

Australia-Korea Economic Cooperation in the 21st Century: Challenges and Prospects

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1. Introduction

Although Australia-Korea relations began to develop in the late 19th century, it was only since the mid-1970s that both countries recognised each other as an important economic partner. Since then, bilateral trade between Australia and Korea has increased by leaps and bounds. Two-way trade increased from A\$176 million in 1975 to A\$13.8 billion in 2000 with an annual growth of 19.1 percent. This compares with an annual growth of 10.7 percent in Australia's world trade during the same period. In 2000, Australia was Korea's eighth largest trading partner and Korea was Australia's fourth largest trading partner. In 1994, in particular, Korea became Australia's second largest export market. Although this ranking slipped during the economic crisis in 1998, Korea is still Australia's third largest export market after Japan and the United States.

The complementarity of the Australian and Korean economies, primarily based on the differences in resource endowments, accounts for the pattern and growth of bilateral trade. Australia's principal export items to Korea are mainly natural resource and agricultural products (non-monetary gold, coal, iron ores, aluminum, wool, sugar and wheat), while the principle import items from Korea are mainly manufactured consumer goods (passenger cars, electrical equipment, textiles, telecommunications equipment and office machines. The complementarity of the two economies has been accelerated by patterns of economic development within each country, accelerating the bilateral trade. In particular, Korea adopted two important economic strategies during the 1970s. One was diversification of resource imports following the 1973 oil crisis, and the other was development of heavy and chemical industries (Kwon, 1997a). Both were facilitated by reliable supplies of industrial raw materials from Australia.

However, the present pattern of bilateral trade between Australia and Korea, which is based on their existing characteristics of comparative advantage, could pose serious problems for both countries over time. In response to internal and external pressures, the two countries are now striving for the development of knowledge-based economies. These changes in their respective industrial structures will change the comparative advantage of the two countries and dilute the economic complementarity. Australia wants to diversify the bilateral economic relationship with Korea to reflect its position as a sophisticated industrial society with an advancing industrial structure and rich in technological assets. As the Korean economy matures and moves toward a knowledge-based economy, its demand for Australian natural resources is bound to decline. Korea also wants to expand its exports of high-technology products.

To cope with the structural change in each economy and ensure continued success in the economic relationship including bilateral trade, new approaches should

be explored which will expand and diversify the scope of economic relations. To this end, the purpose of this paper is to investigate the feasibility of a free trade arrangement (FTA) between the two countries and to explore ways to expand two-way investment flows between the two countries. It should be noted that expansion of trade through an FTA and expansion of FDI are closely related. It has been well documented that trade is linked to investment particularly in manufacturing and high-technology areas, because companies usually establish their overseas direct investment strategy together with their export strategy, and thus exports tend to follow FDI (UNDP, 1999: 9). Typically an FTA includes clauses on investment liberalisation within the trade zone, which purports to expand investment relations. FDI will also be encouraged to flow from outside of the FTA zone into the zone in order to take advantage of free trade inside the zone.¹

2. A Korea-Australia Free Trade Agreement (KAFTA)

International enthusiasm for regional free trade agreements (FTA) has been rising. Even though the world economy is being integrated based on the multilateralism principle of the World Trade Organisation (WTO), numerous countries have engaged in regional or bilateral trade agreements as a way of securing their foreign markets, minimising trade disputes, and at the same time enhancing their national competitiveness. As of May 2000, 214 FTAs that were registered with the WTO, of which 90 were registered since 1995, the year in which the WTO took effect (Cheong and Lee, 2000: 20). The most influential FTAs are the European Union (EU) and the North American Free Trade Agreement (NAFTA). Following the induction of the European Free Trade Area (EFTA) countries such as Austria, Sweden and Finland in 1995, the EU is now deliberating on the admission of a few East European countries. Since 1994, the United States has been carrying on discussions for the Free Trade Area of Americas (FTAA) for the purpose of linking the North and South American continents under one trade regime.

Multilateralism is giving way to bilateralism or regionalism, and the WTO runs the risk of being sidelined as numerous countries opt for the quick fix of bilateral trade agreements. This situation traces back to the debacle of the 1999 WTO talks in Seattle. The follow-up protests at meetings of the World Bank, the IMF and the World Economic Forum further convinced politicians of developed countries that the promotion of globalisation and the WTO could be counter-productive domestically. Thus, none of the developed countries is willing to take the real political leadership to regain the trade liberalisation momentum lost at Seattle, even though most countries want the WTO to initiate a new trade liberalisation round. This suits the developing nations, which have opposed United States and European efforts to link human rights, labour, intellectual property and environmental standards to trade liberalisation. Besides, FTAs are in general regarded as complementary and beneficial in the search for wider global trade agreements, and thus the WTO has not seriously challenged any FTA nor opposed the establishment of FTAs.

In this context, when Australian Prime Minister John Howard visited Korea in May 2000, he proposed to President Kim Dae-jung that the two countries form a free trade agreement to further expand bilateral trade and investment ties (*Korea Herald*, 20 May 2000). The success of a bilateral free trade agreement depends on the

¹ It should be noted that FTA and promotion of FDI are long-term approaches to expand and diversify the scope of economic relations. In the short-run, the two countries should expand intra-industry trade relations in knowledge-based industries. This would include searching for new niches in these industries that offer opportunities for both countries and identifying efficient and effective ways of seizing them.

economic size, economic systems, willingness and commitment of the countries involved, existing trade barriers, and complementarity and competition of the two economies. As shown in Table 1, the Australian and Korean economies are similar in size, and thus the possible benefits or costs of an FTA would not be skewed towards either of them. The economic systems of the two countries are quite compatible. Both economies have pursued outward-looking economic policies, and the Korean economic system has been transforming rapidly towards the western economic system by undertaking deregulation and liberalisation. Also, although the bilateral trade between the two countries has expanded rapidly, there is still room for improvement, since tariff and non-tariff barriers are still significantly high between the two countries.

Table 1: Comparison of the Australian and Korean Economies

	Australia	Korea
Population (2000)	19.0 million	47.3 million
GDP (1999, US \$ billion)	394	406
Per capita GDP (1999, US\$)	20,773	8,660
GDP growth (1985-1999, %)	3.68	7.16
Export growth (1985-1999, %)	9.5	11.7
Import growth (1985-1999, %)	9.3	10.0
Export/GDP (1999, %)	14.2	63.7

Source: *Major Statistics of Korean Economy*, 2001.3, Seoul: Korea National Statistical Office

It should be noted that the bilateral trade between Australia and Korea accounts for a small portion of their respective world trade. As shown in Table 2 the two-way trade between the two countries accounted for about 2.8 percent of Korea's world trade during the 1990s. During the same decade, the amount of bilateral trade took up about 5.5 percent of Australia's world trade (Table 3). Both Australia and Korea depend heavily on the rest of the world, and hence they should organise a non-discriminatory, open trade bloc. By opening competition between the two countries, a KAFTA would be regarded as a useful experiment and a stepping stone towards further trade liberalisation with free trade agreements with other countries. Success of a bilateral free trade agreement depends heavily on national policy toward the FTA in general and perspectives on the proposed FTA taken by the countries involved. The perspective will indicate the extent of willingness and commitment of the countries involved. Thus, FTA policy and perspective on KAFTA taken by Korea and Australia will be examined.

