cannot accept the hypothesis that global RCA indices of the United States and Korea are statistically independent.

11. See Noland (1996; 1997) for empirical evidence on the negative correlation between intraindustry trade and trade conflict.

Table 2.12 United States and Korea: Revealed comparative advantage of exports in each other's market, 1995-97

SITC two-digit category	United States			Korea		
	1995	1996	1997	1995	1996	1997
00-Live animals chiefly for food	1.67	1.50	1.55	n.a.	n.a.	n.a.
01-Meat and meat preparations	2.43	2.25	1.98	0.00	0.01	0.00
02-Dairy products and birds' eggs	0.73	0.99	0.83	0.06	0.07	n.a.
03-Fish, crustaceans, mollusks, aquatic invertebrates, and preparations thereof	0.76	0.71	0.69	0.44	0.40	0.38
04-Cereals and cereal preparations	3.50	3.37	1.86	0.51	0.62	0.41
05-Vegetables and fruit	1.43	1.41	1.42	0.04	0.05	0.07
06-Sugar, sugar preparations, and honey	0.16	0.29	0.36	0.09	0.07	0.05
07-Coffee, tea, cocoa, spices, manufactures thereof	0.42	0.61	0.55	0.01	0.01	0.01
08-Feeding stuff for animals (not including unmilled cereals)	0.35	0.35	0.61	0.00	0.00	0.03
09-Misc. edible products and preparations	1.93	2.21	1.91	0.72	0.82	0.56
11-Beverages	0.17	0.21	0.24	0.06	0.06	0.07
12-Tobacco and tobacco manufactures	1.07	1.41	1.37	0.00	0.29	0.02
21-Hides, skins, and furskins, raw	3.16	3.07	2.71	0.03	0.03	0.00
22-Oil seeds and oleaginous fruit	3.62	3.69	3.55	0.01	0.01	0.00
23-Crude rubber (including synthetic and reclaimed)	0.26	0.40	0.21	0.17	0.34	0.53
24-Cork and wood	0.92	0.87	0.94	0.00	n.a.	0.00
25-Pulp and waste paper	1.90	1.88	1.75	n.a.	0.00	0.00
26-Textile fibres (except wool tops and other combed wool) and their wastes (not manufactured into yam or fabric)	1.79	1.72	1.51	3.47	3.02	3.52
27-Crude fertilizers (imports only), except those of division 56, and crude materials (excluding coal, petroleum, and precious stones)	0.83	0.84	0.93	0.16	0.27	0.30
28-Metalliferous ores and metal scrap	1.28	1.09	1.09	0.01	0.01	0.05
29-Crude animal and vegetable materials, n.e.s.	0.48	0.46	0.37	0.24	0.21	0.20
32-Coal, coke, and briquettes	0.46	0.42	0.39	n.a.	n.a.	n.a.
33-Petroleum, petroleum products, and related materials	0.17	0.17	0.42	0.08	0.07	0.06
34-Gas, natural and manufactured	0.03	0.02	0.05	0.00	0.00	0.02

41-Animal oils and fats	2.66	2.06	1.46	0.06	0.02	0.91
42-Fixed vegetable oils and fats, crude, refined or fractitionated	0.98	0.98	0.97	0.00	0.01	0.00
43-Animal/vegetable oils/fats, processed; waxes and inedible mixtures or preparations of animal/vegetable fats/oils, n.e.s.	0.29	0.19	0.34	0.00	0.00	0.01
51-Organic chemicals	1.14	1.08	0.94	0.29	0.31	0.30
52-Inorganic chemicals	0.95	1.16	1.29	0.06	0.09	0.10
53-Dyeing, tanning, and coloring materials	0.43	0.43	0.48	0.54	0.65	0.72
54-Medicinal and pharmaceutical products	0.62	0.70	0.63	0.09	0.07	0.20
55-Essential oils and resinoids and perfume materials; toilet, polishing, and cleansing preparations	0.96	1.36	0.85	0.15	0.15	0.15
56-Fertilizers, manufactured	1.85	0.35	2.24	n.a.	n.a.	0.02
58-Artificial resins, plastic materials, cellulose esters	1.19	1.30	1.16	1.12	1.28	1.19
59-Chemical materials and products, n.e.s.	0.92	1.01	0.91	0.29	0.66	0.27
61-Leather, leather manufacturers, n.e.s. and dressed furskins	0.46	0.42	0.74	0.40	0.39	0.28
62-Rubber manufactures, n.e.s.	0.71	0.71	0.93	1.66	1.68	1.46
63-Cork and wood manufactures (excluding furniture)	0.44	0.38	0.38	0.08	0.06	0.11
64-Paper, paperboard, articles thereof	1.39	1.61	1.57	0.20	0.18	0.28
65-Textile yarn, fabrics, made-up articles, related products	0.21	0.23	0.28	2.04	2.42	2.22
66-Non-metallic mineral manufactures, n.e.s.	0.62	0.74	0.50	0.12	0.11	0.11
67-Iron and steel	0.25	0.13	0.09	1.36	1.39	1.34
68-Nonferrous metals	0.47	0.41	0.36	0.05	0.07	0.14
69-Manufactures of metal, n.e.s.	0.81	0.94	0.70	1.32	1.26	1.09
71-Power generating machinery and equipment	1.64	1.58	1.26	0.62	0.22	0.20
72-Machinery specialized for particular industries	1.10	1.24	1.08	0.35	0.59	0.53
73-Metalworking machinery	0.85	0.79	0.86	0.64	0.99	0.70
74-General industrial machinery & equipment, n.e.s., and machine parts, n.e.s.	0.85	0.81	0.81	0.53	0.60	0.56
75-Office machines and automatic data processing machines	1.60	1.64	1.67	1.09	1.30	1.96
76-Telecommunications and sound recording and reproducing apparatus and equipment	1.73	1.90	1.50	1.60	1.22	0.91
77-Electrical machinery, apparatus, and appliances	1.16	1.16	1.14	3.64	3.22	2.85

