

KOREA IN ASIA:
*KOREA'S DEVELOPMENT, ASIAN REGIONALISM,
AND U.S.-KOREA ECONOMIC RELATIONS*

Claude Barfield

SPECIAL
STUDIES SERIES: I



Korea Economic Institute

KOREA IN ASIA:

***KOREA'S DEVELOPMENT, ASIAN REGIONALISM,
AND U.S.-KOREA ECONOMIC RELATIONS***

Claude Barfield

KEI Editorial Board

Editor: James M. Lister

Contract Editor: Mary Marik

Assistant Editor: Florence M. Lowe-Lee

The Korea Economic Institute is registered under the Foreign Agents Registration Act as an agent of the Korea Institute for International Economic Policy, a public corporation established by the Government of the Republic of Korea. This material is filed with the Department of Justice, where the required registration statement is available for public inspection. Registration does not indicate U.S. Government approval of the contents of this document.

KEI is not engaged in the practice of law, does not render legal services, and is not a lobbying organization.

The views expressed in this publication are those of the authors. While this publication is part of the overall program of the Korea Economic Institute, as endorsed by its Board of Directors and Advisory Council, its contents do not necessarily reflect the views of individual members of the Board or the Advisory Council.

Copyright © 2003 by the Korea Economic Institute of America.

Printed in the United States of America.

All Rights Reserved

Preface

The Korea Economic Institute (KEI) is pleased to launch, with this volume, a new publication series of “Special Studies.” In contrast to KEI’s other publications, which generally take the form of a compilation of relatively short articles on analytical and policy issues by a number of authors, this series will afford individual authors an opportunity to explore in depth a particular topic of current interest relating to Korea.

Dr. Claude Barfield’s examination of Korea’s economic role in Asia draws together a number of strands of policy issues, particularly trade and investment, that help explain the Republic of Korea’s impressive rise to the top echelon of economies in the region and indeed in the world. As importantly, the book looks at some of the different challenges that Korea is facing or will face in the trade policy area as it narrows the technology gap with other leading economies.

KEI is dedicated to objective, informative analysis. We welcome comments on this and our other publications. We seek to expand contacts with academic and research organizations across the country and would be pleased to entertain proposals for other “Special Studies.”

Joseph A. B. Winder
President
Korea Economic Institute
August 2003

Foreword

This study consists of five chapters. Chapter 1 is the introduction, and it covers the historical background of Korea's economic growth, its export growth, and U.S.-Korea economic relations since 1950.

Chapter 2 first traces the evolution of Korea's development strategies and phases beginning in the 1960s; it then describes the role of foreign investment and technology in the growth of Korea's economy. Chapter 2 concludes with a description and analysis of Korea's new development model, with its emphasis on science, the role of innovation, and the growth of service sectors.

Chapter 3 chronicles and analyzes Korea's trade and investment patterns since 1960, including assessments of Korea's growing position and competitiveness in world markets. Separate sections address the special place of the United States in Korea's trade relations and also Korea's recent increasing involvement with Asian trade and investment.

Chapter 4 deals with the impact of growing Asian regionalism over the past decade and with the substantial increase in proposals and negotiations for bilateral, subregional, and regional trading arrangements among both Asian nations and nations outside Asia. This chapter also analyzes the results of various simulation models of the welfare and trade impacts of proposed trade agreements; it uses proposed Korea-Japan and Korea-U.S. free trade agreements as key examples. It then explores the welfare effects on Korea and the United States of a number of other proposed bilateral and regional trade arrangements.

Chapter 5 presents conclusions and recommendations for future U.S. and Korea trade relations on three levels: how to reconcile common and competing goals in the World Trade Organization Doha Round; potential responses and priorities of Asian and non-Asian countries regarding future bilateral, subregional, and regional trade agreements; and, after describing in some detail current bilateral disputes, Chapter 5 suggests a new framework for dealing with these issues.

Acknowledgments

I would like to thank Cordula Thum for her indispensable research and drafting support throughout the manuscript, Sung Woo-lim for his painstaking and thorough numbers crunching, and Andre Zlate for his work on the U.S.-Korea bilateral trade disputes. I am also grateful for the thoughtful comments from three outside readers: Robert Gordon, Nick Eberstadt, and Yang Jun-sok. Needless to say, any remaining errors in fact or interpretation are my responsibility.