Table 2: Korea's Exports and Imports to Australia

(Unit: US\$ bill)

	1991	1993	1995	1996	1997	1998	1999	2000
Exports (X)	1.1	1.2	1.6	1.1	2.2	2.8	2.4	2.6
Imports (M)	3.0	3.3	4.9	6.3	5.9	4.6	4.7	6.0
Trade balance	-2.0	-2.2	-3.3	-4.5	-3.6	-1.8	-2.3	-5.4
World exports	71.9	82.2	125.1	129.7	136.2	132.3	143.7	172.3
World imports	81.5	83.8	135.1	150.3	144.6	93.3	119.8	160.5
X to A/world (%)	1.5	1.5	1.3	0.8	1.6	2.1	1.7	1.5
M from /world (%)	3.6	3.9	3.6	4.2	4.1	4.9	3.6	3.7
(X+M)/world (%)	2.7	2.7	2.5	2.6	2.9	3.3	2.7	2.6

Source: Korea National Statistical Office, *Major Statistics of Korean Economy*, 2001.3, Seoul

Table 3: Australia's Exports and Imports to Korea

(Unit: A\$ bill)

	1991	1993	1995	1996	1997	1998	1999	2000
Exports (X)	3.4	4.3	6.1	7.3	6.8	6.1	6.3	9.0
Imports (M)	1.3	1.9	2.3	2.3	3.0	4.2	3.9	4.8
Trade balance	+2.1	+2.4	+2.8	+5.0	+3.8	+1.9	+2.4	+4.2
World exports	53.7	62.8	71.7	77.0	84.8	89.0	86.9	110.4
World imports	49.7	62.4	77.5	78.4	83.4	96.8	101.5	116.9
X to K/world (%)	6.3	6.8	8.5	9.5	8.0	6.0	7.2	8.2
M from K/world (%)	2.6	3.0	3.0	2.9	3.6	4.4	3.8	4.1
(X+M)/world (%)	4.5	5.0	5.6	6.2	5.8	5.5	5.4	6.1

Source: Department of Foreign Affairs and Trade, *Component of Trade*, Canberra: DFAT

a) Korea's FTA Policy and Perspective on KAFTA

In contrast to the recent trend of FTAs in the world, Korea is one of the few countries in the world that has not actively pursued FTAs until recently. The Korean government had no particular intention of exploring FTAs in fear of the adverse effects of the market liberalisation on weak domestic industries. As a result, Korea and Japan are the only two countries among the WTO members that have not concluded any regional trade agreements. However, over the last few years, it appears that Korea has changed its attitudes toward FTAs. In the face of a stronger trend toward regional economic integration in recent years, Korea could not maintain its position of multilateralism and the resulting isolation from increasingly influential regional trade agreements.

Korea would expect that FTAs would contribute to the liberalisation and structural reform of the economy that it has been seeking since the 1997 crisis. As compared to ideal multilateralism anchored in the WTO, regional or bilateral free trade agreements could be a practical and short-term approach to opening the economy and to enhancing economic efficiency. Korea had opposed FTA until recently, fearing that market liberalisation would have devastating effects on weak domestic industries –including the agricultural, manufacturing and services sectors. The Korea government realised that protection of domestic industries from foreign competition over time had resulted in the inefficiency of these industries, thereby contributing to the financial crisis. Korea would expect that FTAs would enlist foreign pressure in support of its efforts to shake up its inefficient agriculture and service sectors. FTA would make it difficult, if not impossible, to maintain Korea's inefficient agricultural sector insulated from foreign competition. As a result, since 1999 Korea has been actively pursuing the establishment of FTAs with Chile, Thailand, South Africa, Turkey, the United States and Japan (Cheong, 1999: 14, Cheong and Lee, 2000, Cheong and Yun, 1999, LIEP, 2000).²

Korea would attempt to take advantage of a variety of benefits available from an FTA. One is to expand export markets in the member countries of the FTA and to minimise trade disputes with the member countries. Given the paramount importance of exports to the Korean economy, Korea has to secure its export markets. By opening the economy to FTA member countries, Korea would expect that its business efficiency and competitiveness would be enhanced. FTA will also contribute to the attraction of foreign direct investment (FDI). In order to take advantage of free flows of goods and services across the FTA member countries, FDI flows into the FTA region. Moreover, an FTA usually includes clauses of liberalisation of FDI across its member countries which will improve FDI across those countries. Unlike government policy before the 1997 financial crisis that had restricted incoming FDI in order to protect domestic industries, Korea embarked on seeking and attracting FDI soon after the onset of the crisis. FTA is thus consistent with government policy toward FDI.

Korea might have sought a political partnership through FTAs in international relations. In some cases of FTAs like EU and ASEAN, the political partnership among member countries is equally important as the economic partnership. By being isolated from the trend of regionalism, Korea might have realised that it was lacking a strong diplomatic partnership with other countries. In the event of economic crisis, member countries of a FTA are more willing to help each other as seen by the attempts made by the United States authorities to help out Mexico from its recent financial crisis.

With regard to a KAFTA, Korea would attempt to surmount tariff and non-tariff barriers of Australia with which Korean exports have faced some difficulties and to secure access to the Australian market. Although the Australia average tariff rate is 5.0 percent, high tariff rates are charged for Korea's major exporting goods. For example, Australia charges tariff of 20 percent for automobiles and parts, and 20-30 percent for textiles, clothing and footwear (Cheong, 1999). Australia has increased its use of trade remedy laws such as antidumping and countervailing duties to restrict foreign imports. Although only a few cases of antidumping duties have been imposed on Korean goods, there is no guarantee that Australia would not expand its use of such laws more often on Korean goods.

² Korea has been negotiating an FTA with Chile since 1999, aiming at conclusion of the agreement by 2002. It appears that Korea has chosen Chile as the first candidate country for an FTA through which to learn the benefits and costs of an FTA.

KAFTA will help Korea secure access to Australia's abundant natural resources and agricultural products. Korea relies heavily on foreign sources for its mineral and energy sources, and will be interested in securing access to Australian mineral resources not only with freer trade but also through investment environments favorable for resource development. Some agricultural products such as cotton, wool and sugar are used for intermediate goods for Korea's manufacturing sector. KAFTA will facilitate Korea's access to these input materials from Australia.

KAFTA may also attract Australian investment in Korea. As compared to the dynamic trade relationship between Australia and Korea, two-way FDI has been sluggish. In particular, Australian investment in Korea amounted to only US\$38 million by the end of 1998, accounting for an insignificant proportion of Australian overall overseas investment (Kwon and Oh, 2001: 4). One of the important reasons for sluggish Australian investment in Korea was that there were not many areas in which Australian firms had comparative advantage in Korea. Hence, KAFTA will open the Korean services sector and provide significant advantage for Australian firms. This would encourage Australia firms to undertake FDI in the Korean services sector.

Korea's major concern with KAFTA will be its possible adverse effects on the Korean agricultural sector. In effect, KAFTA will be a double-edged sword with regard to Korean agriculture. As indicated above, KAFTA will force the Korean agricultural sector to improve its efficiency and to open itself to the world. KAFTA would also be a means by which Korea is able to demonstrate its continuing commitment to trade liberalisation. Most Australian agricultural exports to Korea (except a few items such as beef and live animals) complement Korean agriculture in the sense that some are not produced in Korea, and others (fruits, beverages and horticultural products) are produced in different seasons. Nonetheless, possible adverse effects on Korean agriculture of a KAFTA would produce some resistance to it in Korea.³ Korea imported agricultural products worth about US\$8.1 billion in 2000, as compared with about US\$20 billion of Korea's GDP generated by its agricultural sector. Korea's agricultural imports from Australia amounted to US\$706 million, accounting for 8.7 percent of total agricultural imports in 2000 (KCS, 2001 and KNSO, 2001). This made Australia the third largest import source country after China (with a market share of 21.0%) and the United States (with a market share of 19.5%) in 2000. Hence, by the sheer level of imports from Australia, it is understandable why Korea is concerned about opening its agricultural sector to Australia through a KAFTA. Moreover, once the Korean agricultural market is open to Australia, it will be difficult for Korea to restrict agricultural imports from other countries.

b) Australia's FTA Policy and Perspective on KAFTA

Like Korea, Australia was also one of the few countries that had not actively pursued FTAs. Recently, however, interest in regional or bilateral FATs has been rising in Australia. ASEAN countries, China, Japan and South Korea decided to study the possibility of establishing a free trade area among them (ASEAN + 3) at the end of 2000, and a number of countries in the Pacific Rim area (Chile, Japan, Korea, Mexico, New Zealand and Singapore and the U.S.) are courting each other to stitch up a web of bilateral trade deals. Australia has expressed interest in joining the negotiations on the ASEAN + 3, but it has not been invited, and a proposed merger of the CER (Australia-New Zealand Closer Economic Relationship) with the ASEAN

³ Impacts of KAFTA on Korean and Australian agriculture in terms of specific agricultural products should be further investigated. This is beyond the scope of this study.

