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Trade Relations of Korea and Japan: Moving from Conflict to Cooperation?

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“A . . . task of Japan is to maintain multilateral free trade. . . . Japan should try to find multilateral solutions to trade conflicts through a strengthened GATT system.”

Ippei Yamazawa (1990).

“After the Asian economic crisis, momentum has emerged in both Japan and Korea to promote a closer economic relationship A conventional approach to private sector cooperation will not be sufficient. The new closer economic relationship has to involve inter-governmental arrangements. . . . A study is under way to design a potential overall framework for closer economic relations between Japan and Korea . . . including the option of setting up a . . . FTA consistent with article XXIV of the GATT.”

Ippei Yamazawa (2000).

“The most striking changes in the world trading system, especially in the short run . . . will probably come from the host of sub-regional trade agreements now being busily negotiated by Japan, South Korea, Singapore and other countries in East Asia.”

C. Fred Bergsten (2000).

Introduction

As is implied in the above quotations, the attitude of Japan towards international trade negotiations has undergone a fundamental shift in the past decade. Japan has finally abandoned its basic multilateral approach to international trade negotiations and has announced plans to negotiate a free trade agreement (FTA) with Singapore.² It has also been actively conducting studies of “Closer Economic Relationships” with Mexico and South Korea. Although it is by no means a sure thing that Japan will be able to enact a series of free trade agreements that are comprehensive in the short run, it is likely Japan and partners such as Korea and Singapore will meet the criteria of the GATT and WTO.³ Opposition to an Article XXIV-consistent FTA, one covering “substantially all trade,” is likely to be strong, particularly in sensitive sectors such as agriculture, construction, forestry and fisheries. However, the likelihood that Japan and Korea will continue to seek protection of primary sectors and certain service industries should not be regarded as a serious obstacle to the pursuit of a free trade agreement. No regional trading arrangement has been successfully challenged under Article XXIV.

Therefore, provided domestic opposition in protected sectors such as agriculture and construction can be overcome, it is only a matter of time before Japan enters into

Notes

² Prime Minister Goh Chok Tong of Singapore and the late former Prime Minister Keizo Obuchi agreed to jointly study a free trade agreement. Unlike the other cases, the study will literally be jointly conducted with active participation of government officials (speech by Chairman of JETRO, Noboru Hatakeyama downloaded from <http://www.jetro.go.jp>, March 13, 2000). It is worth noting that a FTA with Singapore will have few, if any implications for Japan’s so-called “sensitive sectors” and particularly little impact on agriculture.

³ These include: 1) the FTA must not raise, on average, trade barriers against other contracting parties, 2) if an “intermediate” agreement is reached, it should include a schedule to become a comprehensive FTA within a “reasonable period,” 3) the fact of the FTA must be notified to WTO, and 4) the FTA should eliminate tariffs and other trade barriers for substantially all sectors. Services that are liberalized under the FTA should also meet the criteria of not, on average, raising trade barriers against other contracting parties and must also be implemented within a reasonable period (taken to be at maximum ten years).

preferential trading arrangements with Singapore, Korea and other partners. This represents a dramatic break with the post war “pure multilateral” stance and signals an important new development in the international trade diplomacy of both Japan and Korea.¹ The decision to proceed with the negotiations implies that the two parties have made positive assessments of the overall benefit of a FTA. On purely economic grounds, it would appear the net benefits of a FTA would be small at best. However, there are other reasons the governments may favor a FTA. First, concluding regional integration agreements such as a FTA may strengthen the bargaining position of East Asian countries like Japan and Korea in the WTO and in bilateral disputes with major western trading partners. Second, the FTA may be favored by prominent corporate interests and may be seen as a way to strengthen the global competitiveness of Korean and Japanese enterprises, much as NAFTA has done for the US, Canada and Mexico. Third, conclusion of a FTA may provide political cover for the implementation of domestic structural reforms.

Despite the political fact that Japan and Korea will attempt to negotiate free trade agreements or other forms of closer economic relationships, it should not be taken for granted that these new agreements will be neutral in their impacts on third parties. Hence, it is a worthwhile exercise to carefully consider the present and historical trade relationship in order to make an informed assessment of the outcome.

International trade relations of South Korea (hereafter Korea) and Japan have often been tense and contentious. Clearly, on the basis of economic theory, one would expect substantial trade between these neighbors. Japan is the second largest economy in the world (measured in current US dollars) and Korea ranked 17th in 1998 (World Bank ²2000). In terms of value of merchandise exports, Japan ranked 3rd and Korea 12th in 1998 and 1999 (WTO 1999 and 2000). In terms of value of merchandise imports, Japan ranked 5th and Korea 16th in 1998 and in 1999 Japan ranked 4th and Korea 14th (WTO 1999 and 2000).

A striking feature that emerges from analysis of Japan-Korea trade, from the viewpoint of Korea, is the relatively low volume of exports to Japan given its proximity and economic size. Korean trade officials have complained about the difficulty in penetrating the Japanese market. Indeed, although the share of imports from all sources has risen as a share of apparent consumption of manufactured goods in Japan (from 6.03% in 1988 to 9.62% in 1997), the market share of Korean suppliers has remained constant at a little over one-half of one percent.³ The low market share of Korean

¹ Bilateral trade negotiations, particularly involving Japan and the United States, have been conducted in a manner consistent with GATT principles. Market access agreements by Japan with the United States have been implemented on a non-discriminatory basis. Hence, third parties such as Korea have benefited from negotiations to open market access in sectors such as semi-conductors.

²

³ James and Movshuk (2000) provide detailed statistical analysis of market share in manufacturing for Japan, Korea, Taiwan and the United States using OECD (1998a). Market share is defined as the ratio of imports to apparent consumption. Apparent consumption is calculated as domestic production minus exports plus imports. Lincoln (1999) provides estimates of market share for manufactures for Japan’s world imports. His estimates differ because he uses a different source.

manufactures in the nearby Japanese market is a puzzle as Japan maintains it has open markets with low tariffs and few non-tariff barriers.

This study will examine the basis for increased bilateral cooperation between Korea and Japan in the areas of trade and investment, including the basis for a free trade agreement. Moving away from sole reliance on the multilateral trading system is certainly consistent with the global trend towards preferential trade and investment measures.¹ The logic of formation of a FTA between the two will be considered in light of each partners overall interest in an open trade and investment environment in the region and the world. Some of the issues involved in seeking common ground in multilateral arenas such as the WTO, the OECD and APEC will also be considered. These include improving market access in areas of mutual interest. Antidumping reform, discipline in the use of rules of origin, trade-related intellectual property rights, and trade-related investment measures are among these.²

Methodology

This study documents recent patterns of trade between Korea and Japan and provides an interpretation of the development of trade relations in the postwar period. Bilateral trade patterns are compared with global trade patterns. The similarity of export specialization of the two partners and issues of competition and complementarity in trade and industrial structures are considered. In order to assess the modalities of bilateral cooperation that make the greatest sense in the case of Korea and Japan, it is helpful to examine relevant statistical data on trade.³

The quantitative analysis is augmented with some discussion of recent trade conflicts involving Korea and Japan. Both bilateral conflict and conflicts over market access in third country markets (i.e., antidumping actions by the EU, Taiwan or the USA) are considered. The study concludes with policy recommendations based on both quantitative and qualitative indicators.

Historical Perspective

Korea was a Japanese colony starting in the early twentieth century and trade relations were developed along colonial lines.⁴ Korea essentially exported primary

¹ 198 reciprocal preferential trading arrangements have been identified, with 119 actually implemented (Hatakeyama 2000).

² In addition to these positive market access issues, Japan and Korea also have strong political incentives to cooperate in blocking further liberalization in sectors such as agriculture and fisheries. These areas, however, are also considered “sensitive” in the context of FTA negotiations.

³ In this context, it is unfortunate that detailed statistics on bilateral services trade are not available. In this paper, the focus is on trade in manufactured goods. However, it is recognized that services are also an important component of any trade agreement between Korea and Japan. A detailed analysis of services is beyond the scope of this study. Although regional monetary arrangements in East Asia have been even more prominent than trade agreements (Bergsten 2000), the focus of this paper is on trade rather than on capital market developments.

⁴ Japan occupied Korea in 1905, the year in which Japan defeated Czarist Russia, and formally annexed it in 1910. Korea was then administered as a Japanese colony for 36 years.

commodities (rice, beans, wheat, fruit, raw silk, hides, fish, iron ore, coal and sea weed) and imported manufactured goods (processed food, beverages & tobacco products, textiles, chemicals, petroleum products, iron & steel, metal products and machinery). From 1918-28, Korean exports to Japan exceeded imports from Japan and both exports and imports were growing steadily (Hong 1979). With the onset of the Great Depression trade with Japan contracted between 1929-33. Thereafter, trade expansion was rapid for the rest of the decade. Trade with Japan accounted roughly for over 80 per cent of exports and imports during the decade of the 1930s (Hong 1979). During the colonial occupation, gradually some light industries were developed and by the early 1930s, manufactured goods comprised about 20 per cent of exports (Hong 1979).

Trade relations between Korea and Japan were severed following the Second World War and the end of Japan's colonial domination of Korea. Hong (1979: 45) characterizes the overall trade situation of Korea in the immediate post-war period as follows:

“Compared to the pre-World War II period, Korea’s exports during 1945-53 were negligible. In 1953, for instance, exports amounted to less than 1 percent of GNP. At the same time imports, which were mostly financed by U.S. grants-in-aid, amounted to about 10 percent. In response to such an extreme disparity between exports and imports, various forms of import control emerged during 1945-53, and soon these had developed into an extremely complicated system of multiple exchange rates.”

The Korean War stimulated trade with Japan. However, imports were far larger than exports, reflecting Japan's role as an important forward supply base for United Nations forces. However, the share of imports coming from Japan fell from 16 per cent in 1953-54 to just 5-8 per cent between 1955-57 following the cessation of hostilities (Hong 1979).

Trade Patterns Since the 1960s

Trade began to grow between the two countries in the early 1960s and, particularly, following normalization of relations in 1965. In 1962, urged on by the United States, Japan and Korea reached a settlement with Japan providing the equivalent of \$300 million in grants to Korea (Haggard 1990). In that same year, using Japan as the reporter, imports from Korea into Japan accounted for only one-half of one percent of total merchandise imports and in US dollars Japan's imports from Korea were a mere \$28.5 million (see Tables 1 and 2).¹ Exports of Japan to Korea were several times greater than imports (Table 3) and accounted for 2.8% of Japan's total merchandise exports

¹ Time series data on Korea-Japan trade in the UN Commodity Trade Statistics begin in 1962. There are some peculiarities in these data. For example, in the 1960s and 1970s estimates of Japan's imports from Korea tend to exceed estimates of Korea's exports to Japan, but this is reversed in the 1980s. In the 1990s the discrepancy is not systematic one way or the other, perhaps reflecting the time difference between recording the shipping of exports and landing of imports. This discrepancy does not arise because of the c.i.f./f.o.b. distinction (all these data are on a f.o.b. basis). The UN data is used here because it has the longest time series. For the detailed analysis of trade patterns on an intra-industry basis we switch to Statistics Canada's *World Trade Analyzer* data.

(Table 4). By way of contrast, imports of Korea from Japan (using Korea as the reporter) were \$92 million in 1962 (up from \$68.7 million and \$69.5 million in 1960 and 1961, respectively) or almost one-quarter of Korean merchandise imports (tables 5 and 6).¹ On the export side, the estimated \$25.7 million of Korean merchandise shipments to Japan accounted for almost half of total merchandise exports in 1962 (tables 7 and 8).²

President Park of Korea began to implement serious economic reforms in the early sixties including unification of the exchange rate and relaxation of exchange controls. Import liberalization policies were also adopted. In this context, Japanese businesses began to lobby strongly for normalization in the expectation that they would be able to compete effectively in the Korean market. The period of market reforms in South Korea corresponds to that of the ascension of Japan into the OECD. In Korea, normalization was a much more contentious issue than in Japan. Large demonstrations against the treaty and strong political opposition had to be overcome by President Park. His tactics were crude but effective and the treaty was rammed through a compliant legislature in 1965.³

It was clearly recognized in Japan that Korean exports, particularly of labor-intensive manufactured products, would increase competition in the Japanese domestic market. This was explicitly recognized in a joint economic survey conducted by the Japan Economic Research Council and the Korea Productivity Organization.⁴ However, Japanese officials and scholars recognized that the expansion of the share of Korean labor-intensive products in the Japanese market would be a natural phenomenon and would be consistent with the evolving comparative advantages of the two countries. Thus, it would stimulate the restructuring of Japanese and Korean industry and allow firms to become more efficient and competitive.⁵ Foreign direct investment (FDI) from Japan to developing Asian countries such as Korea would accelerate this process. Kiyoshi Kojima (1973 and 1978) formalized the underlying proposition that FDI from advanced industrial countries could, under certain conditions, accelerate the development of export-oriented labor-intensive manufacturing industries in developing countries.