(table continued next page)

Table 2.12 United States and Korea: Revealed comparative advantage of exports in each other's market, 1995-97 *(continued)*

SITC two-digit category	United States			Korea		
	1995	1996	1997	1995	1996	1997
78-Road vehicles (including air cushion vehicles)	1.09	1.17	1.15	0.69	0.78	0.60
79-Other transport equipment	3.23	3.39	3.23	0.77	0.95	0.20
81-Sanitary, plumbing, heating, and lighting fixtures and fittings	0.91	0.98	1.04	0.65	0.57	0.39
82-Furniture and parts thereof	0.76	0.77	0.70	0.14	0.14	0.15
83-Travel goods, handbags, and similair containers	0.17	0.30	0.30	1.97	1.67	1.48
84-Articles of apparel and clothing accessories	0.16	0.19	0.12	1.66	1.43	1.27
85-Footwear	0.17	0.25	0.17	1.11	0.81	0.52
87-Professional, scientific, and controlling instruments and apparatus, n.e.s.	1.18	1.50	1.35	0.58	0.42	0.27
88-Photographic apparatus, optical goods, watches and clocks	0.27	0.31	0.33	0.62	0.62	0.50
89-Miscellaneous manufactured articles, n.e.s.	1.52	1.62	1.32	0.99	0.99	0.78
93-Special transactions & commodities, not classified according to kind	1.27	1.45	0.83	n.a.	0.01	0.59
94-Animals, live, n.e.s., including zoo animals	1.50	1.48	0.75	0.03	0.02	0.03
95-Armoured fighting vehicles, arms of war	3.70	3.63	3.67	0.67	0.77	0.49

SITC = Standard International Trade Classification.
n.a. = not available
n.e.s. = not elsewhere specified

Source: Authors' calculations based on the World Trade Analyzer database.

Table 2.13 Korea: Intraindustry trade index[a], 1989-97

Year	Global trade[b]		Trade with the United States[c]	
	All industries[d]	Manufacturing[e]	All industries[d]	Manufacturing[e]
1989	38.5	42.4	26.0	29.4
1990	39.4	44.6	28.4	33.2
1991	42.0	45.2	33.5	36.7
1992	43.0	47.2	33.9	38.3
1993	44.8	47.8	35.7	39.6
1994	45.9	50.6	40.6	45.3
1995	47.0	51.5	38.7	44.4
1996	49.6	54.0	40.8	47.0
1997	51.3	58.4	44.0	47.8
Memo items: Period average				
1989-91	40.0	44.1	29.3	33.1
1992-94	44.6	48.5	36.7	41.1
1995-97	49.3	54.6	41.2	46.4

a. Grubel-Lloyd index average weighted by trade volume, based on SITC three-digit trade data from the World Trade Analyzer database.

b. Korea's trade with all its trading partners.

c. Korea's trade with the United States only.

d. All SITC industries (296 SITC three-digit categories).

e. Only SITC 5 through 8 category industries (183 SITC three-digit categories).

Source: Authors' calculations based on the World Trade Analyzer database, CD-ROM version, 1998.