Free Trade Area has been rejected (*The Australian* 27 November 2000). Under these circumstances, Australia should have realised that it would face the risk of becoming isolated from East Asia and other major trading countries. Through an FTA, Australia would aim to gain maximum short-term trading advantage before a WTO round, to capture strategic advantage by establishing closer links with its traditional trade partners, and to experiment with a trial liberalisation in an environment smaller and less threatening than under the multilateral arrangement. In this context, Prime Minister John Howard would have proposed an Australia-Korea free trade agreement to further expand bilateral trade and investment ties (*Korea Herald*, 20 May 2000). Australia also embarked on negotiating a comprehensive FTA with Singapore in 2001. Although Australia rejected an official overture by the United States on the possibility of a bilateral free trade arrangement in the early 1990s, it has been pursuing FTA discussions with the United States since the inauguration of the Bush administration early in 2001 (Vaile 2001a and 2001b). Australia and Thailand are also moving closer to the conclusion of a FTA (*Korea Times*, 15 August 2001).

Australia would have proposed KAFTA for a number of reasons. KAFTA will secure Australia's existing Korean market for its traditional products and further facilitate the movement of Australian goods and services to Korea. Although Korea has recently pursued an import liberalisation policy, thereby raising the import liberalisation rate to 99.9 percent by 1999, Korean tariff rates are still high. While Australian tariffs on Korean products averaged 5.0 percent, Korean tariffs on Australian products averaged 9.1 percent as of 1998 (DFAT, 1999: 56). Korea's average tariff rate is expected to decrease to 8.3 percent by 2004 in line with its commitment to the WTO. Although Korean tariffs on imports of mineral products are low at 3.6 percent on average in 1998, its tariff rates on agricultural and food products, which are of major interest to Australia, range from 11.3 percent on fats and oils to 19.8 percent on prepared food (DFAT, 1999: 56). Korea continues to use the adjustment duties to limit disruptions to domestic markets from imports, and the rates of these adjustment duties can be higher or lower than those shown in the tariff schedule.

Korea still imposes non-tariff barriers particularly on those commodities in which Australia has high interest. Korea has been liberalising trade under the WTO commitments and IMF requirements, both of which are intended to reduce the level of state control over trade and increase the transparency of Korea's trade-related policies. As a result, except for imports affecting national security, the environment and public health, Korea has removed most of import restrictions, and by 2004 will completely tariffy most agricultural products except for the rice quota. However, in order to protect the agricultural sector, Korea currently imposes tariffs, quotas or prohibitive out-of-quota rates on agricultural imports. Because of these tariff quota rates, tariffs on ten products of interest to Australia exceed 40 percent (DFAT, 1999: 59). Korea also imposes quarantine restrictions and customs-related impediments, particularly for horticultural, animal and dairy products.

Australia would also regard Korea as a foothold to promote it to Northeast Asia and other East Asian countries. As mentioned earlier, since Korea has been moving to establish free trade agreements with a number of countries and since a dialogue has been underway to establish a trade bloc of ASEAN + 3 with Australia excluded, KAFTA will also pave the way for closer relations with other East Asian countries. A free trade agreement with Korea or any Asian country will help disperse the Asian perception of an alienated Australia and enhance the image of Australia's connectedness to Asia.

Australia would also be concerned with the potential for trade diversion of products in which Australia has comparative advantage to the United States and other competitors. If the ongoing dialogue concerning a free trade agreement between Korea and the United States turns out to be successful, Australia may be displaced by the United States in supplying agricultural and mineral products to the Korean market. Australia will also be in danger of losing to Japan the Korean market for its manufactured goods such as automobile engines, once a Korea-Japan free trade agreement is consummated.

Australia would attempt to penetrate the Korean market with services in which Australia has been reputed to have comparative advantage. Korea's services sector has been liberalising as a result of Korea's Uruguay Round negotiations in 1994 and accession to the OECD in 1996. Additional liberalisation of its services sector took place after the 1997 financial crisis, as a way of attracting more foreign investment (Kim and Kim, 2000: 14). As a result, except for a few wholly restricted and partially restricted categories related to national security, culture and primary producers' special position, most of the services businesses – transport, communications, finance, insurance and business services industries - are now open to foreign investment and competition.⁴ A KAFTA will facilitate the expansion of Australian services to Korea.

An FTA is to eliminate trade barriers and investment restrictions among its member countries. To what extent trade barriers and investment restrictions must be eliminated by an FTA is a controversial issue. To be registered with the WTO, an FTA should eliminate tariff and other trade restrictions for 'substantially all trade' in commodities including agricultural products, and eliminate 'substantially all discrimination' in trade in services among the member countries. There is also a restriction on the phase-in period of an FTA over a 'reasonable length of time' which is in general regarded to be less than 10 years (Cheong and Lee, 2000: 15-16). An FTA cannot raise barriers to trade with those outside the agreement region, and should be open for additional membership. Under these conditions for establishing an FTA, Korea is highly likely to confront serious difficulties from a KAFTA particularly by opening its agricultural sector to Australia. Because of these difficulties in concluding a KAFTA, neither of the two countries appears to be pushing for a KAFTA, nor has serious analysis of a KAFTA been undertaken by either country since its proposal by Prime Minister John Howard.⁵

c) **Economic Effects of a KAFTA**

The net gains from an FTA depend on whether the agreement generates "trade creation" which improves welfare, or generates "trade diversion" which lowers welfare. Trade creation occurs when member country X imports from member country Y a product, which was sourced locally in country X before the establishment of the FTA. Since the protection structure in country X raised the price of imports above the domestic production price, it was previously cheaper to source the product locally. Welfare increased because country X now imports the good from a lower cost source. On the other hand, trade diversion occurs when the establishment of an FTA causes member country X to import a product from member country Y that it

⁴ As of July 2000, only 2 business categories (at the KSIC five digit level) are completely restricted, and 22 categories are partially restricted out of 495 total business categories in the services sector (Kim and Kim 2000: 16).

⁵ After the Prime Minister's proposal of a bilateral free trade agreement, the two countries held a ministerial meeting to discuss ways to improve economic relations between them, and in pursuit of an agreement at the meeting, the two governments established their own study teams in 2001 to explore ways to of strengthen the economic partnership.

previously had imported from a non-member country. This implies that the FTA causes the country to import from a higher cost supplier, thus decreasing welfare. The more divergent the patterns of comparative advantage across member countries are, the greater is the presumption that there exists room for trade creation with the formation of an FTA. Alternatively, similar patterns of comparative advantage across member countries vis a vis the rest of the world imply that there is a greater possibility of trade diversion.

Except for studies by Cheong (1999) and Kim and Cheong (1996), no quantitative assessment is available in the literature that has measured economic impacts of an FTA between Australia and Korea. According to Cheong (1999: 26) which simply restates the quantitative measurements of Kim and Cheong (1996), in 1992 a KAFTA would have increased GDP of Korea and Australia, respectively, by 0.76 percent and 0.72 percent by eliminating tariffs between the two countries. Korea's total exports to Australia amounted to US\$1.1 billion in 1992, or only 0.3 percent of Korea's GDP. Such a relatively tiny share of exports to Australia suggests that the extent of the benefit estimated by Kim and Cheong (1996) is likely to be overestimated. According to Cheong (1999: 26), in 1992 Australian exports to Korea would have increased by US\$3.4 billion, or 109.7 percent of Australia's total exports to Korea valued at US\$3.1 billion in that year, and Korea's exports to Australia would have increased by US\$1.6 billion, or 145.5 percent of Korea's total exports to Australia of US\$1.1 billion in that year. These estimates of the impact of a KAFTA on bilateral exports appear to be gross overestimates.