During the 1960s, Japan's imports from Korea grew faster than its imports from the world and, similarly, its exports to Korea grew more rapidly than its world exports (table 9). Between 1962 and 1970, Korea's imports from Japan grew more rapidly than imports from the world, however, its merchandise exports to the world grew more rapidly

¹ Data for Korea for 1960 and 1961 are available from Hong (1979). He reports that Korean exports to Japan were \$20 million in 1960 and \$19.2 million in 1961, a significant share of Korea's global exports of \$32.8 million and \$40.9 million respectively in those years. Hong reports imports of Korea from Japan were \$68.7 million in 1960 and \$ 69.5 million in 1961, with global imports of Korea at \$343.5 million and \$316.1 million respectively.

² Using the data from Hong (1979) in footnote 5, Japan was the destination for 61 per cent of exports in 1960 and 47 per cent in 1961.

³ For discussion, see Haggard (1990: 72-74).

⁴ Quoted in Haggard (1990:72).

⁵ The Vice Minister of MITI expressed this in a speech to the OECD Industrial Committee in Tokyo in 1970 (quoted in Oppenheim 1992: 319). His speech also emphasized the importance of the cooperation of private industry and government in implementing Japanese industrial policies (quoted in Ichimura 1998: 164).

than its exports to Japan (table 10). Moreover, overall export growth was nearly double import growth during the period 1962-1970.

As Korea's trade with Japan grew at equal rates for imports and exports during this period, the bilateral trade deficit widened considerably from \$66 million to \$579 million (table 11). The bilateral deficit continued to widen in the 1970s in absolute terms reaching \$2,820 million in 1980. The deficit widened again to over \$6,000 million in 1990.

Thus two fundamental points may be derived from observation of these historical data series. First, trade data reflect the asymmetry in size between the two countries. Although from Japan's vantage point Korea appears relatively small, from Korean eyes Japan appears to be a colossus. Second, there has been a systematic imbalance in merchandise trade between the two, with Korea perennially in deficit to Japan.¹

It is remarkable to note that Korean export growth to the world was higher than import growth throughout this nearly 30-year period. The bilateral deficit with Japan in 1990 was greater than Korea's global merchandise trade deficit. Hence, Korea had achieved a trade surplus with the rest of the world. This fact should be borne in mind when considering the bilateral trade relationship.

Following the re-opening of Korea to trade with Japan in 1965, a large surge of imports from Japan occurred. Much of these new imports were capital goods, particularly machinery and other equipment for establishing or expanding and modernizing factories. In addition, intermediate goods used in manufacturing production were purchased from Japan, then a low-cost source of such vital inputs. Thus, the appearance of a large bilateral trade deficit with Japan and its persistence should be viewed in the larger context of Korea's overall stellar performance in world trade following its opening to Japan.

Japanese foreign direct investment was argued to be trade creating by Kojima and others. However, Korea had maintained restrictions on inward (and outward) FDI even after the trade and exchange rate reforms of the mid-sixties. Thus, Japanese multinationals were restricted in their ability to operate facilities in Korea. Restrictions on inward FDI were consistent with Korea's industrialization strategy and were broadly similar to policies Japan adopted in the postwar period (Lincoln 1990 and 1999). The "full set" industrialization strategy combined import substitution and export promotion in manufacturing industries depending on the stage of development of a particular branch of industry (James, Fujita and Kim 1988). By the late eighties Korea liberalized its inward investment restrictions (as Japan had done earlier), at the same time as a boom occurred in Korean outward FDI. According to the OECD (1999), Japan's stock of outward FDI in 1996 stood at \$259 billion almost nine times its inward stock of \$30 billion. Korea had an outward FDI stock of about \$14 billion in 1996 up from just \$0.6 billion in 1986. Korea's restrictions on inward-FDI from Japan (and other countries) may have limited its

¹ Japan has a large services trade deficit while Korea has a nearly balanced services trade account (ICSEAD 2000 and IDE/JETRO 2000). It is likely Korea has a bilateral surplus in services trade with Japan.

ability to penetrate the Japanese market through intra-industry trade. Hence, the bilateral deficit with Japan was exacerbated on the demand side by heavy Korean demand for manufacturing plant and equipment as well as intermediate inputs from Japan and on the supply side by restrictions on inward-FDI by Japanese multinationals.

Korea has been attempting to catch-up with its larger and economically more mature neighbor. This catching-up process requires high real economic growth fueled by investment and development of export-oriented industry. In the process, Korea experienced relatively rapid economic growth and, oftentimes ran a current account deficit in order to fuel high rates of investment relative to its national savings rate. The resulting persistent imbalances in Korea's trade carried over to its bilateral trade with Japan. This has been an important source of trade friction between these two Northeast Asian countries. The bilateral deficit, from an economist's perspective, is not an economic liability for Korea since the import surplus provided by Japan has been used to build up Korean industries that compete effectively in third country markets. However, the deficit is politically sensitive and has commanded attention from senior officials in the bureaucracy and among the politicians as well.

Korean Approaches to the Trade Deficit with Japan

Korea has adopted two approaches to attempt to reduce its trade deficit with Japan. Export expansion by Korea into the Japanese market has been one approach. This approach initially actively relied on the cooperation of the Japanese government. Korean exports and those of other developing countries were given preferential treatment under Japan's Generalized System of Preferences (GSP) scheme beginning in 1973. Korea grew to be the largest supplier of GSP imports to Japan by the early 1980s. However, as Korean manufactured exports became more sophisticated, the share coming under GSP had steadily dwindled. Despite the preferential treatment, the trade imbalance continued to worsen. Finally, Korea was "graduated" from GSP in 1998 and had to compete in the OECD markets on a non-preferential basis.

The second approach adopted by Korea has been to restrict imports through various means, including localization or local content schemes and selective import restrictions. For over two decades, the Korean government imposed discriminatory measures against Japanese products under the Import Source Diversification Program (ISDP). The program restricted imports of consumer goods and amounted to an import ban on key Japanese exports such as passenger cars. Imports of listed items are subjected to approval by the Korean government. The program was implemented in a flexible manner, so that the list of restricted items was regularly amended (Bridges 1991). These policies amount to discriminatory quantitative restrictions against Japan. Under the rules of the multilateral trading system, such policies are illegal.¹ The Japanese government refrained from taking the case to the General Agreement on Tariffs and Trade (GATT) or

¹ Under Article I of the General Agreement on Tariffs and Trade, which covers the Most Favored Nation principle, it is illegal for one member country to grant concessions or impose barriers against other members on a discriminatory basis (see Trebilcock and Howse 1999: 27 for detailed discussion).

its successor the World Trade Organization (WTO). Yet it is a foregone conclusion that Japan would have prevailed should it have done so.

The ISDP has also targeted imports from Japanese affiliated multinationals with operations in Southeast Asia. Initially in 1977, 50 items were restricted and the list grew to 344 items in 1988. Japan was not specifically named in the ISDP. However, the “country that is the largest source of imports” is the target.¹ The discriminatory restrictions required adoption of rules of origin designed to block imports from all Japanese sources. When regulations concerning certification of origin were tightened to block imports from Japanese affiliated companies in Southeast Asia in 1991, the Japanese government informed the Korean government it was considering bringing the case before the GATT (Bridges 1991). Subsequently, Korea began to progressively reduce the number of items restricted and to phase out the program gradually. In 1992, Korea launched a “Concrete Plan to Correct the Imbalance in Japan-Korea Trade,” and sought to reduce barriers to Korean exports in Japan in specific items with high tariffs (leather clothing and shoes, some clothing items, travel bags and polypropylene) or quantitative restrictions (fish, silk fabric). Despite these efforts the bilateral deficit in merchandise trade ballooned from \$6 billion in 1990 to almost \$16 billion in 1996 (table 11).

Export Structures of Japan and Korea: A Case of Convergence

A key issue for trade relations between Japan and Korea is that of competition versus complementarity in trade patterns. One tool with which to assess this issue is the index of Revealed Comparative Advantage (RCA).² The RCA index assesses a country’s comparative advantage in a given industry by comparing the share of its own exports in that industry with the share of the industry in total world exports. It may be calculated as follows:

$$RCA_a^i = \left\{ X_a^i / X_i^i \right\} / \left\{ X_a^w / X_i^w \right\}$$

Where: X_a^i : exports of product a by country i; X_i^i : total exports of country i; X_a^w : world exports of product a; and, X_i^w : total world exports. If the ratio RCA_a^i is unity or greater, then the country tends to intensively export in that industry relative to the world and this is thought to reveal its comparative advantage in that industry.

A previous study (Lee 1986) utilizing 3-digit SITC data for 1964-1977 found a fairly low rank correlation between Korean and Japanese RCA indices for manufacturing

¹ As an aside, in 1980 when Saudi Arabia temporarily became the largest single source of imports, the Korean government amended ISDP to cover the largest source of imports over the past five years.

² Belassa (1965) first proposed use of this measure. It has been criticized and various modifications have been attempted (Vollrath 1991 and Ballance, Forstner and Murray 1987). However, none of the modifications is a significant improvement over the Belassa-type RCA. An alternative measure is the export similarity index, first proposed by Finger and Kreinin (1979). Noland (1997) uses this alternative measure and finds that Korea and Taiwan (along with Hong Kong) have the highest export similarity values (1968-1988) and finds some support for convergence with Japan’s export pattern.

industries using the year 1977 for Korea and 1964 for Japan (0.335).¹ A more recent study (James and Movshuk 2000) examines RCA structures across all SITC categories for Korea, Japan and Taiwan over the period 1980-1996. It finds that the overall RCA export structures of Korea and Japan are converging with the Spearman Rank Correlation Coefficient rising from 0.43 in 1980 to 0.55 in 1996. The trend in RCA convergence is found to be statistically significant. Moreover, convergence is also seen in the high correlation (0.66) between Korean exports in a given present year (1996) and Japanese exports in a previous year (1980), again the relationship is statistically significant. In contrast, while the rank correlation between Korean and Taiwanese export structures is high (0.66 in 1996), there is no statistically significant trend upwards over the entire period of 1980-1996. There is also statistically significant convergence between Taiwan and Japan, although the size of the correlation coefficient is slightly smaller than between Korea and Japan.

The strong tendency towards convergence of RCA structures between Korea and Japan would suggest that the two economies are more competitive than complementary with respect to third country markets. However, in bilateral trade this may not be the case. This is a matter of concern, as the basis for a preferential agreement to be trade creating on balance, is the criterion of a “natural economic territory.”² In fact, the composition of Korean exports to Japan is different from that of Korean exports to the world (table 12). Non-manufactures make up a far larger percentage of exports to Japan between 1994 and 1996 (22%) than to the world (8%). Moreover, within manufacturing exports of basic manufactures (SITC 6) and miscellaneous manufactures (SITC 8) make up a larger percentage of total exports to Japan than to the world. Finally, exports of machinery (SITC 7), on average, account for over half of Korean exports to the world in 1994-1996 but only 30% of exports to Japan.³ In contrast, Korean exports to Taiwan are more in line with Korea’s global export composition, particularly in 1994 and 1995, though less so in 1996.

What about the composition of Japan’s exports to Korea? In general, manufactures comprise similar percentages of total exports to Korea (93.5%) as to the world (95.9%) over the period 1994-1997. However, once again one finds that machinery exports are a lower share of exports to Korea (53%) than to the world (69%). Basic and miscellaneous manufactures comprise larger shares of exports from Japan to Korea than to the world (table 13).

Caution should be exercised in interpreting the bilateral trade composition. For example, if one examines Korean exports to Japan and to the world over the period 1980-1996 (table 14) the share of labor-intensive manufactures in total merchandise exports is roughly in line with the share going to the total world market. However, if one examines

¹ A comprehensive analysis of the RCA index for all 217 3-digit SITC categories would probably indicate a higher correlation coefficient. Aside from being somewhat dated, Lee’s study did not test for the statistical significance of simple correlations between national indices.

² Plummer and Kreinin (1992) argue that a “natural economic territory” is one in which partner countries have very similar bilateral and global trade patterns.

³ In 1997 a large amount of exports from Korea were classified in SITC 999 (unidentified products), hence, data on composition of trade in that year are suspect.

import data for Japan (table 15), imports of labor-intensive manufactures from Korea consistently account for a far larger share of total imports of Japan from Korea, than of world imports of Japan as a whole. Furthermore, consider machinery exports from Korea. If one looks at the composition of Korean exports, it is clear that the share of machinery in exports to Japan is often less than half the share being exported to world markets. Thus, from a Korean perspective, the pattern of exports to Japan appears to lag behind the pattern of exports to the world in terms of technological sophistication. Yet if one looks at Japanese imports from Korea, they are on par with the share of machinery imports from the world, and, in recent years (1993-96) the share has been well above the world machinery share. Hence, from Japan's point of view, Korea is an important supplier of machinery imports.