Claude A. Barfield
August 2003

Introduction and Historical Background

The goal of this study is to explore the current state of U.S.-Korea trade and economic relations, with special emphasis on the impact of the rise of Asian regionalism and the implications of an evolving Korean development model. This book explores possibilities for closer U.S.-Korea economic relations, the resolution of current trade disputes, and the development of common approaches (or at least an understanding of the differences in approach) to both multilateral trade negotiations and Asian regional initiatives.

Korea's Economic Growth

During recent decades, the Republic of Korea (hereafter, Korea) has transformed itself from a poor, agrarian nation into one of the fastest-growing industrialized economies in the world. Until the launch of an initial economic development plan in the early 1960s, the country was heavily dependent on imported raw materials and manufactured goods. The economic development plan of 1962 was, indeed, a drastic turnaround for a heretofore low-income country.

Korea's phenomenal growth has been achieved as a result of the successful implementation of forward-looking economic strategies formulated in the 1960s and later. Korea adopted policies that emphasized, first, the enhancement of the country's export position and, later, the gradual adoption of market liberalization programs. These two complementary strategies have worked to propel Korea into a new era of industrial leadership and prosperity.

The results have been impressive. Over the relevant three decades (from the early 1970s to 2002) Korea's gross domestic product (GDP) grew from the equivalent of \$8 billion in 1970 to \$444 billion in 2002, with per capita GDP soaring from \$254 to about \$9,318 at current price levels (see *Table 1*). Wide-reaching changes include extensive expansion of the manufacturing sector, from around 577 billion *won* (approximately \$1.82 billion) in 1970 to over 163 trillion *won* (approximately \$123 billion) in 2001, and an increase in commodity trade volume, from \$835 million in 1970 to more than \$161 billion by 2002.

Table 1: Major Indicators of Korea's Economy, 1960–2002

Indicator	1970	1975	1980	1985	1990	1995	2000	2001	2002
Population (million)	31.44	34.68	37.41	40.42	43.39	44.55	45.99	47.34	47.64
Real GDP (1995 prices, billion U.S.\$)	8.00	21.10	62.20	93.40	252.50	489.40	461.70	422.20	443.93
Per capita GDP (U.S.\$)	254.45	608.42	1,662.66	2,310.74	5,819.31	10,985.41	10,039.14	8,918.46	9,318.43
GDP by kind of economic activity (constant prices 1995, billion won)									
Primary ^a	779.80	2,728.00	6,200.20	11,275.40	16,590.90	25,129.80	26,319.80	25,912.70	n.a.
Manufacturing	577.20	2,645.60	10,639.60	23,720.00	51,551.10	110,826.90	163,283.20	163,334.90	n.a.
Construction	139.80	478.60	3,040.60	6,125.50	20,333.50	42,564.10	41,788.00	44,879.30	n.a.
Industrial services ^b	880.20	3,222.80	12,792.10	28,531.40	66,004.80	148,085.80	211,454.20	225,031.30	n.a.
Government services ^c	491.90	1,559.90	6,792.60	14,983.30	33,305.30	73,116.40	105,274.60	94,146.20	n.a.
Nonprofit services	51.40	190.80	629.20	1,582.40	3,507.20	8,093.70	12,320.70	13,514.30	n.a.
Others	1.80	5.70	24.30	39.70	97.40	190.60	247.20	269.10	n.a.
Sectoral employment (% of total labor)									
Primary ^a	51.52	46.18	34.92	25.97	18.34	12.53	10.95	10.36	9.81
Manufacturing	13.18	18.60	21.60	23.41	27.16	23.48	20.15	19.66	19.01
Services	35.30	35.22	43.49	50.62	54.51	63.99	68.90	69.98	71.18
Exports and imports									
Exports (millions U.S.\$)	835.2	5,081.0	17,504.9	30,283.1	65,015.7	125,058.0	172,267.5	150,439.1	161,070.6
Ratio of exports to GDP	0.10	0.24	0.28	0.32	0.26	0.26	0.37	0.36	0.36
Imports (millions U.S.\$)	1,983.9	7,274.4	22,291.6	31,135.7	69,843.7	135,118.9	160,481.0	141,097.8	150,055.1
Ratio of imports to GDP	0.25	0.34	0.36	0.33	0.28	0.28	0.35	0.33	0.34

Sources: KOSIS various; BOK various. Data for 2002 are projections.