Unlike the study by Kim and Cheong (1996) which produced highly aggregated estimates of KAFTA's economic effects, this paper takes a different approach by examining sectoral level data, and does not attempt to measure either the aggregate income or trade effects of a KAFTA. Instead, this paper attempts to determine whether there are potential gains from trade by identifying a significant possibility for trade creation between Korea and Australia under a KAFTA. To this end, the concept of revealed comparative advantage (RCA) is the method employed to do this.⁶ RCA calculations are used to analyse the trade complementarity and competition between the two countries, which in turn provides some indication of the effects of a KAFTA for both Korea and Australia. The RCA technique does not provide a complete analysis of the bilateral trade creation and trade diversion. However, it does provide a relatively disaggregated look at sectors that are likely to generate significant impacts under a KAFTA.

A country's comparative advantage is determined by pre-trade relative prices. Since observable data of pre-trade relative prices are not readily available, Ballassa (1965) developed a concept of RCA in which a country's comparative advantage is reflected or revealed in its exports to the world market. As such, the revealed comparative advantage of exports (RCAX) is represented by a country's commodity composition of exports *vis a vis* the commodity composition of world exports. The RCAX index is defined as:

$$RCAX_{kj} = (X_{kj}/X_{kt}) \div (X_{wj}/X_{wt}) = (X_{kj}/X_{wj}) \div (X_{kt}/X_{wt})$$

where:

X_{kj} represents the value of country k's exports of commodity j

X_{kt} represents the value of country k's total exports to the world

X_{wj} represents the value of world exports of commodity j

⁶ The concept and measurement of RCA are well known. See, for example, Kwon (1998) for an exposition.

X_{wt} represents the value of total world exports of all commodities. The RCAX of country k in the export of product j is measured by that product's share in the country's exports (X_{kj}/X_{kt}) relative to that product's share in world exports (X_{wj}/X_{wt}). It can also be measured by the country's share of world exports of product j (X_{kj}/X_{wj}) relative to the country's total export share of world exports (X_{kt}/X_{wt}). The RCAX index has a straightforward interpretation. If the index exceeds unity, then the implication is that the country has a revealed comparative advantage in commodity j . Similarly, if the index takes a value less than unity, then this implies that the country does not have a revealed comparative advantage in commodity j .

A revealed comparative advantage of imports (RCAM) index, representing a country's import composition vis a vis the world total, can be defined as:

$$RCAM_{kj} = (M_{kj}/M_{kt}) \div (M_{wj}/M_{wt}) = (M_{kj}/M_{wj}) \div (M_{kt}/M_{wt})$$

where:

M_{kj} represents the value of country k 's imports of commodity j

M_{kt} represents the value of country k 's total imports from the world

M_{wj} represents the value of world imports of commodity j

M_{wt} represents the value of total world imports of all commodities

RCAM is interpreted in the same way as is RCAX. An RCAM value of greater than unity implies that country k has a revealed comparative advantage in its importation of commodity j , or a revealed comparative disadvantage in commodity j . In the case of an RCAM value less than unity, the country would be said not to have a comparative advantage in importing that product.

RCA can be used for a number of purposes. It can examine shifts in the comparative advantage of industries over time by comparing RCA indices over time. It can also estimate the competitiveness of various countries in one export market by comparing RCA indices of competing countries in the market.⁷ This paper uses RCA to determine whether the bilateral trade between Australia and Korea is complementary or competing on a cross-sectional basis. The results are then used to assess whether a KAFTA is likely to lead to bilateral trade creation.

RCAX and RCAM indices are calculated for all products at the three-digit SITC level for the years 1995 and 1998 for both Australia and Korea. Data are from *the UN International Trade Statistics Yearbook, 1999*. Calculations of RCAX and RCAM are limited to those products for which values of exports and imports are reported for Australia, Korea and the world. First, to determine the extent of complementarity of Australia-Korea bilateral trade, RCAX values for Australia and RCAM values for Korea are compared for individual products over the two years. Australia's RCAX larger than unity in conjunction with Korea's RCAM larger than unity in either 1995 or 1998 is the criterion used to identify products for which complementarity was assumed to exist.⁸ This implies that Australia's export specialisation matches Korea's import specialisation, and thus the two economies are

⁷ Kwon (1998) estimates changes in comparative advantages over time and competitiveness of foreign mineral products in the Korean market.

⁸ Given the fluctuations of imports and exports at the disaggregated commodity level, the criterion of accepting complementarity based on either of the two years could result in an overestimate or underestimate of complementarity. To smooth out annual fluctuations of exports and imports at the disaggregated commodity level, averaging the data over more years would be more appropriate. This is not attempted in this study, because more extensive comparable data are unavailable.

complementary in trade of those products. Once a KAFTA is established, trade would increase in favour of Australian exports for those products for which Australia has high RCAX values and Korea has high RCAM. Similarly, trade would increase in favour of Korea for those products for which Korea has high RCAX and Australia has high RCAM. Second, to determine the level of competition between Australia and Korea, RCAX values for the same products are compared between the two countries. For products for which both Australia and Korea have RCAX greater than unity, trade competition is considered to exist in the world market. This means that both countries specialise in exporting the same products, indicating that they are competing with each other in the world market.

The results of the calculated RCAX and RCAM indices are divided into three parts. First, Table 4 shows the extent of complementarity of the bilateral trade in favor of Australia. It shows the product categories in which Australia's export specialisation with RCAX larger than unity match Korea's import specialisation with RCAM larger than unity. There are 17 product categories representing 39.2 percent of Australian world exports in 1998 that are complementary with Korean imports. Major sectors of complementarity of Australian exports, which account for a significant share (more than one percent) of total Australian exports, include raw agricultural products (wheat and cotton), mineral products (iron ore, base metal ores, coal and petroleum products).

Table 4: Complementarity between Australian Exports and Korean Imports

SITC	COMMODITY	Austrian Exports (RCAX>1)		Korea Imports (RCAM >1)		Share of Aust total exports (%)
		1995	1998	1995	1998	
041	Wheat etc unmilled	7.176	14.590	0.990	2.383	3.95
081	Feeding stuff for animal	1.404	1.506	0.947	1.281	0.59
211	Hides skins .exc furs.raw	5.626	6.507	6.010	7.008	0.57
222	Seeds for 'soft' fixed oil	0.591	1.748	1.362	1.723	0.46
263	Cotton	4.308	9.106	2.513	2.829	1.76
281	Iron ore. concentrates	24.831	24.157	2.635	3.825	4.48
287	Base metal ores. conc nes	14.878	19.260	1.536	2.989	6.54
288	Nonferr metal scrap nes	1.669	1.500	1.607	1.287	0.22
322	Coal lignite and peat	26.448	30.651	3.467	5.816	11.04
334	Petroleum products. refin	1.054	1.036	1.624	0.170	1.78
533	Pigments, paints etc	1.421	1.342	0.999	1.047	0.54
611	Leather	2.157	1.930	1.400	1.215	0.51
672	Iron, steel primary forms	1.958	1.929	3.065	1.278	0.88
682	Copper exc cement copper	1.857	1.238	1.896	2.694	0.65
684	Aluminum	4.307	4.719	1.719	1.680	3.82
793	Ships and boats etc	0.738	1.229	3.623	1.241	0.95
882	Photo.cinema supplies	1.389	1.424	1.195	1.513	0.45

Sources: Calculations based on *the UN International Trade Statistics Yearbook, 1999*

It should be noted that, according to the calculated RCAX and RCAM, Australia's live animals for food, meat, and milk are not complementary with Korea. This shows the limitations of RCA as an indicator of comparative advantage. Comparative advantage depends on pre-trade relative price. The Heckscher-Ohlin

theorem argues that the pre trade relative price is determined by factor endowments. In practice, however, the pre trade relative price is affected by market distortions

true comparative advantage. These market distortions include tariffs, quotas, export subsidies, embargoes, a myriad of other governmental distortionary activities, and different stages of industrialisation (Maule, 1996). Because of numerous types of market distortions introduced by the Korean government in its agricultural market, the agricultural trade between Australia and Korea. Other than in the agricultural sector, enough to diminish the usefulness of RCA.