A final point worth noting is that exports from Korea to Japan and from Japan to Korea had fallen in nominal dollar value in 1996 and 1997, reflecting the general export collapse that took place across the region.¹ The stagnation in trade is not surprising given Japan's weak economy, the onset of the financial crisis in Korea and the general reduction in the growth of the volume of world trade in 1997.

Intra-Industry Trade

Does the composition of trade between Korea and Japan imply that classical comparative advantage is the fundamental determinant? The fact that bilateral trade flows appear to lag behind global export-import composition in terms of technological sophistication seems to imply that much of Korea-Japan trade is *inter*-industry trade, or trade in products that are quite distinct (e.g. Korean pears and sweaters are "traded" for Japanese cameras and color film). However, such a simplistic model of trade may fail to explain the actual composition of a large portion of trade in manufactured goods between the two countries. In observing the data presented above, it is clear that trade in SITC 7 (machinery) is by far the largest category in recent years. Therefore, it is important to consider the role that *intra*-industry trade may play in explaining the composition of bilateral trade flows.

Intra-industry trade is influenced by the extent to which partners engage in exchange of differentiated products. Countries with relatively high levels of income typically display preference for diversity in the range of models of motorcars, household goods, consumer electronic products, etc. that they wish to import. A second influence on the level of intra-industry trade is the degree of economic activity of multinational enterprises in partner economies. If there is a large stock of foreign direct investment in the form of manufacturing establishments it is likely that there will be substantial intra-industry and intra-firm trade. Clusters of such enterprises engage in production networks that seek to take advantage of ownership, location and internalization advantages as well as of economies of scale and of scope. Multinational enterprises choose to locate

¹ James (1997a) later published in Adams and James (1999) called attention to the export-growth slow-down in Asia, which began in the latter half of 1995 and became more pronounced thereafter. Parker and Lee (2000) attribute much of the slow-down to a collapse in world and regional export demand rather than to supply-side factors such as export competitiveness.

production accordingly and, with declining costs in telecommunications and transportation, this again provides impetus for expansion of intra-industry trade, particularly in components and intermediate products.

The standard measure of intensity of intra-industry trade is the Grubel-Lloyd index of intra-industry trade (IIT). It is calculated for an individual industry in a country as follows:

$$IIT_i = \{1 - (ABS(X_i - M_i)) / (X_i + M_i)\} * 100$$

Where *ABS* refers to the absolute value; *X_i*: exports of product *i*; and *M_i*: imports of product *i*. The IIT will take a value ranging from zero to one hundred. If the value is zero, then no intra-industry trade takes place. If the value is one hundred then exports and imports are equal and intra-industry trade is complete. Intra-industry trade may be evaluated on a global basis for each manufacturing industry and may also be evaluated on a bilateral basis.

An average or aggregate measure of intra-industry trade may be obtained as follows:

$$IIT = \sum_i \{IIT_i * (X_i + M_i) / (X + M)\}$$

Where: *X* and *M* refer to total exports and imports of manufactured goods of the country or region in question. The IIT is almost exclusively used for the evaluation of trade in manufactured goods rather than primary products. However, Hosen (1992) chose to include all products in his analysis of Japan's intra-industry trade. This was in response to criticisms that Japan has an abnormally low level of intra-industry trade, given its size, wealth and mature industrial structure.¹ Almost all studies of intra-industry trade have found Japan to be an outlier, with an extremely low average IIT². For example, Lincoln (1999) reports an average Japanese IIT of only 31.0 in 1988 and 46.9 in 1996 compared with 72.0 and 75.1 in the USA and 69.3 and 75.5 in Germany, respectively.³ Lincoln acknowledges that the rise in the IIT of Japan, particularly in 1995-96 appears to represent a significant structural change. Lincoln also reports an average IIT of 59.3 for Korea in 1995. An earlier study conducted by Fukusaku (1992) reports an average IIT of 35.4 in 1979 and 41.0 in 1988 for Korea and of 28.2 in 1979 and 30.2 in 1988 for Japan.⁴

¹ See, in particular, Lincoln (1999) for a critical evaluation of Japan's intra-industry trade.

² A problem arises with the IIT measure in countries with large trade imbalances. The IIT is biased downward in such cases. See Helpman (1987) and Aquino (1978) for discussion and Lee (1987). It is interesting to note that both Japan and the United States tend to have large global and bilateral trade imbalances in manufactures. However, the IIT measure for the US is invariably much larger than that of Japan. Hence, whatever bias may exist in the Grubel-Lloyd index, a correction would not seem to change the fundamental picture that Japan is an outlier with low intra-industry trade.

³ See Lincoln (1999). Lincoln uses harmonized system (HS) trade data in making these estimates.

⁴ Fukusaku (1992) uses OECD trade data, which use a slightly different classification system for manufacturing than the HS data used by Lincoln.

Hence, it appears Korea has more rapidly increased its intra-industry trade than is the case in Japan.

Intra-industry trade indices for 140 3-digit manufacturing industries, including 21 chemical industries, 48 basic manufacturing industries, 44 machinery industries and 27 miscellaneous manufacturing industries were calculated for the years 1980-1997 utilizing bilateral trade data.¹ Calculations at the industry level for Japan-Korea trade indicate that there is substantial variation between individual industries in the IIT index values and that the index varies both across industries and over time within industries. However, if one compares the mean value of the IIT over the entire period with the IIT in the latest years (1995-97), for 95 industries the IIT rose, for 41 it fell and for 4 it remained constant.

A ranking of industries by the mean value of the IIT for the most recent period (1995-97) with a cutoff value of an IIT of 60.0 yields 36 sectors (table 16). In reviewing the results, there is an almost total absence of chemical industries and otherwise a mixture of basic manufacturing, machinery and miscellaneous manufacturing. Among the top items are textile intermediate products such as SITC 656, 651, 657, 653 and 655. Machinery including telecommunications equipment (SITC 764), semiconductors (776), electric power machinery (771), office machines (751), computers (752) and passenger cars (781) have fairly high mean IIT values. There is substantial intra-industry trade in metal manufactures such as SITC 674, 672, 693, 694, 699, 678, 679 and 692. In addition, miscellaneous items such as SITC 893, 812, 898, 894, 892, 885 and 884 also are prominent. Finally some light industrial products such as paper (SITC 642), cutlery (696), pottery (666), leather (611) and pearls and semi-precious stones (667) are represented.

Average bilateral IIT values were calculated for all industries in each year and for three six-year periods (table 17). Overall average IIT values rose from 33.87 in 1980-85 to 36.43 in 1986-1991 and further to 42.05 in 1992-97. The average IIT appears to have risen sharply between 1993 and 1997. A statistical test for a significant trend in these observations is performed using Spearman Rank Order Correlations between time and the 18 IIT observations with original data replaced by their ranks. The resulting correlation coefficient is 0.837 and indicates a positive and significant time trend in the bilateral IIT values.

Global IIT values were calculated for both Korean and Japanese manufacturing industries using 140 3-digit SITC categories. These 3-digit industries have been ranked in descending order by mean IIT values for recent years (1995-97) with a cut-off of 60.00 for Korea (Table 18) and Japan (Table 20). In comparison with bilateral trade, there are a larger number of 3-digit sectors with mean IIT values of 60.00 or more (55 vs. 35). Moreover, almost half of the 3-digit sectors with high IIT values in bilateral trade were not among those with high IIT values in global trade. Again, the lack of correspondence between bilateral and global patterns may signify that Korea and Japan are not presently a

¹ Data are from the World Trade Analyzer database, Statistics Canada on CD-Rom (1997). The 3-digit SITC (rev. 2) data were chosen because more detailed data had numerous missing observations.

“natural economic territory.” Among 140 SITC 3-digit industries for which IIT values were calculated for Korea, in 97 there was an increase (comparing mean values in recent years 1995-97 with mean value over the entire sample period), in 33 there was a decrease and in 10 there was no trend up or down. The overall average IIT values (table 19) show a sharp increase from a mean of 37.20 in 1980-85 to 41.90 in 1986-91 and 51.59 in 1992-97. These observations indicate that overall, Korea’s intra-industry trade is more developed than is bilateral intra-industry trade with Japan.

Comparing the global pattern of intra-industry trade of Japan with that of bilateral trade with Korea reveals that 16 of 35 3-digit sectors with high bilateral IIT values do not appear in Japan’s global IIT rankings (compare table 20 with table 16). Of the 140 individual IIT values calculated for Japan, 86 increased, 44 decreased and 10 remained unchanged. The overall average IIT values (table 21) increased over the period but remained substantially below bilateral average values and well below Korea’s global average IIT values. Hence, Japan’s intra-industry trade is relatively less advanced than that of Korea. There appears to be a fairly large divergence between bilateral and global patterns of intra-industry trade. At the global level, the two partners have an intersecting set of 25 sectors (3-digit SITC) that are identified as having large intra-industry trade (IIT of 60 or above). However, the set of non-intersecting 3-digit sectors with high global IIT values in recent years is larger (30 for Korea, 28 for Japan). Thus, detailed analysis of intra-industry trade does not allay concerns that the two partners do not comprise a natural economic territory.¹ From the perspective of third parties, particularly Taiwan, there is a reasonable cause for concern over the possibility of trade and investment diversion under a free trade agreement between Korea and Japan.

The relatively low present level of intra-industry trade mirrors the very low Korean market share in Japan’s consumer market for products such as transportation machinery.² Tariff rates in Japanese industries (production weighted) have been shown to be negatively correlated with import penetration levels for the period 1988-1996, including in the case of imports from Korea, Taiwan, the US and the world.³ Thus, lowering of Japanese tariffs in various sectors has been associated with increases in import penetration in those sectors, including Korea. However, gains in sectors with tariff reductions have apparently been offset by loss of market share in other sectors where tariffs are low, but other types of obstacles to imports may exist. Difficulties in penetrating Japanese markets are compounded by the arcane distribution system. Non-tariff barriers, including regulations and standards such as the automobile certification system are thought to inhibit trade in differentiated products (e.g., sedans, cosmetics, consumer electronics) and this limited the expansion of intra-industry trade.

Another reason for the low level of intra-industry trade lies in the legacy of barriers to FDI in Korea and Japan. The relatively low stock of Japanese FDI in Korea

¹ One concern that arises from the possible downward bias in the average IIT measure of Japan, is that a lessened trade surplus in manufactures in recent years may account for the increase in IIT values, rather than an actual increase in the amount of intra-industry trade. See note 24 above.

² James and Movshuk (2000) find that Korean transport equipment suppliers have been unable to penetrate Japanese consumer markets over the period 1988-1997 (market share is stable at 0.04%).

³ James and Movshuk (2000) find the expected negative sign but find no statistically significant correlation.

(estimated to be about US \$5.0 billion at the end of 1998) is mainly from second-tier Japanese multinationals and is dispersed in rather small investments divided roughly equally between manufacturing and services. Korean investment in Japan is only about US \$0.54 billion and is largely invested in trade, with only 20% in manufacturing.¹ Removal of barriers to investment and trade would help spur multinational activity and allow consumer markets to be more easily served. Hence, intra-industry trade could be expanded through a closer economic relationship.

The 1997 Crisis and the IMF Reforms

The onset of the financial and balance of payments crisis in late 1997, forced the Korean government to agree to numerous reforms under the IMF Program (Sohn and Yang 1998). One of the trade reforms required was the abolition of the ISDP, a measure that was adopted by the Korean government on June 30, 1999. It is too early to comment on the impact cessation of the ISDP has had on imports of formerly regulated items from Japan. In particular, because of the import compression that took place in 1998 under the IMF Program, it would be inaccurate to use that year as a base year for measuring growth rates of imports of deregulated items. Rather, one should compare imports in the latter half of this year against those of the latter half of 1999 in order to make such an evaluation as imports have begun to recover with the resurgent Korean economy in 1999 and 2000.

Korea has exhibited the strongest economic recovery among the Asian crisis-hit economies, with real growth estimated at 10.7% in 1999 and signs of strong growth continuing in 2000. However, the rebound in economic activity has diverted attention from the necessity of deep and on-going structural reforms. Strong resistance on the part of vested interest groups (owners of chaebol and labor unions) has emerged and political squabbles have also played a role in frustrating progress in implementing reforms. The Korean government has responded to domestic political resistance to introduction of reforms and is actively supporting new regional initiatives to build defenses against future financial crises. Support by Korea and Japan for the Chiang Mai initiative and active participation in ASEAN+3 arrangements for currency swaps and monetary cooperation appear to be significant steps towards greater regional monetary cooperation.