^a Primary: agriculture and forestry, mining and quarrying

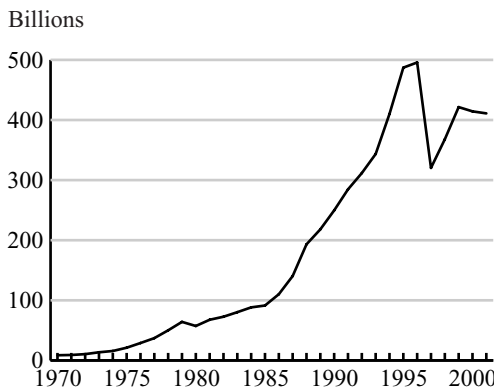
^b Industrial services: Wholesale, retail trade, restaurants, hotels and transport, storage and communication and finance, insurance, real estate, business services

^c Government services: producers of government services and public administration and defense, social and community services

The dramatic transformation of the Korean economy would be seen as impressive by any standard, but it is particularly striking against the backdrop of the country's history. Korea has experienced colonial rule and upheaval throughout much of the twentieth century. Few industries existed before and during the era of Japan's imperial control (1910–45). The Korean War (1950–53) also took its toll, leaving extreme devastation and a rapidly expanding, largely unemployed population. In 1960, the country was heavily dependent on imported raw materials and manufactured goods. The economic turnaround after 1961 was, indeed, a drastic development for a theretofore undeveloped nation.

Since 1970, Korea's GDP has recorded strong year-on-year growth, particularly after 1986 (see *Figure 1*). The 1997 Asian financial crisis caused the first big contraction during the observed period and brought a brief pause to rapid economic growth. GDP contracted 6.7 percent in 1998 after rising 5.0 percent in 1997 and 6.8 percent in 1996. Thanks to the sharp recovery of the current account surplus, the Korean economy quickly rebounded and continued to recover during the 1999–2002 period, although by 2002 nominal GDP in U.S. dollar terms had still not returned to the 1996 level because of the substantial depreciation of the won in response to the crisis.

Figure 1: Korea's Annual GDP, 1970–2001, billions of U.S. dollars, current prices



Source: BOK various.

Korea's Export Growth

During recent decades, Korea's strong performance in exports has been the principal factor behind its successful growth and industrialization. The ratio of exports to GDP was only 10 percent in 1970, but it rose rapidly to 28 percent by

1980 and to 36 percent in 2002. As a result, Korea has become a major exporting nation, ranking 11th among Organization for Economic Cooperation and Development (OECD) member countries in the volume of exports as well as imports in 2001 (KOSIS various). Rapid expansion of exports accompanied the rapid growth of real GDP and has, in turn, brought fundamental changes in all sectors of the economy. The rapid expansion of exports was achieved mainly by the increase in production of manufactured goods since the early 1960s (see Table 1). As a result, the manufacturing sector's share increased from 577.2 billion *won* (equivalent to \$1.82 billion) in 1970 to 163.3 trillion *won* (equivalent to \$123.2 billion) in 2001, whereas the primary sector—for example, agriculture, forestry, fishing, mining, and quarrying—increased only from 779.8 billion *won* (equivalent to \$2.46 billion) to 25.9 trillion *won* (equivalent to \$19.4 billion) throughout the same period.

However, Korea's growth pattern resulted not only from Korea's outward, industry-, and growth-oriented development strategy, but also from the choices of various economic policies (Chenery and Syrquin 1975). Certainly Korea's high growth was ignited by the expansion of exports and sustained by the rapid growth of export industries. Many Korean industries were developed on the basis of the export-first principle.

Because of the outsized expansion of industrial capacity, the amount of domestic investment always exceeded the amount of domestic savings. The gap between investment and savings was filled with foreign borrowing, which was required despite the high domestic savings rate. This is one of the major reasons—along with the need to import oil and many other industrial raw materials—why Korea's foreign debt continued to rise until 1985.

Also, the debt-equity ratio of large Korean firms, which were forced to over-expand their production capacity, tended to be higher than debt-equity ratios in any of the other Asian Tigers.¹ As a result, low domestic savings, a high debt-equity ratio for most firms, and a large foreign debt characterized Korean growth.

The expansion of industrial capacity in Korea was achieved largely through the expansion of existing firms instead of through the creation of new firms. This pattern has persisted and has resulted in the expansion of a small number of very large firms and business groups (*chaebol*), causing a large gap between large and small firms. This in turn has led to a concentration of economic power, in particular during Korea's heavy industry and development phase in the 1970s.