Table 5 shows the extent of complementarity in the bilateral trade in favour of Korean exports that were complementary with Australia's imports. Major sectors of complementarity of Korean exports, which account for a significant one percent) of total Korean exports, include some chemical products (polymerisation products), some basic manufactures (rubber tyres, man made fibre fabric), and machines and transportation equipment (automatic data equipment, communications equipment, household equipment, transistors, passenger motor vehicles, and ships and boats).

Table 5: Complementarity between Korean Exports and Australian Imports

SITC	COMMODITY	Korean Exports (RCAX > 1)		Aust. Imports (RCAM > 1)		Share of Korean total exports (%)
		1995	1998	1995	1998	
513	Carboxylic acids etc		1.884	0.953		0.53
582		1.758	1.694	1.082	0.006	0.91
583	Polymerization etc prods		2.095	0.742		2.79
625	, tubes etc		2.483	1.863		1.17
653	Wovn man-made fib fabric	7.999	6.477	0.937	1.016	3.49
658	Textile articles nes	1.224	0.830	1.389	0.964	0.23
678	Iron.stl tubes.pipes.etc	1.023	1.112	1.094	0.556	0.56
682	Copper exc cement copper	0.499	1.705	0.529	1.155	0.90
723	Civil engineerg equip etc	1.136	0.941	2.656	0.860	0.49
724	Textile, leather machnry	1.242	1.018	0.777	2.637	0.38
752	Automtic data proc equip	1.274	1.158	1.553	0.119	3.43
761	Television receivers	3.416	1.949	1.172	0.392	0.86
762	Radio broadcast receivrs	1.626	0.569	1.088	10.634	0.18
763	Sound recordrs.phonogrph	3.429	2.108	1.132	1.178	0.80
764	Telecom eqpt.pts,acc nes	1.438	1.251	1.335	0.197	3.44
775	Household type equip nes	2.035	1.972	1.312	0.699	1.30
778	Electrical machinery nes	2.846	0.619	1.220	0.209	0.90
781	Pass motor veh exc *uses	1.242	1.248	1.168	0.120	6.50
793	Ships and boats etc	6.050	7.869	2.736	0.453	6.06
831	Travel goods,handbags	1.874	0.998	1.308	1.093	0.27
845	Outerwear knit nonelastc	1.508	1.238	0.609	2.685	0.97
898	Musical instruments.pts	1.876	1.256	1.893	1.201	0.73
899	Other manufactured goods	1.371	0.967	1.317	2.678	0.36

Sources: Calculations based on *the UN International Trade Statistics Yearbook, 1999*

Table 6 shows the extent of competition between Australian and Korean exports in world markets. These are the product categories in which both Australia and Korea have RCAX indices higher than unity. These reflect intra-industry trade, where Australia and Korea export the same products in significant quantities to the world market, including each other's market. There are only a few product categories in which Australia and Korea are competing in world markets. They are petroleum products, leather, iron and steel in primary forms, copper products, and ship and boats, representing 12.2 percent and 4.7 percent, respectively, of Korean and

Australian total exports in 1998. This finding indicates that the two economies are in competition with each other in the world market only for a limited number of products,

Table 6: Product categories in which Australian and Korean Exports Compete

SITC	COMMODITY	Aust Exports (RCAX>1)		Korean Exports (RCAX >1)		Share of Aust total exports (%)	Share of Kor total exports (%)
		1995	1998	1995	1998	1998	1998
334	Petroleum products.refin	1.054	1.036	1.009	1.921	1.78	3.29
611	Leather	2.157	1.930	4.053	3.326	0.51	0.88
672	Iron & steel primary forms	1.958	1.929	1.746	2.420	0.88	1.11
682	Copper exc cement copper	1.857	1.238	0.499	1.705	0.65	0.90
793	Ships and boats etc	0.738	1.229	6.050	7.869	0.95	6.06

Sources: Calculations based on *the UN International Trade Statistics Yearbook, 1999*

RCA will also show the extent of 'domestic intra-industry trade' within an economy. This type of domestic intra-industry trade would be reflected by a country exporting a product as well as importing that same product in significant quantities. Significant amounts of intra-industry specialisation will yield high RCAX and RCAM indices for the same product categories of a country. There are only three product categories in which Australia has RCAX and RCAM both larger than unity. They are copper products, ships and boats and photo cinema supplies. Exports of these products amounted to only 2.4 percent of total Australian exports in 1998. This reflects the simple industrial and trade structures of the Australian economy which exports mainly agricultural and mineral products, and imports mainly manufactured products.

Table 7: Sectors in Which Australia has Comparative Advantage in Both Export and Imports

SITC	COMMODITY	Australian Exports (RCAX >1)		Australian Imports (RCAM >1)		Share of Aust total exports (%)
		1995	1998	1995	1998	1998
682	Copper exc cement copper	1.857	1.238	0.529	1.115	0.65
793	Ships and boats etc	0.738	1.229	6.050	7.869	0.95
882	Photo. cinema supplies	1.389	1.424	1.771	1.090	0.45

Sources: Calculations based on *the UN International Trade Statistics Yearbook, 1999*

Korea has more extensive 'domestic intra-industry trade' within the economy. For 17 product categories both its RCAX and RCAM are larger than unity. They are refined petroleum products, some chemical products, some basic manufactures, and some machinery and transport equipment, representing 40.2 percent of total Korean exports in 1998. This shows that Korean industrial and trade structures are more diversified than in the Australian economy. This may imply that Korea is more likely to take advantage of trade liberalisation resulting from a KAFTA, as compared to Australia, in the non-traditional trading industries.

Table 8: Sectors in Which Korea has Comparative Advantage in Both Exports and Imports

SITC	COMMODITY	Korean Exports (RCAX >1)		Korean Imports (RCAM >1)		Share of Korean total exports (%)
		1995	1998	1995	1998	1998
334	Petroleum products .refin	1.009	1.921	1.624	0.170	3.291
511	Hydrocarbons nes.derivs	2.312	3.489	3.109	3.109	0.984
513	Carboxylic acids etc	1.625	1.884	1.157	1.076	0.527
582	Prod of condensation etc	1.758	1.694	1.202	1.260	0.913
611	Leather	4.053	3.326	1.400	1.215	0.882
651	Textile yarn	1.584	4.053	1.866	1.775	1.176
653	Woven man-made fib fabric	7.999	6.477	7.999	6.477	3.495
654	Other woven textile fabric	1.621	1.404	1.841	1.617	0.250
672	Iron, steel primary forms	1.746	2.420	3.065	1.278	1.106
673	Iron, steel shapes etc	0.845	1.709	1.278	0.593	0.773
674	Iron, steel univ. plate, sheet	1.875	2.860	1.050	0.829	2.744
682	Copper exc cement copper	0.499	1.705	1.896	2.694	0.896
724	Textile, leather machnry	1.242	1.018	1.775	0.763	0.379
776	Transistors, valves, etc	4.295	40.720	2.051	3.824	14.674
778	Electrical machinery nes	2.846	0.619	0.797	1.030	0.903
793	Ships and boats etc	6.050	7.869	3.623	1.241	6.057
871	Optical instruments	1.256	4.658	2.140	2.999	1.131

Sources: Calculations based on *the UN International Trade Statistics Yearbook, 1999*

d) Policy Implications of a KAFTA

Analysis of the calculated RCA indices indicates that the Australian and Korean economies are highly complementary for numerous products and are in competition with each other for a limited number of products. For Australia, 39.2 percent of its exports are considered to be complementary with Korea, and only 4.7 percent of its exports are in competition with Korea. In the case of Korea, 37.3 percent of its exports are complementary with Australia, while 12.2 percent of them are in competition with Australia. From these results, it may be argued that there are large opportunities for inter-industry trade creation from the formation of a KAFTA. The extent of trade creation will be higher than that implied by the calculated RCA, if a KAFTA eliminates distortions in the Korean agricultural sector. On the other hand, the low intra-industry trade between the two countries would indicate that the two economies have not yet developed intra-industry trade particularly in manufacturing and high-technology areas, although such intra-industry trade is required to advance their economies towards knowledge-based economies. This may imply that there would not be significant potential for trade expansion through intra-industry trade with the establishment of a KAFTA under the existing industrial and trade structures of the two economies.⁹