On the trade front, Japan and Korea have broken with their past practice of relying solely on the multilateral trading system and have begun to actively study and negotiate preferential arrangements (free trade agreements) with each other and with partners such as Singapore, Chile and Mexico. The time is ripe for such agreements, given the Asian recovery and the increased role of intra-regional trade in East Asia. Moreover, the collapse of the momentum for a “Millennium Round” at the Seattle WTO Ministerial Meeting last November meant that global progress towards freer trade has stalled. Improvement in market access at the regional level will help sustain the recovery of East Asian economies. This new East Asian regionalism will provide some insurance against future financial crises and enhance the bargaining position of major East Asian economies within larger bodies such as APEC and the WTO (Bergsten 2000). It will also

¹ As reported in IDE/JETRO (2000), p. 13.

provide a political rationale for deepening commitments to structural market reform and institutional improvements in these economies.

A Closer Economic Relationship

In order to understand the impact of a free trade agreement between Korea and Japan it is necessary to assess existing barriers to imports, investment and provision of internationally traded factor and non-factor services. In this section, tariff and non-tariff barriers facing imports are first discussed. Obstacles to direct investment and expansion of multinational affiliate activity are briefly reviewed. Services barriers are considered taking into account the commitments undertaken in each partner's schedule in the General Agreement on Trade in Services (GATS). After this review of barriers to closer economic ties, it is possible to speculate on the impact a FTA may have on the two economies. However, rigorous analysis of the likely impact of the FTA is beyond the scope of the present paper. Instead the paper explores how a FTA might incorporate features that are important to investors, particularly trade-related intellectual property rights (TRIPs) and trade-related investment measures (TRIMs). In addition, some caveats about the possible adverse effects a FTA may have on third parties and measures to limit trade disputes are offered based on experience with existing Free Trade Agreements, particularly NAFTA.

Tariff and Non-Tariff Import Barriers

Tariffs in Japan are relatively high in a few sectors: agriculture, processed food, beverages, tobacco, textiles, apparel, leather and footwear, and in some of these sectors Korea has a revealed comparative advantage over the period in question. Hence, tariff reductions can be expected to benefit Korean suppliers of textiles, apparel, leather products and footwear.

Barriers in the form of technical barriers to trade and difficulties in distributing consumer products are partly to blame. The incidence of non-tariff barriers to imports in Japan, as reported in OECD (1998b), is concentrated in the following industries (excluding agriculture and services): food, textiles, pharmaceuticals, rubber products and non-ferrous metals. In general, Japan has fewer "core NTB measures" and lower tariffs than other OECD members, largely because Japan is not party to the Multi-Fiber Arrangement (MFA) and is parsimonious in the use of safeguards and antidumping measures. Removal of non-tariff barriers in rubber manufactures, textiles and non-ferrous metals would stimulate imports from Korea based on its comparative advantage in those sectors.

As for Korean barriers to trade, tariffs are generally higher than in Japan.¹ Unfortunately, Korea is not yet included in the OECD database on tariff and non-tariff barriers to trade (OECD 1998b). The relatively high tariff sectors in Korea, aside from agriculture, are reported by IDE/JETRO (2000) to be in selected manufacturing sectors

¹ It is estimated that Korean tariffs average 7.9% compared with an average tariff of 2.9% in Japan (Yamazawa 2000).

(chemicals, glassware, steel, liquid crystal devices, camera components, automotive components and batteries). However, the main obstacle to Japan was the now defunct ISDP, which required importers to obtain special permits in order to purchase regulated items from Japan and, therefore, acted as a non-tariff barrier to imports from Japan. Despite the ISDP, import penetration levels by Japanese suppliers are nearly nine times higher in manufacturing in Korea (4 to 5 percent of apparent consumption) than for Korea in Japan (0.5 percent of apparent consumption).¹

With the removal of ISDP, it is expected that Korea will import a larger amount of Japanese final consumer products such as cameras, sedans, brand-name apparel and other luxury goods. Mere removal of tariff and non-tariff barriers would be expected to lead to fairly minor impacts in terms of trade creation and trade diversion (IDE/JETRO 2000). However, these effects could be magnified by the choice of rules of origin.²

Investment Barriers

Although Japan maintains no official restrictions on inward direct investment or on foreign ownership, in practice, informal barriers make it somewhat difficult for foreign multinationals to establish themselves in Japan (Mason 1992, Encarnacion 1992 and Lincoln 1999). A core issue in this context is the difficulty foreigners have in acquiring local firms. The number of foreign acquisitions of Japanese firms in Japan is now rising and this bodes well for Korean firms seeking to improve their market access in Japan. For example, the number of foreign acquisitions of Japanese firms was only 13 in 1991 at the beginning of the long recession, but in 1997 was as high as 80, roughly equivalent to the number of US firms acquired by foreigners in 1995 and 1996 (Lincoln 1999).

In contrast to Japan, Korea maintains explicit restrictions on foreign ownership in 23 sectors including some key sectors such as telecommunications, broadcasting and news media. However, Korea has also gradually lifted foreign exchange regulations that limited inward investment and is allowing foreigners to purchase land for business purposes. Hence, it is likely a FTA will provide synergy to Japanese multinationals that are considering expansion into Korea through new investments or through acquisition of firms that are being hived off by overextended Korean chaebol.

Services

Under the GATS, Japan and Korea have scheduled 408 and 311 commitments out of a possible 620 (155 services multiplied by the 4 modes of supply).³ While these are respectable numbers, the number of fully liberalized sectors (no restrictions imposed on any mode of supply) is few. Japan generally has commitments that are mildly restrictive in terms of cross-border transactions, overseas consumption, presence of natural persons

¹ Estimates by James and Movshuk (2000).

² For discussion of the trade diversion effect of rules of origin see James and Umemoto (1999), Krueger (1993 and 1997), Stephenson and James (1995) and James (1997b).

³ See Trebilcock and Howse (1999).

or establishment of commercial presence by companies. In regulating services, however, there are some severe restrictions that in practice limit market access for foreigners, even though they also apply to Japanese companies. In the case of movement of natural persons, Japan is extremely restrictive except in cases of select qualified management, professional or specialist personnel that are working for foreign companies or that are unavailable domestically. Korea has, in services, as in manufactured goods discriminated against Japan to some extent. Legal restrictions on Japanese cultural services and entertainment exist, but are hardly enforced. These will be phased out soon. More problematic may be the rigorous restrictions that Korea implements on presence of natural persons, commercial presence and even cross-border transactions. One sector that both countries have liberalized is travel and tourism. The effects are telling. The most popular foreign destination for Japanese consumer of tourism and travel services is Korea, and nearly 2 million Japanese traveled to Korea in 1998. Until 1997, the number of Koreans visiting Japan was also the largest at just over 1 million. However, the financial crisis temporarily reduced the number of Korean visitors to 720,000 in 1998, below the 840,000 from Taiwan (IDE/JETRO 2000).

Korea has much lower prices for services than does Japan.¹ Hence, it can be expected that a FTA that extensively liberalizes services will strongly benefit Korean service industries. The benefits accruing to Korean service providers will not come at the expense of third parties as the liberalization will largely displace high cost Japanese suppliers and will be largely trade creating. Both countries are experiencing booming growth in computer-related service industries and in e-commerce. These sectors are being liberalized globally under the Information Technology Agreement (ITA) and it will be important for the FTA to maximize the market access through liberalization of all modes of supply in order to keep in step with the global trend. Service sector liberalization can be augmented through measures aimed at offering protection for intellectual property.

Trade-Related Intellectual Property Rights

Trade-related intellectual property rights (TRIPs) are an integral part of the Uruguay Round Agreement (URA) and were promoted largely by the United States with the support of Japan and Europe. It provides protection over the three main forms of intellectual property: copyright, trademarks and patents. It also sets forth obligations with respect to national treatment and enforcement and establishes a dispute settlement mechanism. Korea has in the past been stigmatized by the United States for its “weak” intellectual property regime, leading to the withdrawal of US tariff concessions under the Generalized System of Preferences (Trebilcock and Howse 1999: 318). Under US trade law (Special 301 provision of the Omnibus Trade and Competitiveness Act of 1988); Korea came under intense US pressure to provide protection for innovations of US

¹ This can be seen in comparing purchasing power parity GDP per capita with nominal dollar GDP. In Korea’s case PPP income per capita is \$13,590 compared to nominal income per capita of \$10,360 in 1997, while for Japan PPP income per capita is \$24,070 compared with nominal income per capita of \$33,387 in 1997 (ICSEAD 2000). IDE/JETRO (2000) reports that a survey of prices indicated services were often 2 to 4 fold more expensive in Japan than in Korea.

enterprises. The URA has now generalized that protection to other contracting members of the WTO. In order for Korea to attract high-technology investments from Japanese multinationals, a sound intellectual property rights regime is essential. The role of TRIPs in promoting inward foreign direct investment and in encouraging technology transfer is potentially significant. Hence, the Korea-Japan framework for a FTA will need to address this set of issues beyond the simple call for cooperation in harmonizing investigation criteria, preventing distribution of counterfeit goods and sharing data (IDE/JETRO 2000). NAFTA, for example, addressed the thorny problem of extending patent protection for pharmaceuticals (a major sticking point between the US and Canada in the negotiations). Up to the present, Korean law has restricted access of Japanese performers and has restricted the distribution of Japanese culture through videos, CDs and the like. As these restrictions are lifted, Korea will need to address the issues of copyright and performers' rights. These issues may be dealt with in provisions of a FTA dealing with TRIPs.

Trade-Related Investment Measures

Trade-related investment measures (TRIMs) were incorporated into the URA and in the GATS. NAFTA itself extends the national treatment principle, including embodiment of a right of establishment (with certain listed exceptions). The NAFTA prohibits various performance requirements and their use as a condition for the receipt of subsidies. The prohibition of measures is extended to requirements for technology transfer, but is qualified by permitting requirements for worker training and domestic R&D. NAFTA also provides protection to non-NAFTA investors so that a Japanese firm operating in Mexico would be extended the same NAFTA rights as a US firm operating in Canada. This type of open national treatment would encourage investors from outside the FTA to invest in Japan and Korea under the FTA investment framework. As part of the investment agreement, a positive provision allowing ease of movement of key corporate managers and specialists would also be attractive to multinationals seeking to expand activities in the FTA.

Caveats: Rules of Origin

Much has been written in recent years on the issue of rules of origin in the context of free trade agreements. In the case of NAFTA the issue of protectionist use of rules of origin has arisen. Even in the EU, product specific rules of origin have been used to block market access for semiconductors and other items produced or assembled in Japanese or Korean-affiliated enterprises operating within the EU. Currently there is virtually no international discipline over the use of rules of origin.

The NAFTA rules of origin, in particular, have rekindled the interest of economists in this seemingly arcane and technical area of international trade. "Customs Union" theory has been augmented by renewed interest in the welfare economics of regional preferential trading agreements, and the use of rules of origin (rules of preference) as potentially strategic commercial policy instruments. It is not my purpose here to belabor the issue (see references in footnote 34). The choice of rules of origin

will be a significant aspect of the new regionalism in East Asia. It is hoped that rules of origin are adopted by the Japan-Korea FTA are simple and transparent. In general, positive criteria such as a change in tariff heading or a minimal local value content rule (with a consistent and straightforward accounting framework) are preferable to negative criteria or complex rules that combine product specific criteria with other requirements. Exporters in Taiwan, Hong Kong, the PRC, and in Southeast Asia will take keen interest in this issue, as they have had adverse effects from NAFTA rules of origin, particularly in the textiles and apparel sectors.

Managing Trade Disputes and the Rise of Antidumping

The abolition of ISDP (or for that matter, the negotiation of a FTA) does not mean there will be an end to the Korean government's efforts to regulate imports from Japan. In recent years, Korea has begun to actively use antidumping as a trade remedy. Between 1993 and 1998 five definitive antidumping measures were instituted against Japanese exports by the Korean government. In 1999, three of these measures were extended and a new investigation was launched. The trend towards increasing use of antidumping as a trade remedy, particularly with reference to Japan, may be expected (James 1999).

In contrast, the Japanese government has been quite parsimonious in its use of antidumping. For example, in 1988 the Japan Knitwear Industry Association petitioned the Japanese government for an antidumping suit against the Korean knitwear industry, as exports of Korean knitwear to Japan rose sharply that year (Yoshimatsu 1999). However, the Japanese government rejected the petition and encouraged the industry associations to negotiate with one another. The result was predictable—a voluntary restraint agreement (VRA) was reached. The agreement restricts the growth of knitwear exports to 1% per year for a period of three years. Although the Japanese government has resisted abuse of antidumping as a trade remedy, the possibility of its use itself introduces a troubling element. The increased threat of antidumping may induce private industry to collude as the above example illustrates. However, in future, the WTO Antidumping Agreement (ADA) bans the use of voluntary restraint agreements among member countries. Increased use of antidumping measures is an undeniable threat to free and open trade (Trebilcock and Howse 1999). Elimination of the use of antidumping is possible through harmonization of competition laws as has been done in the case of the Australia-New Zealand Closer Economic Relationship. However, Korea and Japan are only beginning the process of building up the institutions necessary for effective enforcement of competition laws and policies and will have to look for other solutions.