High levels of complementary together with low levels of competition between the two economies do not suggest that a KAFTA could be a substitute for multilateral trade liberalisation. As shown earlier in Tables 2 and 3, bilateral trade between the two countries accounts for only a small portion of their respective world trade. Both the Australian and Korean economies depend heavily on the rest of the world. Hence, the two countries should continue to pursue their respective multilateral trade liberalisation. The low extent of competition is not necessarily desirable in conjunction with the formation of a KAFTA; it may indicate few opportunities for intra-industry trade creation. Under the existing industrial and trade structures of the two economies, a KAFTA is unlikely to generate extensive intra-industry trade in the

⁹ It should also be noted that the calculation of RCA indices was done with trade data with the three-digit SITC level. Further disaggregated product categories might generate different results.

knowledge-based industries, in which both economies are attempting to advance through bilateral trade. In particular, the Australian industrial structure has not been diversified to take advantage fully of opportunities arising in the Korean knowledge-based sectors.

Another type of benefit from an FTA is an increase in inflows of FDI. With the relatively small size of the two economies, a KAFTA is unlikely to attract significant amounts of FDI to establish production bases within the two economies. However, given the ongoing dialogues by both Australia and Korea to establish other regional free trade agreements with neighbouring countries, the KAFTA region is likely to be part of a large regional trade bloc. This prospect would attract FDI into the region either to develop the sources of raw materials in Australia or to develop a foothold in a broad Northeast Asian economic region.

Another advantage of a KAFTA for both countries is that it would provide an experimentation of a free trade agreement with minimum disruptions in their respective trade relations and economies. Given the ongoing international trend toward FTAs, both countries may have to consider seriously establishing an FTA with other countries to minimise economic and political losses arising from being isolated from the trend. As the economies are similar in size and their bilateral trade accounts for a small proportion of their respective world trade, disruption from the formation of a KAFTA on their respective economy may not be high. Insofar as a KAFTA reduces trade and investment barriers between the two countries, it sets out a schedule for lowering trade barriers, which might not otherwise have occurred, and facilitates formations of other regional trade agreements. For Korea, in particular, the formation of a KAFTA will help to improve its international competitiveness and facilitate domestic structural reforms which is likely to make Korea more attractive to foreign investment.

The major stumbling block to the establishment of a KAFTA is the Korean agricultural sector. Korean agriculture has faced serious structural problems. Land suitable for cultivation is not sufficient for production to meet domestic agricultural demand. The sparsity of arable land by comparison with the agricultural population has resulted in small-scale farming that has been the main cause of low agricultural productivity and low incomes for farm households. Low farm income has in turn accelerated the exodus of young farmers to urban areas. Aging farmers are reluctant to mechanise agriculture and to introduce innovations, thereby slowing productivity and income growth. With this vicious cycle of structural problems, the Korean agricultural sector has declined continuously, accounting for only 4.6 percent of GDP and 10.9 percent of total employment in 2000.

Although Korea's agricultural sector is small when compared to the nation's total population and national income, it has enormous political clout. Besides, the government attempts to maintain the viability of the agricultural sector and rural communities to alleviate and prevent further social problems in urban areas arising from internal migration. Korean agriculture is characterised not only by small-scaled farms but also by rice-oriented farming systems. As the staple food in Korean's diet, rice remains the dominant crop in terms of production, land use and government support. Livestock products, fruits and vegetables are, however, growing in importance. Secure provision of staples, in particular rice, with domestic resources is regarded as important for national security.¹⁰ Under these circumstances, it is difficult to envisage that Korea will agree to a KAFTA at the present time. Realising this,

¹⁰ For a detailed analysis of Korean agriculture and its relations with Australia, see Kwon and Kang (2000).

investment relations will be analysed between Australia and Korea and some proposals will be made to promote investment relations as an early stage solution of the Australia-Korea economic cooperation.

3. Australia-Korea Investment Relations

As indicated earlier, one of the premises of this paper is that Australia and Korea should expand two-way investment flows in order to meet the challenge of expanding bilateral trade in a mutually desirable direction which is in turn consistent with the drive by both nations for knowledge-based economies. As compared to the dynamic trade relationship between Australia and Korea, two-way FDI is still at a low level. At the end of 1998, the stock of Korea's FDI in Australia amounted to US\$425 million, and that of Australia's FDI in Korea was US\$38 million.¹¹ The stock of Korea's overall overseas investment amounted to US\$26 billion, and that of Australia was estimated at US\$53 billion. Thus, the stock of FDI position between the two countries - US\$463 million at the end of 1998 - accounted for only 0.6 percent of the US\$79 billion of total outward FDI of the two countries (Kwon and Oh, 2001). This compares with the amount of bilateral trade between Australia and Korea that accounted for 2.1 percent of the sum of their respective world trade in 1998.

Two-way flows of FDI between the two countries are dwarfed by the magnitude of the flows of FDI worldwide. Over the past two decades, there has been a marked increase in the annual flows of FDI worldwide, reaching US\$827 billion of one-year inflows of FDI worldwide in 1998. This amounted to 7.7 percent of world trade (exports plus imports) (UNCTAD 2000 and UN 1999). Korean FDI in Australia, though markedly higher than Australian FDI in Korea, amounted to only 0.7 percent of its trade with Australia over the 1995-99 period. Therefore, this section attempts to examine the reasons for the low levels of bilateral FDI flows and to explore some means to expand these flows. To this end, an examination of appropriate theories of FDI is in order. Since Australian FDI in Korea has been markedly less than Korean FDI in Australia, emphasis will be placed on the reasons for the sluggish Australian investment in Korea.¹²

Theories of FDI¹³

Although a number of models have been put forward to explain FDI, most appear to be based on two premises. First, FDI is largely undertaken by MNEs, and second, the world is characterised by imperfections in the output and factor markets (Agarwal 1980, Rugman 1980, Teece 1983, and Hill and Kim 1988). The genesis of FDI thinking in this direction, known as the ownership advantage theory, came from Hymer (1960, 1976), and was refined by Kindleberger (1969) and Caves (1971, 1982). This theory argues that when MNEs invest in a foreign country they should have advantages over local firms compensating for their disadvantages on the foreign turf. Advantages owned by MNEs will include firm-specific monopolistic or oligopolistic advantages such as superior technical knowledge, well-known brand names, managerial and marketing skills, special access to markets, cheaper sources of financing, economies of scale, and differentiated products.

For a firm to possess monopolistic or oligopolistic advantages is a necessary, but not a sufficient condition for conducting FDI, because the firm can also serve foreign markets with exports or by licensing, renting or selling these advantages. A

¹¹ The stock value of Australia's direct investment in Korea was provided by the Korea Trade-Investment Promotion Agency (KOTRA) Office in Sydney from its internal material.

¹² For a detailed analysis of Korean direct investment in Australia, see Kwon and Oh (2001)

¹³ This section draws heavily on Kwon and Oh (2001)

number of models have been proposed to explain why a firm chooses FDI over other alternatives to take advantage of its ownership advantages internationally. Among these models, the internalisation model, which was first proposed by Buckley and Casson (1976), has been broadly accepted. This model argues that the markets for key intermediate products such as technology, knowledge and expertise, and managerial and marketing skills are imperfect. These intermediate products are held largely by MNEs. Market imperfections involve the so-called transaction costs such as time lags, uncertainties in negotiating the value of products, monitoring and enforcing contracts, and government intervention. Hence, when the transaction costs associated with these intermediate products are high, MNEs replace these imperfect external markets with their own internal markets. The internalisation of the external markets across national boundaries leads to FDI – internalising international production within the firm.

The creation of an internal market facilitates the transformation of intangible intermediate goods such as technology invented by a firm into valuable properties, retention of the exclusive right to use the innovation, and the exploitation of monopoly rent from them. Expanding their operations through FDI, MNEs may also realise economies of scale. Although internalisation can be applied to any type of MNE with firm-specific advantages, the available empirical studies conclude that the process of internalisation is concentrated in industries with relatively high R & D expenditures (Agarwal 1980).

Although internalisation theory addresses why firms choose FDI as the mode for entering international markets, it ignores the question of why production should be located in a particular country. Here the question is whether there is a location advantage in producing in a particular foreign country. This issue was incorporated by Dunning (1981, 1988, and 1998) in his eclectic theory. According to Dunning's eclectic theory, a firm undertakes FDI when there are three types of advantage for the firm: (a) ownership advantage, (b) location advantage, and (c) internalisation advantage. Ownership advantage means that the firm possesses a competitive advantage that allows it to overcome the disadvantage of competing on the firm's foreign turf. Location advantages refer to the advantages that arise from using resources and assets that are tied to a particular foreign location and that a firm finds valuable to combine with its own ownership advantage. The internalisation advantage arises when the firm finds it cheaper to produce the product by itself rather than hire a foreign firm to do so, because of high transaction costs.

Dunning's eclectic theory is a comprehensive theory of FDI. However, the eclectic theory does not mean that all foreign firms undertaking FDI in different countries have the three types of advantages to the same extent, nor does it indicate that firms' motives for pursuing FDI to capitalise on the three advantages are the same across countries and companies. Given the complexity of the global economy and the diversity of both the characteristics of firms and the opportunities that firms seek in different countries, it is not surprising that different motives may influence a firm's decision to undertake FDI. Strategic motives for undertaking FDI are classified as 'supply-seeking' and 'market-serving'. A firm's supply-seeking motives for undertaking FDI are to control its own costs and secure supplies by capitalising on the location advantages of a foreign country. This includes lowering production and/or delivery costs, acquiring raw materials, and gaining access to key technology in the host country. A firm's market-serving motive for undertaking FDI is to establish new national markets for its products. This motive is in general to explore new markets, circumvent prohibitive trade barriers, establish a local presence as a way of gaining local visibility, and respond to the strategic rivalry in host countries.

Drawing on strategic rivalry, Knickerbocker (1973) argues that FDI reflects strategic rivalry among companies in oligopolistic industries. A critical competitive feature of oligopolistic industries is the interdependence of major players in the sense that what one firm does can have an immediate impact on the major competitors, forcing a response in kind. Recognising this feature of oligopolistic industries, Knickerbocker (1973) argues that as one competitor in an oligopolistic industry undertakes FDI in a foreign country, other competitors tend to follow suit to ensure that the competitor does not gain the dominant positions in the foreign market.

It appears that most of the models of FDI that have been briefly surveyed above are based on the investor's perspective; the host country's perspective draws little appraisal.¹⁴ In particular, it appears that most available modes for FDI assume that the inflow of FDI is unrestricted in the host countries. Frequently, however, this is not the case, particularly in developing countries. Rather, capital-importing countries have foreign investment controls and regulations together with incentives to attract foreign investments. Under these regulations and inducements, FDI is encouraged for certain areas and restricted for other areas. These countries in general seek to attract FDI as a vehicle by which to attract advanced technologies and managerial and marketing skills and to expand export markets. The host country's perspective has become further important with the rising trend of FDI in the form of joint ventures with the host country's partners. The host country's companies search for foreign companies with ownership advantages in areas consistent with their national FDI policy.

b) Australian FDI in Korea

One of the factors underlying the low level of Australian investment in Korea is the lack of location advantage in Korea perceived by Australian investors. Until recent years western business people perceived that Korea was a difficult place to do business (Kwon 2001). Korean government policy discouraged and restricted inward FDI with an excessive burden of government intervention and regulations. A number of sectors were closed to FDI by law until the early 1990s, and even in those areas that permitted FDI, the administrative regulations and processes for FDI were complex and lacked transparency. In addition, other economic conditions were not conducive to incoming foreign investment. The labour market was inflexible in the sense that laying off workers was impossible and labour relations were inefficient and sometimes volatile. Labour costs were thus among the highest of the Asian NICs. Restrictive zoning laws made land and real estate prices extraordinarily high, and foreigners were prohibited from purchasing land for business purposes.

Australian investors' preference for western countries over Korea as an investment target country also appears to have hindered Australian investors' willingness to explore the location advantage in Korea. Historically, Australia tended to favour the United Kingdom, the United States, and New Zealand over Asia, due to historical and cultural ties, trading arrangements, and a higher level of familiarity with these markets.¹⁵ Australia also faces a variety of unfavourable situations in Korea. Lack of understanding of Korea and mis-perceptions of Korea held by Australian business people are also part of the reasons for low Australian investment in Korea. Kwon and Trotman (1999) found that Australians' understanding of Korea is quite

¹⁴ This was pointed out by Kwon (1986).

¹⁵ Uren (2001) stated that the United States absorbs more than half of Australian total direct investment offshore – with the total amount of A\$90 billion as of 2001, although it takes only about a tenth of Australian exports.

limited, and that their perceptions of Korea and its people are to some degree incorrect and outdated.

Few Australian companies have much ownership advantage as far as investment prospects in Korea are concerned. Australia's few multinationals are concentrated in resource industries where Korea offers few opportunities for foreign firms. The Australian manufacturing sector has been under government protection over time, and its international competitiveness is relatively low. Government protection of oligopolistic markets has led Australian companies to focus on their direct competition within Australia, thus reducing their interest in exploring niches in foreign countries. This has happened because a large portion of the Australian manufacturing sector has been controlled by foreign investors, and the main interest of these foreign-controlled companies is to meet the Australian domestic demand. Furthermore, Australian companies could not invest abroad until exchange controls were removed in 1984, which led them to diversify their operations domestically, rather than developing the areas of expertise required to compete in global markets (Uren 2001: 50).

c) New Prospects for Australian FDI in Korea

There is no doubt that the business environment has changed markedly in Korea and many of the root causes for the difficult FDI environment have been eliminated since the financial crisis. Since the onset of the crisis Korea has become to appreciate the value of FDI for its economic recovery from the crisis and future economic development. Hence, the government has switched its policy toward FDI from "restriction and control" to "promotion and assistance" (Bishop, 2001). The government has opened for incoming FDI a number of industries that were closed prior to the crisis. The labour market was reformed to improve its flexibility, and this has significantly slowed increases in wage rates. For the first time in history, foreigners are now allowed to purchase real estate in Korea for personal and business purposes. The government has streamlined the complicated administrative procedures for FDI by dismantling or relaxing more than 50 percent of the former restrictions (Kwon 2001). It has also introduced the so-called "one-stop" service system for inward FDI. Mergers and acquisitions (M &A), which were prohibited before the crisis, have been promoted in conjunction with the liberalisation of the FDI regime (KOTRA, 1999). In addition, numerous Korea companies need to dispose of their surplus assets as part of their structural reform.

One of the sectors in which Australia has relatively high ownership advantage is the services sector. Before the 1997 financial crisis, Korea protected its services sector (banks, securities firms, insurance, and professional consulting) by restricting incoming foreign investment in the sector. However, Korea has largely liberalised the services sector and is in need of foreign professional services (accounting, financing, legal and management). Australian companies can now capitalise on location advantages arising from Korea and utilise their emerging ownership advantages particularly in the services sector.

d) Australian Investment Strategy in Korea

To expand and deepen the bilateral economic relationship between Australia and Korea in line with these nation's their respective national strategy of advancing their industrial structures and exporting high technology products, they should expand their FDI relations in manufacturing, services and technology areas. In this respect, Australian direct investment in Korea has been inadequate. The expansion of bilateral investment relations requires cooperation between the two countries to reach better understanding of the dynamics of each other's economy and investment opportunities.

Concerted efforts are required by both Korea and Australia to enhance mutual understanding of Korea's location advantages and Australia's ownership advantages in the manufacturing, services and high technology areas and possible fusion of these advantages in the form of direct investment in Korea.