In this context, NAFTA has a positive lesson for the Japan-Korea FTA. It established a bi-national panel review as a dispute resolution mechanism. The panels consist of five experts selected according to criteria set out in NAFTA Chapter 19. Since its implementation, this dispute settlement mechanism has effectively overturned antidumping and countervailing duty measures in several key areas of interest to Canadian exporters, thus limiting US protectionism (Trebilcock and Howse 1999).

Korea, in particular, may wish to study this panel review mechanism as a means to build-in insurance against the possibility of an enervated Japanese antidumping regime.

Cooperation at the Multilateral and Regional Levels

Japan has continued to be reluctant to use antidumping as a trade remedy and proposed that antidumping reform be placed on the agenda of the “Millennium Round” negotiations at the Seattle WTO Ministerial Conference (Government of Japan 1999). Many Asian countries, including Korea, are likely to be supportive of Japan’s proposal. At the same time Japan and Korea have begun to explore the basis for expanded bilateral economic cooperation at the multilateral and regional levels, including coordination of approaches to multilateral trade issues, trade and investment facilitation in APEC and monetary cooperation in the context of the Chiang Mai initiative. As heretofore neither Japan nor Korea has participated in a regional preferential trade arrangement both have an interest in ensuring that such arrangements meet the requirements under Article XXIV of the GATT.

In framing multilateral and regional levels of cooperation between Japan and Korea as in framing the FTA, due consideration of the interests of nearby trade-oriented economies will enhance the understanding of the implications of various courses of action by the two governments. In this context, it is worth noting that a system of free trade agreements with harmonized rules of origin and uniform margins of preference as well as an agreed objective and expeditious dispute settlement mechanism will be superior in welfare terms to a hub and spoke system, in which Japan is the hub and Korea, Singapore and other East Asian countries become spokes. The costs of complying with excessively complex tariff schedules, standards and rules may vitiate the very purpose of such agreements. Indeed, an alternative approach to the new regional arrangements could be to permit other countries with significant commercial ties to one or both member countries (or perhaps that are APEC members) to join the arrangement provided reciprocal concessions are granted. Again this would have the distinct advantage of simplicity and would avoid overlapping, complex schedules for tariff preferences and rules of origin. Hence, it is desirable from an international economics and business standpoint that the new East Asian Regionalism go beyond traditional approaches to free trade agreements in order to maximize the contribution to regional integration and global welfare.

Conclusion

The prospects for a closer economic relationship between Japan and Korea under the umbrella of a free trade agreement appear to have the blessing of the political leaders of the two countries and can be expected to be supported by prominent members of the corporate sector as well. The political momentum for seeking closer economic relations may have been strengthened by the feeling that the US and the Washington-based international financial institutions did not respond quickly or appropriately to East Asia’s economic troubles. With recovery in sight in Japan and with Korea on the mend from the

financial crisis of 1997-98, the time appears ripe for moving ahead with new regional arrangements in East Asia.

Despite these signs, however, the analysis contained in this paper should lead to some caution. The road to a FTA between Korea and Japan is likely to be difficult given the countries' industries tendency to compete in the international markets. In bilateral trade, there are some major differences from global trade patterns and these do not allay concerns that the pair is not a "natural economic territory." The convergence in export structures is found to be robust. Hence, it is necessary to consider the potential role of intra-industry trade. Analysis of bilateral and global patterns of intra-industry trade reinforce the findings with regard to overall export structures: trade links in the form of intra-industry trade tend to be weak, largely reflecting Japan's position as an outlier in the intensity of intra-industry trade. The reasons for this appear to be related to the difficult environment foreign investors face in establishing a manufacturing base inside Japan. This limits the scope of intra-firm trade and mirrors the low market share of foreign products in the Japanese consumer markets for manufactures.

On the positive side, there is evidence that this is changing. There has been a statistically significant rise in the average IIT ratio in trade between the two and in their trade with the world. The reduction of investment barriers would reinforce this trend. Hence, a FTA could be expected to have important positive dynamic effects, even though the static trade creation and diversion effects are likely to be small. Trade diversion effects could be significant, however, for Taiwan unless efforts are taken to minimize trade diversion. Provision of national treatment (including FTA rights) for non-member investors in either or both members of the FTA would minimize adverse effects over time. The FTA may provide some reinforcement for on-going efforts to reform and restructure the domestic economy and will also provide a mechanism to sustain on-going efforts to liberalize international trade and investment in the two countries. Fears in Korea about a burgeoning bilateral deficit in trade with Japan have been somewhat alleviated as Korea has had an overall trade and current account surplus since 1998, even with a surge in imports following the strong economic recovery.

The key policy recommendations of this study are based on the author's assessment that Japan and Korea, as well as other East Asian states, will attempt to negotiate a series of free trade agreements in the near future. This assessment is not based on pure economic grounds, but takes into account the political factors that have pushed the governments in the region toward the negotiating table with one another. Despite the fact that the static gains from a FTA are minor and that third parties could be negatively affected, East Asian governments appear to be committed to exploring closer economic relations as a counter-weight to deeper integration in Europe and, possibly, in the Americas.

Once this prospect is accepted the key issue becomes how to enhance the positive liberalizing elements and dynamic growth effects and, at the same time, how to limit the potential negative effects of trade and investment diversion. The decision to negotiate comprehensive agreements consistent with GATT Article XXIV will mean the

negotiations will have to cover contentious issues in sensitive sectors such as agriculture, fisheries and services. Since both Japan and Korea are protective of their agricultural sectors, it is likely they will trade concessions in manufacturing and services. In both a static and dynamic sense, it is likely Korea will benefit most in services and Japan in manufactures.

The avoidance of hub and spoke systems of regional free trade agreements or what Bhagwati (1997) has called a “spaghetti bowl” of ever more complex schedules of preferential tariffs and rules of origin, through a harmonized and transparent set of rules of origin is possible in East Asian regionalism. Korea and Japan will be a more significant test case for a FTA than Japan-Singapore as the latter has virtually zero tariffs and will not be interested in complex rules of origin given its role as a major open port and trading center for the region. In the case of Korea and Japan, however, manufacturing interests may be tempted to use rules of origin to divert trade from competitive suppliers in third markets such as Taiwan, Hong Kong, the USA or China. Hence, agreement to use a simple positive criterion for determining origin will be an important principle for the new FTA. Opening the FTA to new members who provide reciprocal concessions under a single agreed set of rules of origin would further the avoidance of a complex system and would help to maximize the welfare effects of trade liberalization.

An equally important principle in the treatment of investment is that of national treatment. Extending national treatment to investors from non-member economies allows them to enjoy the benefits of the FTA and thereby encourages them to invest.

Having an effective dispute resolution mechanism that allows members to challenge restrictions imposed by one another (say through antidumping measures) is important in limiting the discretion of protectionist forces. A panel review system, as under Chapter 19 of NAFTA, is an effective way to provide exporters with a means to defend their legitimate interests.

Korea and Japan have experienced bitter and acrimonious relations for a good part of the twentieth century. However, as relations have steadily improved in recent years the seemingly impossible or improbable prospect of the two embracing in a mutual closer economic relationship may soon be at hand. In approaching the new relationship, both have a clean slate of no other preferential arrangements. Hence, as the 21st century begins Japan and Korea may develop a new and forward-looking type of regionalism that can reinforce East Asian prosperity and contribute to global economic welfare.

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Table 1. Japan's Imports from Korea, Taiwan and the World, 1962-1996

('000 US dollars, current prices)

Japan's Imports from Korea, Taiwan and the World				1960s									
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Japan	Imports	Korea	all	28,505	26,982	41,667	41,316	71,694	92,390	101,637	133,938		
Japan	Imports	Taiwan	all	63,255	124,956	143,347	157,448	147,410	137,097	150,729	180,538		
Japan	Imports	World	all	5,636,975	6,736,860	7,938,174	8,169,676	9,523,465	11,664,018	12,988,273	15,024,734		
Japan's Imports from Korea, Taiwan and the World				1970s									
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Japan	Imports	Korea	all	228,988	272,119	425,995	1,204,678	1,565,127	1,309,850	1,916,773	2,113,838	2,591,029	3,359,410
Japan	Imports	Taiwan	all	250,780	286,883	421,862	887,794	952,855	812,106	1,189,833	1,288,664	1,750,157	2,475,630
Japan	Imports	World	all	18,882,680	19,711,756	23,470,703	38,313,410	62,094,358	57,864,534	64,504,675	70,560,476	78,731,303	110,108,382
Japan's Imports from Korea, Taiwan and the World				1980s									
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Japan	Imports	Korea	all	2,994,844	3,388,908	3,253,512	3,364,793	4,203,038	4,091,950	5,283,680	8,057,523	11,771,367	12,967,111
Japan	Imports	Taiwan	all	2,293,365	2,522,502	2,443,115	2,622,315	3,203,662	3,385,509	4,690,520	7,128,054	8,743,424	8,979,266
Japan	Imports	World	all	139,891,569	140,830,276	130,318,594	125,016,848	134,257,312	127,512,091	119,423,909	146,048,027	183,252,006	207,356,181
Japan's Imports from Korea, Taiwan and the World				1990s									
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Japan	Imports	Korea	all	11,620,797	12,339,170	11,568,266	11,631,026	13,421,009	17,156,700	15,815,257			
Japan	Imports	Taiwan	all	8,495,678	9,492,140	9,467,187	9,669,430	10,752,907	14,349,992	14,959,176			
Japan	Imports	World	all	231,223,477	234,102,734	230,974,848	238,716,345	272,307,833	332,843,867	347,495,549			

Source: UN Commodity Trade Statistics

Table 2. Share of Japan's Imports from Korea and Taiwan, 1962-1996

(%)

Share of Japan's Imports (%)													
1960s													
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Japan	Import	Korea	all	0.51%	0.40%	0.52%	0.51%	0.75%	0.79%	0.78%	0.89%		
Japan	Import	Taiwan	all	1.12%	1.85%	1.81%	1.93%	1.55%	1.18%	1.16%	1.20%		
Share of Japan's Imports (%)													
1970s													
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Japan	Import	Korea	all	1.21%	1.38%	1.82%	3.14%	2.52%	2.26%	2.97%	3.00%	3.29%	3.05%
Japan	Import	Taiwan	all	1.33%	1.46%	1.80%	2.32%	1.53%	1.40%	1.84%	1.83%	2.22%	2.25%
Share of Japan's Imports (%)													
1980s													
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Japan	Import	Korea	all	2.14%	2.41%	2.50%	2.69%	3.13%	3.21%	4.42%	5.52%	6.42%	6.25%
Japan	Import	Taiwan	all	1.64%	1.79%	1.87%	2.10%	2.39%	2.66%	3.93%	4.88%	4.77%	4.33%
Share of Japan's Imports (%)													
1990s													
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Japan	Import	Korea	all	5.03%	5.27%	5.01%	4.87%	4.93%	5.15%	4.55%			
Japan	Import	Taiwan	all	3.67%	4.05%	4.10%	4.05%	3.95%	4.31%	4.30%			

Source: UN Commodity Trade Statistics

Table 3. Japan's Exports to Korea, Taiwan and the World, 1962-1996

('000 US dollars, current prices)

Japan's Exports to Korea, Taiwan and the World				1960s									
reporter	type	partner	sitc	1962	1963	1964	1965	1966	1967	1968	1969		
Japan	Exports	Korea	all	138,152	159,676	108,846	180,325	335,194	406,994	602,697	767,253		
Japan	Exports	Taiwan	all	119,617	107,557	138,986	218,052	255,441	328,312	471,714	606,417		
Japan	Exports	World	all	4,916,550	5,452,522	6,673,728	8,452,423	9,777,172	10,442,408	12,972,695	15,991,300		
Japan's Exports to Korea, Taiwan and the World				1970s									
reporter	type	partner	sitc	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Japan	Exports	Korea	all	818,244	856,025	979,788	1,786,614	2,651,379	2,248,130	2,822,789	4,078,297	6,001,090	6,244,564
Japan	Exports	Taiwan	all	700,472	923,498	1,090,613	1,642,114	2,000,557	1,823,959	2,278,791	2,551,754	3,583,507	4,364,963
Japan	Exports	World	all	19,319,231	24,018,886	28,591,144	36,931,399	55,537,754	55,754,233	67,202,797	80,470,067	97,501,411	102,964,432
Japan's Exports to Korea, Taiwan and the World				1980s									
reporter	type	partner	sitc	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Japan	Exports	Korea	all	5,363,867	5,653,597	4,878,298	5,996,998	7,216,714	7,122,222	10,461,973	13,213,578	15,429,593	16,554,135
Japan	Exports	Taiwan	all	5,141,368	5,400,346	4,252,157	5,080,596	5,978,723	5,058,733	7,843,146	11,274,192	14,340,118	15,384,526
Japan	Exports	World	all	129,542,331	151,910,088	138,584,404	146,803,690	170,037,528	175,857,946	209,081,153	229,054,532	264,771,851	275,039,703
Japan's Exports to Korea, Taiwan and the World				1990s									
reporter	type	partner	sitc	1990	1991	1992	1993	1994	1995	1996			
Japan	Exports	Korea	all	17,449,832	20,059,806	17,786,454	19,059,755	24,310,332	31,215,471	29,290,651			
Japan	Exports	Taiwan	all	15,374,627	18,236,315	21,129,957	22,017,690	23,725,167	28,824,588	25,870,693			
Japan	Exports	World	all	286,767,652	314,395,355	339,491,582	360,705,505	395,326,197	442,571,004	410,481,180			

Source: UN Commodity Trade Statistics

Table 4. Share of Japan's Exports to Korea and Taiwan, 1962-1996

(%)

Share of Japan's Exports (%)				1960s									
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Japan	Exports	Korea	all	2.81%	2.93%	1.63%	2.13%	3.43%	3.90%	4.65%	4.80%		
Japan	Exports	Taiwan	all	2.43%	1.97%	2.08%	2.58%	2.61%	3.14%	3.64%	3.79%		
Share of Japan's Exports (%)				1970s									
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Japan	Exports	Korea	all	4.24%	3.56%	3.43%	4.84%	4.77%	4.03%	4.20%	5.07%	6.15%	6.06%
Japan	Exports	Taiwan	all	3.63%	3.84%	3.81%	4.45%	3.60%	3.27%	3.39%	3.17%	3.68%	4.24%
Share of Japan's Exports (%)				1980s									
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Japan	Exports	Korea	all	4.14%	3.72%	3.52%	4.09%	4.24%	4.05%	5.00%	5.77%	5.83%	6.02%
Japan	Exports	Taiwan	all	3.97%	3.55%	3.07%	3.46%	3.52%	2.88%	3.75%	4.92%	5.42%	5.59%
Share of Japan's Exports (%)				1990s									
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Japan	Exports	Korea	all	6.09%	6.38%	5.24%	5.28%	6.15%	7.05%	7.14%			
Japan	Exports	Taiwan	all	5.36%	5.80%	6.22%	6.10%	6.00%	6.51%	6.30%			

Source: UN Commodity Trade Statistics

Table 5. Korea's Imports from Japan, Taiwan and the World, 1962-1996

('000 US dollars, current prices)

Korea's Imports from Japan, Taiwan and the World				1960s									
reporter	type	partner	sitc	1962	1963	1964	1965	1966	1967	1968	1969		
Korea	Imports	Japan	all	92,045	159,331	110,131	166,627	293,792	443,049	624,103	753,815		
Korea	Imports	Taiwan	all	6,171	14,993	15,197	30,167	22,350	29,947	15,959	24,345		
Korea	Imports	World	all	381,145	560,271	404,334	449,945	736,557	996,140	1,467,766	1,822,840		
Korea's Imports from Japan, Taiwan and the World				1970s									
reporter	type	partner	sitc	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Korea	Imports	Japan	all	809,280	953,762	1,031,242	1,726,899	2,620,546	2,432,000	3,094,208	3,923,207	5,979,586	6,637,859
Korea	Imports	Taiwan	all	33,937	39,096	47,871	55,395	107,688	161,917	79,876	109,087	152,611	209,110
Korea	Imports	World	all	1,983,269	2,394,063	2,522,002	4,240,279	6,844,301	7,271,002	8,764,466	10,803,124	14,965,947	20,296,053
Korea's Imports from Japan, Taiwan and the World				1980s									
reporter	type	partner	sitc	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Korea	Imports	Japan	all	5,834,116	6,341,184	5,279,003	6,207,984	7,613,341	7,523,710	10,844,024	13,641,528	15,917,153	17,441,821
Korea	Imports	Taiwan	all	312,469	354,439	280,160	288,503	338,652	332,882	431,691	758,863	1,071,211	1,316,000
Korea	Imports	World	all	22,228,224	26,028,324	24,236,097	26,173,738	30,608,611	31,118,688	31,517,958	40,925,297	51,707,905	61,338,468
Korea's Imports from Japan, Taiwan and the World				1990s									
reporter	type	partner	sitc	1990	1991	1992	1993	1994	1995	1996			
Korea	Imports	Japan	all	18,566,282	21,110,680	19,450,797	20,008,532	25,381,271	32,594,904	31,431,613			
Korea	Imports	Taiwan	all	1,452,000	1,514,673	1,315,211	1,407,101	1,799,528	2,563,683	2,725,406			
Korea	Imports	World	all	69,580,740	81,245,667	81,395,658	83,397,640	101,628,806	132,375,500	144,724,219			

Source: UN Commodity Trade Statistics, IMF, Direction of Trade Statistics Yearbook 1996

Table 6. Share of Korea's Imports from Japan and Taiwan, 1962-1996

(%)

Share of Korea's Imports (%)				1960s									
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Korea	Imports	Japan	all	24.15%	28.44%	27.24%	37.03%	39.89%	44.48%	42.52%	41.35%		
Korea	Imports	Taiwan	all	1.62%	2.68%	3.76%	6.70%	3.03%	3.01%	1.09%	1.34%		
Share of Korea's Imports (%)				1970s									
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Korea	Imports	Japan	all	40.81%	39.84%	40.89%	40.73%	38.29%	33.45%	35.30%	36.32%	39.95%	32.71%
Korea	Imports	Taiwan	all	1.71%	1.63%	1.90%	1.31%	1.57%	2.23%	0.91%	1.01%	1.02%	1.03%
Share of Korea's Imports (%)				1980s									
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Korea	Imports	Japan	all	26.25%	24.36%	21.78%	23.72%	24.87%	24.18%	34.41%	33.33%	30.78%	28.44%
Korea	Imports	Taiwan	all	1.41%	1.36%	1.16%	1.10%	1.11%	1.07%	1.37%	1.85%	2.07%	2.15%
Share of Korea's Imports (%)				1990s									
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Korea	Imports	Japan	all	26.68%	25.98%	23.90%	23.99%	24.97%	24.62%	21.72%			
Korea	Imports	Taiwan	all	2.09%	1.86%	1.62%	1.69%	1.77%	1.94%	1.88%			

Source: UN Commodity Trade Statistics, IMF, Direction of Trade Statistics Yearbook 1996

Table 7. Korea's Exports to Japan, Taiwan and the World, 1962-1996

('000 US dollars, current prices)

Korea's Exports to Japan, Taiwan and the World				1960s									
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Korea	Exports	Japan	all	25,726	26,437	38,730	43,967	65,480	84,740	99,741	128,345		
Korea	Exports	Taiwan	all	1,257	747	2,113	3,034	3,041	3,303	5,764	13,326		
Korea	Exports	World	all	52,445	86,675	118,603	175,087	249,543	320,223	455,399	616,926		
Korea's Exports to Japan, Taiwan and the World				1970s									
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Korea	Exports	Japan	all	229,587	257,804	404,236	1,234,093	1,374,100	1,285,155	1,789,783	2,102,892	2,586,027	3,326,167
Korea	Exports	Taiwan	all	7,227	11,982	16,062	40,940	50,626	62,703	83,660	100,058	137,266	159,370
Korea	Exports	World	all	829,640	1,060,036	1,615,778	3,214,884	4,452,544	5,070,591	7,693,044	9,986,028	12,654,104	14,951,705
Korea's Exports to Japan, Taiwan and the World				1980s									
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Korea	Exports	Japan	all	3,014,032	3,482,915	3,385,553	3,403,582	4,607,046	4,543,321	5,417,594	8,394,017	11,965,747	13,425,868
Korea	Exports	Taiwan	all	209,765	260,227	206,601	150,154	258,846	196,112	332,975	554,413	949,288	1,284,000
Korea	Exports	World	all	17,445,814	21,199,819	21,849,986	24,436,931	29,247,885	30,282,664	34,701,572	47,171,770	60,503,448	62,262,859
Korea's Exports to Japan, Taiwan and the World				1990s									
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Korea	Exports	Japan	all	12,555,816	12,355,459	11,593,635	11,544,611	13,407,666	16,811,879	15,449,482			
Korea	Exports	Taiwan	all	1,249,000	1,539,877	2,139,919	2,265,802	2,712,012	3,649,424	3,477,692			
Korea	Exports	World	all	64,837,079	71,672,123	76,394,189	81,941,688	95,440,002	122,625,400	124,403,704			

Source: UN Commodity Trade Statistics, IMF, Direction of Trade Statistics Yearbook 1996

Table 8. Share of Korea's Exports to Japan and Taiwan, 1962-1996

(%)

Share of Korea's Exports (%)				1960s									
reporter	type	partner	site	1962	1963	1964	1965	1966	1967	1968	1969		
Korea	Exports	Japan	all	49.05%	30.50%	32.66%	25.11%	26.24%	26.46%	21.90%	20.80%		
Korea	Exports	Taiwan	all	2.40%	0.86%	1.78%	1.73%	1.22%	1.03%	1.27%	2.16%		
Share of Korea's Exports (%)				1970s									
reporter	type	partner	site	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Korea	Exports	Japan	all	27.67%	24.32%	25.02%	38.39%	30.86%	25.35%	23.26%	21.06%	20.44%	22.25%
Korea	Exports	Taiwan	all	0.87%	1.13%	0.99%	1.27%	1.14%	1.24%	1.09%	1.00%	1.08%	1.07%
Share of Korea's Exports (%)				1980s									
reporter	type	partner	site	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Korea	Exports	Japan	all	17.28%	16.43%	15.49%	13.93%	15.75%	15.00%	15.61%	17.79%	19.78%	21.56%
Korea	Exports	Taiwan	all	1.20%	1.23%	0.95%	0.61%	0.89%	0.65%	0.96%	1.18%	1.57%	2.06%
Share of Korea's Exports (%)				1990s									
reporter	type	partner	site	1990	1991	1992	1993	1994	1995	1996			
Korea	Exports	Japan	all	19.37%	17.24%	15.18%	14.09%	14.05%	13.71%	12.42%			
Korea	Exports	Taiwan	all	1.93%	2.15%	2.80%	2.77%	2.84%	2.98%	2.80%			

Source: UN Commodity Trade Statistics, IMF, Direction of Trade Statistics Yearbook 1996

Table 9. Growth Rates of Japan's Trade with Korea, Taiwan and the World, 1962-1996

(annual percentage change)

		Merchandise Imports					Merchandise Exports				
Reporter	Partner	1962-70	1970-80	1980-90	1990-96	1962-96	1962-70	1970-80	1980-90	1990-96	1962-96
Japan	Korea	29.75	29.32	14.52	5.27	20.42	24.90	20.69	12.52	9.02	17.06
Japan	Taiwan	18.79	24.77	13.99	9.89	17.44	24.72	22.06	11.58	9.06	17.13
Japan	World	16.31	22.17	5.15	7.03	12.89	18.66	20.96	8.27	6.16	13.90

Source: UN Commodity Trade Statistics

Table 10. Growth Rates of Korea's Trade with Japan, Taiwan and the World, 1962-1996

(annual percentage change)

		Merchandise Imports					Merchandise Exports				
Reporter	Partner	1962-70	1970-80	1980-90	1990-96	1962-96	1962-70	1970-80	1980-90	1990-96	1962-96
Korea	Japan	31.22	21.84	12.27	9.17	18.72	31.47	29.37	15.34	3.52	20.70
Korea	Taiwan	23.75	24.86	16.60	11.07	19.62	24.44	40.05	19.53	18.61	26.25
Korea	World	22.90	27.34	12.09	12.98	19.09	41.22	35.61	14.03	11.47	25.68