To promote the Korean manufacturing, services and high technology sectors to Australian investors, Korea should redress the inaccurate and outdated perceptions held by Australian business people. Korea's core image in Australia is built on key perceptions developed through media reports of militant unions, corruption and political instability. Korea is also regarded as a country with a lack of transparency in business operation, inefficient corporate governance, complicated regulatory processes and a lack of intellectual property rights protection. Products or technologies from a country with a poor image like Korea are perceived by foreign consumers to be lower in quality than products made elsewhere. Korea has also been perceived as a newly industrialising country that produces mainly labour-intensive consumer goods and low-quality automobiles – not an industrially advanced country with sources of technology and technical expertise.

To capitalise on its ownership advantages in Korea, Australia will need to redress the outdated and inaccurate perceptions prevalent in Korea that Australia is a 'fun in the sun' nation of beach-goers – rather than an industrially advanced country with important sources of technology and technical expertise. Australia lacks a high technology profile. As Korea moves toward a knowledge-based economy, it vigorously searches for foreign technologies and foreign investment that incorporate advanced technologies. Korea also seeks to widen its international cooperation in science and technology with advanced countries such as the United States, Japan and countries in the EU. In searching for advanced technologies or technology cooperation, Korea would not be inclined to choose Australia first given the poor image of Australia and Australia's poor profile in high technology.

Australia's ownership advantages appear to exist in down-stream activities out of the value-chain, which are closer to the ultimate consumers. Australia should search for niche areas in down-stream activities related to Australia's comparative advantages and exports such as warehouses, food distribution system, information and communications, biotechnology, environmental technology, the services sector and professional activities. Australia's major manufactured export item is automotive components. Taking advantage of its advantage in automotive components, Australia should seek to invest in niche areas in Korean automobile parts manufacturers.

Multiple approaches should be undertaken simultaneously in order to improve Australia's high technology profile. Australian firms should establish a presence in Korea and strive persistently to improve their profile of expertise and technology. At the same time, Australia should undertake awareness programs for Australian audiences about the various location advantages held by Korea and for Korean audiences about ownership advantages in Australia. To this end, the two countries should establish forums for discussion to exchange ideas and expertise in the area of knowledge-based industries on a continual and regular basis at the government, academic and business levels. Australia and Korea should also establish an organisation or a networking system through which exchanges of people – researchers, educators and policy advisors - will be undertaken. It should be added that as a long-term approach Australia should improve the profile of its tertiary education system. Koreans in general do not think highly of the Australian tertiary education system as comparable to that of the United States or Japan in terms of high technology (Kwon and Park 2000). Overseas perception of the tertiary education

system of a country will have an important bearing on that country's technology profile internationally.

4. Concluding Remarks

Bilateral trade between Australia and Korea has increased by leaps and bounds from the 1970s through 1990s, because of economic complementarity based primarily on the differences between these nations in resource endowments. The bilateral trade has been accelerated by Korea's development strategy for heavy and chemical industries. As a result, the two countries have become important trade partners. The bilateral trade relationship based on the existing characteristics of comparative advantages could, however, pose serious challenges to both countries over time. In response to internal and external pressures, the two countries are striving to develop knowledge-based economies. These changes in their respective industrial structures and national economic strategies will change the comparative advantage these two countries currently have and dilute their economic complementarity. As the Korean economy matures to a knowledge-based economy, its demand for imports of primary products from Australia is bound to decline. Both countries seek to expand their exports of knowledge-based products in conjunction with their new industrial strategies.

For Australia and Korea to cope with domestic structural changes and to ensure continued success with the future bilateral trade and economic relationship, it is imperative to explore new approaches. To this end, the present paper has investigated the feasibility and potential benefits of a free trade agreement between Australia and Korea (KAFTA), and explored ways to expand two-way investment flows.

International enthusiasm for regional FTA has been rising particularly since the debacle of the 1999 WTO talks in Seattle. Numerous countries have engaged in regional or bilateral trade agreements as a way of securing their foreign markets, minimising trade disputes, and at the same time enhancing their national competitiveness. In this context, Australian Prime Minister John Howard proposed a free trade agreement between Australia and Korea when he visited Korea in May 2000.

Korea has changed its policy toward regional trade agreements. It has not pursued FTAs until recently and is one of the few countries in the world with no regional trade agreement. The experience of financial crisis in 1997 as well as the marginalised multilateralism have led Korea to shift its economic policy paradigm and embark on pursuing free trade relations with a number of countries. Through establishing FTAs, Korea seeks to improve investment relations and political partnership as well as trade relations. By forming an FTA with Australia, Korea would attempt to surmount existing tariff and non-tariff barriers in Australia, and to secure suppliers of Australian mineral and agricultural products. Korea also seeks to attract Australian investment, particularly in the services sector.

Australia has also actively been pursuing FTAs with a number of countries in order to gain maximum short-term trade advantages and to capture strategic advantages. Given that Korea has been negotiating FTAs with a number of countries including the United States, by forming an FTA with Korea Australia would attempt to secure the existing Korean market for its traditional exports, to surmount non-tariff barriers, and to establish a foothold in Northeast Asia. Australia would also seek to penetrate the Korean services sector through an FTA. However, a Korea-Australia free trade agreement has not been analysed by either country since its proposal by the

Australian Prime Minister. Hence, part of the purpose of this paper is to analyse the prospect of a KAFTA and assess its potential gains for the two countries using the technique of revealed comparative advantages based on the three-digit SITC level of products for year 1995 and 1998.

Empirical results quantitatively identify the complementarities of the Australian and Korean economies at a detailed product level. The high degree of complementarity implies strong potential for mutual benefits from a KAFTA. It is also found that the extent of competition between the two economies in the world market is quite limited. This implies low opportunities for intra-industry trade creation. Thus, under the existing industrial and trade structures of the two economies, a KAFTA is unlikely to generate much intra-industry trade in the knowledge-based industries, which the two economies are currently attempting to advance through bilateral trade. In particular, the Australian industrial structure has not been broadly diversified to take advantage of opportunities arising from the Korean knowledge-based sector.

The major stumbling block to the formation of a KAFTA is the Korean agricultural sector. Although Korean agriculture is inefficient and declining, the Korea government attempts to maintain the viability of the agricultural sector and rural communities to alleviate and prevent further social problems in urban areas arising from internal migration. Rice remains the dominant crop for Korean agriculture as the staple food in the Korean diet, but livestock products, fruit and vegetables are gaining importance. Koreans continue to regard secure provision of food staples using domestic resources as important for national security. It is thus difficult to envisage that Korea will agree to a KAFTA at the present time. Negotiations for a KAFTA would therefore require dexterous approaches.

Recognising that a KAFTA is unlikely to be formulated in the near future, investment relations between Australia and Korea were analysed to explore ways to promote them. Unlike the dynamic trade relationship between Australia and Korea, two-way investment relations have been lacklustre. In particular, Australian FDI in Korea has been meagre for a number of reasons. Prevailing perceptions held by Australian investors are that Korea lacks location advantages, and is a difficult place in which to do business due to extensive regulations and complex administrative processes. At the same time, Australia's preference for western countries over Korea as an investment target country has been strong. Also, Australian companies lack ownership advantage with which to invest in Korea. The Australian manufacturing sector has been under government protection over time, which has weakened its international competitiveness.

The business environment has changed both in Korea and Australia. After the 1997 crisis, Korea has shifted its policy on incoming FDI from restriction and control to promotion and assistance. The Korean services sector in which Australia has ownership advantage has been liberalised for incoming FDI. In order to promote Australian FDI in Korea, concerted efforts are required of both Korea and Australia. Both countries should redress their inaccurate or dated mutual perceptions, with promotional activities to enlighten each other about their location and ownership advantages particularly in the areas of knowledge-based industries. This will improve the high technology profiles of the two countries. These tasks require establishment of an organisation or networking system, funded by both governments, to provide a forum for discussion of ideas and expertise and exchanges of people – researchers, educators and policy makers, so that present and future opportunities can be identified and realised for mutual benefit.

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