Source: See Tables 5 and 7

Table 11. Balance of Trade: Korea and Japan, 1962-1996 ('000 US dollars, current prices)

reporter	type	partner	sitc			1962	1963	1964	1965	1966	1967	1968	1969
Korea	Exports	Japan	all			25,726	26,437	38,730	43,967	65,480	84,740	99,741	128,345
Korea	Imports	Japan	all			92,045	159,331	110,131	166,627	293,792	443,049	624,103	753,815
Korea	balance	Japan	all			-66,319	-132,894	-71,401	-122,660	-228,312	-358,309	-524,362	-625,470
reporter	type	partner	sitc	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Korea	Exports	Japan	all	229,587	257,804	404,236	1,234,093	1,374,100	1,285,155	1,789,783	2,102,892	2,586,027	3,326,167
Korea	Imports	Japan	all	809,280	953,762	1,031,242	1,726,899	2,620,546	2,432,000	3,094,208	3,923,207	5,979,586	6,637,859
Korea	balance	Japan	all	-579,693	-695,958	-627,006	-492,806	-1,246,446	-1,146,845	-1,304,425	-1,820,315	-3,393,559	-3,311,692
reporter	type	partner	sitc	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Korea	Exports	Japan	all	3,014,032	3,482,915	3,385,553	3,403,582	4,607,046	4,543,321	5,417,594	8,394,017	11,965,747	13,425,868
Korea	Imports	Japan	all	5,834,116	6,341,184	5,279,003	6,207,984	7,613,341	7,523,710	10,844,024	13,641,528	15,917,153	17,441,821
Korea	balance	Japan	all	-2,820,084	-2,858,269	-1,893,450	-2,804,402	-3,006,295	-2,980,389	-5,426,430	-5,247,511	-3,951,406	-4,015,953
reporter	type	partner	sitc	1990	1991	1992	1993	1994	1995	1996			
Korea	Exports	Japan	all	12,555,816	12,355,459	11,593,635	11,544,611	13,407,666	16,811,879	15,449,482			
Korea	Imports	Japan	all	18,566,282	21,110,680	19,450,797	20,008,532	25,381,271	32,594,904	31,431,613			
Korea	balance	Japan	all	-6,010,466	-8,755,221	-7,857,162	-8,463,921	-11,973,605	-15,783,025	-15,982,131			

Source: UN Commodity Trade Statistics

Table 12. Korea Exports to Japan and the World, Recent Years
(current prices, '000 US dollars)

Japan				
	1994	1995	1996	1997
5-Chemicals and related products, n.e.s.	738,124	828,438	827,346	935,028
6-Manufactured goods classified chiefly	2,952,879	3,596,752	3,036,755	2,837,301
7-Machinery and transport equipment	3,634,550	5,769,870	4,975,231	4,410,580
8-Miscellaneous manufactured articles	3,629,703	3,718,604	3,156,889	2,522,411
Manufactures	10,955,256	13,913,664	11,996,221	10,705,320
Total Exports	13,433,025	17,168,400	16,162,168	14,583,800
Share: %				
5-Chemicals and related products, n.e.s.	5.49%	4.83%	5.12%	6.41%
6-Manufactured goods classified chiefly	21.98%	20.95%	18.79%	19.46%
7-Machinery and transport equipment	27.06%	33.61%	30.78%	30.24%
8-Miscellaneous manufactured articles	27.02%	21.66%	19.53%	17.30%
Manufactures	81.55%	81.04%	74.22%	73.41%
World				
	1994	1995	1996	1997
5-Chemicals and related products, n.e.s.	6,237,127	8,859,474	9,214,031	8,879,247
6-Manufactured goods classified chiefly	23,118,724	27,908,092	27,917,754	22,737,336
7-Machinery and transport equipment	46,899,924	65,729,924	68,869,656	55,509,184
8-Miscellaneous manufactured articles	13,502,603	13,432,374	12,570,004	10,653,300
Manufactures	89,758,378	115,929,864	118,571,445	97,779,067
Total Exports	95,950,400	125,530,072	132,681,848	125,000,768
Share: %				
5-Chemicals and related products, n.e.s.	6.50%	7.06%	6.94%	7.10%
6-Manufactured goods classified chiefly	24.09%	22.23%	21.04%	18.19%
7-Machinery and transport equipment	48.88%	52.36%	51.91%	44.41%
8-Miscellaneous manufactured articles	14.07%	10.70%	9.47%	8.52%
Manufactures	93.55%	92.35%	89.37%	78.22%

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997.

Table 13. Japan Exports to Korea and the World, Recent Years
(current prices, '000 of US dollars)

Korea		1994	1995	1996	1997
5-Chemicals and related products, n.e.s.		3,013,425	4,015,443	3,748,966	3,662,561
6-Manufactured goods classified chiefly		3,981,548	5,182,461	4,869,903	4,463,726
7-Machinery and transport equipment		13,127,219	16,206,951	16,160,709	13,567,868
8-Miscellaneous manufactured articles		2,648,843	3,727,388	3,577,867	3,156,613
Manufactures		22,771,035	29,132,243	28,357,445	24,850,768
Total Exports		24,429,458	31,275,396	30,257,014	26,407,712
Share: %					
5-Chemicals and related products, n.e.s.		12.34%	12.84%	12.39%	13.87%
6-Manufactured goods classified chiefly		16.30%	16.57%	16.10%	16.90%
7-Machinery and transport equipment		53.74%	51.82%	53.41%	51.38%
8-Miscellaneous manufactured articles		10.84%	11.92%	11.82%	11.95%
Manufactures		93.21%	93.15%	93.72%	94.10%
World					
		1994	1995	1996	1997
5-Chemicals and related products, n.e.s.		22,836,510	29,346,502	28,634,656	29,350,346
6-Manufactured goods classified chiefly		42,752,152	49,968,432	46,880,232	47,184,012
7-Machinery and transport equipment		279,585,152	307,456,160	288,426,880	289,904,192
8-Miscellaneous manufactured articles		35,437,036	40,620,748	39,892,748	41,108,164
Manufactures		380,610,850	427,391,842	403,834,516	407,546,714
Total Exports		395,459,808	444,952,096	421,970,016	427,037,376
Share: %					
5-Chemicals and related products, n.e.s.		5.77%	6.60%	6.79%	6.87%
6-Manufactured goods classified chiefly		10.81%	11.23%	11.11%	11.05%
7-Machinery and transport equipment		70.70%	69.10%	68.35%	67.89%
8-Miscellaneous manufactured articles		8.96%	9.13%	9.45%	9.63%
Manufactures		96.25%	96.05%	95.70%	95.44%

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997.

Table 14. Korea Exports of Labor-Intensive Manufactures and Machinery to Japan, Taiwan and the World, 1981-1996

reporter	type	partner	site	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
KRS	EXP	JPN	total	3482915	3385553	3403582	4607046	4543321	5417594	8394017	11965747	13425868	12555816
KRS	EXP	JPN	L-int	1279682	1179901	908367	1283628	1247197	1745417	2904524	4478187	5046790	4253565
KRS	EXP	JPN	L-intshare	36.74%	34.85%	26.69%	27.86%	27.45%	32.22%	34.60%	37.43%	37.59%	33.88%
KRS	EXP	JPN	Machine	380745	402944	367492	779925	792090	663204	1242609	1842098	2309670	2712553
KRS	EXP	JPN	Macshare	10.93%	11.90%	10.80%	16.93%	17.43%	12.24%	14.80%	15.39%	17.20%	21.60%
KRS	EXP	TAI	total	260227	206601	150154	258846	196112	332975	554413	949288		
KRS	EXP	TAI	L-int	34052	18637	25279	41539	30512	55381	86329	154433		
KRS	EXP	TAI	L-intshare	13.09%	9.02%	16.84%	16.05%	15.56%	16.63%	15.57%	16.27%		
KRS	EXP	TAI	Machine	26681	21128	19151	74687	31861	81859	197245	368436		
KRS	EXP	TAI	Macshare	10.25%	10.23%	12.75%	28.85%	16.25%	24.58%	35.58%	38.81%		
KRS	EXP	WOR	total	21199819	21849986	24436931	29247885	30282664	34701572	47171770	60503448	62262859	64837079
KRS	EXP	WOR	L-int	8317631	8177426	8427148	9912844	10306378	13776603	18734246	23114030	23713003	23822973
KRS	EXP	WOR	L-intshare	39.23%	37.43%	34.49%	33.89%	34.03%	39.70%	39.71%	38.20%	38.09%	36.74%
KRS	EXP	WOR	Machine	4683669	6040131	7869387	10312486	11023567	10866860	15669654	21525310	21789486	23941776
KRS	EXP	WOR	Macshare	22.09%	27.64%	32.20%	35.26%	36.40%	31.32%	33.22%	35.58%	35.00%	36.93%
reporter	type	partner	site	1991	1992	1993	1994	1995	1996				
KRS	EXP	JPN	total	12355459	11593635	11544611	13407666	16811879	15449482				
KRS	EXP	JPN	L-int	4141414	3864252	3634135	3850153	3970813	3338567				
KRS	EXP	JPN	L-intshare	33.52%	33.33%	31.48%	28.72%	23.62%	21.61%				
KRS	EXP	JPN	Machine	2202194	2068729	2319476	3342184	5278161	4445881				
KRS	EXP	JPN	Macshare	17.82%	17.84%	20.09%	24.93%	31.40%	28.78%				
KRS	EXP	TAI	total	1539877	2139919	2265802	2712012	3649424	3477692				
KRS	EXP	TAI	L-int	241928	329652	316530	342611	380430	343342				
KRS	EXP	TAI	L-intshare	15.71%	15.40%	13.97%	12.63%	10.42%	9.87%				
KRS	EXP	TAI	Machine	622253	801165	894420	1219742	1897675	1631954				
KRS	EXP	TAI	Macshare	40.41%	37.44%	39.47%	44.98%	52.00%	46.93%				
KRS	EXP	WOR	total	71672123	76394189	81941688	95440002	122625400	124403704				
KRS	EXP	WOR	L-int	24233949	23516091	22756610	23817181	25115725	24464926				
KRS	EXP	WOR	L-intshare	33.81%	30.78%	27.77%	24.96%	20.48%	19.67%				
KRS	EXP	WOR	Machine	28219340	30821782	35000333	44805677	63235645	65165396				
KRS	EXP	WOR	Macshare	39.37%	40.35%	42.71%	46.95%	51.57%	52.38%				

Note: labor-intensive manufactures include textiles (site 65), apparel (site 84), footwear (site 851) and miscellaneous manufactures (site 89); machinery includes all items in site 7.

Source: UN Commodity Trade Statistics database.

Table 15. Japan Imports from Korea, Taiwan and the World, Shares of Labor-Intensive and Machinery Manufactures, 1981-1996

reporter	type	partner	site	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
JPN	IMP	KRS	total	3,388,908	3,253,512	3,364,793	4,203,038	4,091,950	5,283,680	8,057,523	11,771,367	12,967,111	11,620,797
JPN	IMP	KRS	L-int	1,278,021	1,204,834	898,567	1,275,083	1,233,680	1,705,825	2,907,890	4,465,609	5,049,190	4,144,667
JPN	IMP	KRS	L-intshare	37.71%	37.03%	26.70%	30.34%	30.15%	32.28%	36.09%	37.94%	38.94%	35.67%
JPN	IMP	KRS	Machinery	321,674	265,683	288,792	391,542	383,850	514,467	845,831	1,403,080	1,735,978	1,756,923
JPN	IMP	KRS	Macshare	9.49%	8.17%	8.58%	9.32%	9.38%	9.74%	10.50%	11.92%	13.39%	15.12%
JPN	IMP	TAI	total	2,522,502	2,443,115	2,622,315	3,203,662	3,385,509	4,690,520	7,128,054	8,743,424	8,979,266	8,495,678
JPN	IMP	TAI	L-int	666,301	607,667	581,076	734,089	747,235	1,135,962	1,893,394	2,371,880	2,369,314	1,965,383
JPN	IMP	TAI	L-intshare	26.41%	24.87%	22.16%	22.91%	22.07%	24.22%	26.56%	27.13%	26.39%	23.13%
JPN	IMP	TAI	Machinery	284,983	283,490	324,591	379,205	406,825	558,759	1,014,306	1,516,644	1,794,326	1,808,711
JPN	IMP	TAI	Macshare	11.30%	11.60%	12.38%	11.84%	12.02%	11.91%	14.23%	17.35%	19.98%	21.29%
JPN	IMP	WOR	total	140,830,276	130,318,594	125,016,848	134,257,312	127,512,091	119,423,909	146,048,027	183,252,006	207,356,181	231,223,477
JPN	IMP	WOR	L-int	5,306,555	5,284,083	4,877,039	5,936,682	6,161,090	8,281,889	12,977,505	18,652,806	23,170,926	25,175,094
JPN	IMP	WOR	L-intshare	3.77%	4.05%	3.90%	4.42%	4.83%	6.93%	8.89%	10.18%	11.17%	10.89%
JPN	IMP	WOR	Machinery	9,232,489	8,173,127	9,377,806	10,798,194	11,098,289	13,273,346	17,254,598	23,338,651	28,149,180	36,061,009
JPN	IMP	WOR	Macshare	6.56%	6.27%	7.50%	8.04%	8.70%	11.11%	11.81%	12.74%	13.58%	15.60%
reporter	type	partner	site	1991	1992	1993	1994	1995	1996				
JPN	IMP	KRS	total	12,339,170	11,568,266	11,631,026	13,421,009	17,156,700	15,815,257				
JPN	IMP	KRS	L-int	4,195,922	3,936,844	3,642,780	3,796,777	3,962,443	3,355,263				
JPN	IMP	KRS	L-intshare	34.00%	34.03%	31.32%	28.29%	23.10%	21.22%				
JPN	IMP	KRS	Machinery	1,898,186	1,781,705	2,210,037	3,397,900	5,511,547	4,664,329				
JPN	IMP	KRS	Macshare	15.38%	15.40%	19.00%	25.32%	32.12%	29.49%				
JPN	IMP	TAI	total	9,492,140	9,467,187	9,669,430	10,752,907	14,349,992	14,959,176				
JPN	IMP	TAI	L-int	2,003,139	1,952,341	1,701,329	1,758,164	1,971,620	1,993,421				
JPN	IMP	TAI	L-intshare	21.10%	20.62%	17.59%	16.35%	13.74%	13.33%				
JPN	IMP	TAI	Machinery	2,095,450	2,022,828	2,106,484	2,838,131	5,299,117	6,103,306				
JPN	IMP	TAI	Macshare	22.08%	21.37%	21.78%	26.39%	36.93%	40.80%				
JPN	IMP	WOR	total	234,102,734	230,974,848	238,716,345	272,307,833	332,843,867	347,495,549				
JPN	IMP	WOR	L-int	23,633,459	25,491,264	27,499,419	33,616,521	41,383,901	43,567,108				
JPN	IMP	WOR	L-intshare	10.10%	11.04%	11.52%	12.35%	12.43%	12.54%				
JPN	IMP	WOR	Machinery	37,429,303	37,295,845	40,478,549	51,867,863	74,443,016	83,814,617				
JPN	IMP	WOR	Macshare	15.99%	16.15%	16.96%	19.05%	22.37%	24.12%				

Note: labor-intensive manufactures include textiles (site 65), apparel (site 84), footwear (site 851) and miscellaneous manufactures (site 89), machinery includes all items in site 7.

Source: UN Commodity Trade Statistics database.

Table 16. Ranking of Industries by IIT, Mean Values (1995-97)

	1995-97	1980-97
656-Tulle,lace,embroidery,ribbons,& other smal	95.1	47.2
764-Telecommunications equipment and parts	93.9	35.8
893-Articles of materials described in divisio	93.1	27.0
642-Paper and paperboard,cut to size or shape	92.5	38.6
674-Universals,plates and sheets,of iron or st	91.6	10.5
651-Textile yarn	90.8	26.8
657-Special textile fabrics and related produc	90.7	37.1
693-Wire products and fencing grills	89.3	50.9
776-Thermionic,cold & photo-cathode valves,tub	86.3	7.3
696-Cutlery	84.8	24.7
666-Pottery	84.4	56.7
812-Sanitary,plumbing,heating,lighting fixture	82.6	0.7
672-Ingots and other primary forms,of iron or	82.2	16.8
611-Leather	82.1	24.8
694-Nails,screws,nuts,bolts etc.of iron,steel,	82.0	10.1
653-Fabrics,woven,of man-made fibres	80.7	32.3
885-Watches and clocks	76.9	50.2
771-Electric power machinery and parts thereof	75.8	2.1
635-Wood manufactures,n.e.s.	75.1	46.3
898-Musical instruments,parts and accessories	75.1	14.2
751-Office machines	74.6	16.6
894-Baby carriages,toys,games and sporting goo	74.4	24.6
661-Lime,cement,and fabricated construction ma	73.0	41.6
591-Disinfectants,insecticides,fungicides,weed	72.6	45.7
658-Made-up articles,wholly/chiefly of text.ma	70.5	23.4
655-Knitted or crocheted fabrics	69.3	34.3
699-Manufactures of base metal,n.e.s.	69.2	27.2
892-Printed matter	68.4	40.0
678-Tubes,pipes and fittings,of iron or steel	66.2	45.8
679-Iron & steel castings,forgings & stampings	65.7	29.7
692-Metal containers for storage and transport	65.4	66.3
752-Automatic data processing machines & units	64.3	83.3
781-Passenger motor cars,for transport of pass	64.1	57.9
884-Optical goods,n.e.s.	62.8	64.6
667-Pearls,precious& semi-prec.stones,unwork./	60.0	47.7

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations.

Table 17. Average Japan-Korea Intra-Industry Trade Index: All Manufacturing Industries

Avg. IIT	1980 32.22	1981 35.00	1982 35.89	1983 34.30	1984 33.23	1985 32.59	Mean 33.87
Avg. IIT	1986 30.54	1987 33.24	1988 36.65	1989 38.65	1990 41.45	1991 38.07	36.43
Avg. IIT	1992 37.83	1993 36.72	1994 40.84	1995 45.57	1996 43.74	1997 47.60	42.05

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations.

Table 18. Ranking of Korean Industries by IIT, Mean Values (1995-97)

	1995-97	1980-97
885-Watches and clocks	94.84	86.86
892-Printed matter	94.79	82.89
654-Textil.fabrics,woven,oth.than cotton/man-m	94.31	75.01
895-Office and stationery supplies,n.e.s.	93.32	70.29
699-Manufactures of base metal,n.e.s.	93.17	87.48
785-Motorcycles,motor scooters,invalid carriag	93.11	82.91
628-Articles of rubber,n.e.s.	92.93	90.57
511-Hydrocarbons nes,& their halogen.& etc.der	92.77	54.18
678-Tubes,pipes and fittings,of iron or steel	90.94	58.24
724-Textile & leather machinery and parts	90.86	46.31
812-Sanitary,plumbing,heating,lighting fixture	90.56	83.49
673-Iron and steel bars,rods,angles,shapes & s	90.40	74.92
621-Materials of rubber(e.g.,pastes,plates,she	90.20	71.76
651-Textile yarn	89.41	74.68
871-Optical instruments and apparatus	89.19	88.86
513-Carboxylic acids,& their anhydrides,halide	88.16	43.51
686-Zinc	88.07	60.74
842-Outer garments,men's,of textile fabrics	87.45	20.20
771-Electric power machinery and parts thereof	86.30	86.15
894-Baby carriages,toys,games and sporting goo	85.91	36.66
744-Mechanical handling equip.and parts	85.46	67.63
582-Condensation,polycondensation & polyadditi	83.58	72.58
791-Railway vehicles & associated equipment	81.53	74.29
773-Equipment for distributing electricity	80.29	74.00
676-Rails and railway track construction mater	80.15	51.64
641-Paper and paperboard	80.11	86.09
652-Cotton fabrics,woven	78.68	63.89
514-Nitrogen-function compounds	78.61	66.70
679-Iron & steel castings,forgings & stampings	78.52	38.25
674-Universals,plates and sheets,of iron or st	77.98	77.87
893-Articles of materials described in divisio	77.92	59.31
562-Fertilizers,manufactured	77.59	58.69
661-Lime,cement,and fabricated construction ma	77.12	40.38
659-Floor coverings,etc.	76.93	55.52
692-Metal containers for storage and transport	76.62	73.19
821-Furniture and parts thereof	76.57	54.12
666-Pottery	76.28	38.10
743-Pumps & compressors,fans & blowers,centrif	75.58	36.64
784-Parts & accessories of 722--,781--,782--,7	75.12	51.73
695-Tools for use in hand or in machines	73.94	70.92
751-Office machines	73.38	85.98
884-Optical goods,n.e.s.	73.20	51.70
772-Elect.app.such as switches,relays,fuses,pl	72.40	48.76
776-Thermionic,cold & photo-cathode valves,tub	71.87	85.41
612-Manufactures of leather/of composition lea	70.47	47.92
533-Pigments,paints,varnishes & related materi	68.51	39.97
554-Soap,cleansing and polishing preparations	68.11	62.05
778-Electrical machinery and apparatus,n.e.s.	67.32	83.04
752-Automatic data processing machines & units	67.27	61.85
764-Telecommunications equipment and parts	65.26	66.41
898-Musical instruments,parts and accessories	64.09	40.15
592-Starches,inulin & wheat gluten;albuminoida	62.69	28.88
899-Other miscellaneous manufactured articles	62.28	55.21
741-Heating & cooling equipment and parts	62.27	42.73
723-Civil engineering & contractors plant and	62.09	50.34

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations.

Table 19. Average Index of Intra-Industry Trade of Korea: All Manufacturing Industries

	1980	1981	1982	1983	1984	1985	Mean
Aggregate IIT	37.3	36.99	33.15	37.74	38.62	39.42	37.2
	1986	1987	1988	1989	1990	1991	
Aggregate IIT	39.58	39.49	40.17	42.38	44.57	45/22	41.9
	1992	1993	1994	1995	1996	1997	
Aggregate IIT	47.16	47.82	50.62	51.5	53.98	58.45	51.59

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations

Table 20. Ranking of Japanese Industries by IIT, Mean Values (1995-97)

	1995-97	1980-97
872-Medical instruments and appliances	96.53	69.50
621-Materials of rubber(e.g.,pastes,plates,she	96.23	89.23
885-Watches and clocks	96.18	51.77
893-Articles of materials described in divisio	94.86	79.99
672-Ingots and other primary forms,of iron or	93.08	64.24
673-Iron and steel bars,rods,angles,shapes & s	92.91	71.07
553-Perfumery,cosmetics and toilet preparation	92.83	86.73
554-Soap,cleansing and polishing preparations	92.71	81.25
677-Iron/steel wire/wheth/not coated,but not i	92.01	68.38
676-Rails and railway track construction mater	91.39	58.16
721-Agricultural machinery and parts	90.10	57.08
658-Made-up articles,wholly/chiefly of text.ma	88.98	82.26
612-Manufactures of leather/of composition lea	88.53	68.76
727-Food processing machines and parts	86.06	75.41
696-Cutlery	84.82	47.07
514-Nitrogen-function compounds	84.15	80.56
513-Carboxylic acids,& their anhydrides,halide	83.46	89.67
584-Regenerated cellulose;cellulose nitrate,et	82.44	83.24
775-Household type,elect.& non-electrical equi	80.87	40.69
892-Printed matter	80.80	79.87
656-Tulle,lace,embroidery,ribbons,& other smal	80.55	75.92
771-Electric power machinery and parts thereof	80.04	44.36
894-Baby carriages,toys,games and sporting goo	79.53	75.40
774-Electric apparatus for medical purposes,(r	79.20	64.58
662-Clay construct.materials & refractory cons	78.73	67.22
512-Alcohols,phenols,phenol-alcohols,& their d	77.95	87.26
761-Television receivers	77.86	25.69
611-Leather	77.68	48.33
516-Other organic chemicals	76.18	73.93
691-Structures & parts of struc.;iron,steel,al	75.83	50.24
752-Automatic data processing machines & units	75.73	47.70
663-Mineral manufactures,n.e.s	75.56	65.20
714-Engines & motors,non-electric	73.70	54.29
773-Equipment for distributing electricity	71.54	30.70
522-Inorganic chemical elements,oxides & halog	71.36	76.37
692-Metal containers for storage and transport	71.16	52.53
898-Musical instruments,parts and accessories	71.10	35.56
786-Trailers & other vehicles,not motorized	70.93	63.53
762-Radio-broadcast receivers	69.73	25.15
652-Cotton fabrics,woven	69.53	48.81
671-Pig iron,spiegeleisen,sponge iron,iron or	69.41	64.38
628-Articles of rubber,n.e.s.	67.73	66.90
651-Textile yarn	67.62	51.34
591-Disinfectants,insecticides,fungicides,weed	67.53	81.67
699-Manufactures of base metal,n.e.s.	67.41	48.48
697-Household equipment of base metal,n.e.s.	66.51	67.36
511-Hydrocarbons nes,& their halogen.& etc.der	65.96	83.15
657-Special textile fabrics and related produc	65.68	78.74
791-Railway vehicles & associated equipment	65.32	41.89
751-Office machines	64.95	46.00
812-Sanitary,plumbing,heating,lighting fixture	63.54	65.66
899-Other miscellaneous manufactured articles	62.68	75.66
874-Measuring,checking,analysing instruments	62.11	67.17

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations.

Table 21. Average Index of Intra-Industry Trade of Japan: All Manufacturing Industries

	1980	1981	1982	1983	1984	1985	Mean
Aggregate IIT	22.24	20.14	20.45	20.74	20.90	20.24	20.78
	1986	1987	1988	1989	1990	1991	
Aggregate IIT	20.48	23.27	26.18	28.78	31.43	30.66	26.80
	1992	1993	1994	1995	1996	1997	
Aggregate IIT	29.00	29.61	32.38	36.68	40.70	40.31	34.78

Source: Statistics Canada, World Trade Analyzer CD-Rom, 1997 and author's compilations.