The 1997 Asian financial crisis revealed a number of weaknesses in the Korean development model, and succeeding Korean presidential administrations have struggled with varying success to reform financial and competition laws and regulations. In 2003, Korea faces major challenges regarding its economic future in Asia, its competitive place in the world, and its traditional close economic and political alliance with the United States.

1. Asian Tigers comprise Hong Kong, Singapore, South Korea, and Taiwan.

U.S-Korea Economic Relations since 1950

The United States and Korea have maintained strong economic and trade relations since the founding of the Republic in 1948. U.S. development assistance during the 1950s and 1960s provided a good deal of the financial resources needed to reconstruct the postwar Korean economy. Since the 1970s, trade has been a key component of Korea's development model, and the United States has consistently ranked as Korea's most important trading partner.

In 2002, bilateral trade flows between the two nations were more than \$58 billion, with the United States occupying first place as Korea's top export market (representing more than 20 percent of total Korean exports) and second place as a source of imports. In turn, Korea was the eighth-largest export market for the United States and its sixth-largest source of imports.

Although still large, Korea dependence on the U.S. market has fallen dramatically since the 1970s, when the U.S. share of Korean imports was well over 50 percent. During the 1990s, the United States vied with Japan as Korea's single most important source for imports; but the Japanese share has fallen from a high of 40 percent in the early 1980s to about 20 percent in 2002. The United States is a far more important trade partner for Korea than Korea is for the United States; in recent years, U.S. trade with Korea has accounted for only 2 percent to 4 percent of total U.S. trade. Particularly since the Asian financial crisis in the late 1990s, the United States has run a significant trade deficit with Korea, increasing to almost \$9 billion in 2002.

The United States has been a leading supplier of foreign direct investment (FDI) in Korea, although Korea accounts for less than 1 percent of total U.S. outward investment—a reflection of the relatively minor role FDI has played in the Korean economy. Because of changed Korean government policies and the Asian financial crisis that depressed the value of Korean assets, investment in Korea grew strongly after 1997; between 1997 and 2000, the amount of total U.S. FDI in Korea exceeded aggregate U.S. investment for all prior years combined. In return, the United States has received a fairly large share of Korean outward investment, more than one-fourth of Korea's total.

For much of the period, the United States and Korea pursued their bilateral economic policy by using only the multilateral trading system of the General Agreement on Tariffs and Trade (GATT). Since 1990, however, the situation for both nations has changed markedly: first, the United States negotiated a bilateral trade agreement with Canada and then moved directly to form the North American Free Trade Agreement (NAFTA) with Canada and Mexico. It then went on to pursue the Free Trade Area of the Americas (FTAA) with Latin America and, late in the Clinton administration, other bilateral negotiations (Jordan, Chile, and Singapore). Under President George W. Bush, U.S. Trade Representative Robert Zoellick has announced a policy of "competitive liberalization" under which the United States—while still giving first priority to multilateral negotiations—will entertain offers of free trade agreements (FTAs) both regionally and bilaterally.

Korea came much later to a policy of pursuing trade agreements outside of the World Trade Organization (WTO). It did join the special “concerted unilateralism” of the Asia Pacific Economic Cooperation (APEC), but only in 1999 did the Korean government begin actively to plan and execute a series of bilateral and subregional FTAs, both in Asia and with other regions and countries (Chile, for example). The shift of Korea—and, most notably, Japan—to a policy of actively seeking out new partners for FTAs in Asia has major implications for the future of U.S.-Korea trade and investment relations. It is one of the main goals of this study to explore those implications.

The Korean Development Model: Past and Present

From early on, economists like William Cline (1982) chose the economic development process in Korea as the ideal model for East Asia. Besides Japan, Korea is widely regarded as one of the most successful of the developing Asian countries (Christensen and Cummings 1981); and Korea, like many other high-performing Asian countries, followed the Japanese model of extensive government intervention and its own version of cooperative research and development (R&D) projects.

Countries like Singapore and Hong Kong share many of Korea's characteristics, such as its lack of natural resources, but they all went on to post remarkable economic growth. Even more important than the shortage of resources in these countries was their compulsive drive for exports based upon a strong and growing manufacturing sector. Even though manufacturing represented only about one-quarter of total GDP throughout the period, much of this production was for export. In this Korea was perhaps the most outstanding example. Korea's exported growth, as it is often called, was based not just on its own strong fundamentals, however, but also on a benevolent trading system in which other nations, particularly the United States, were willing to absorb Korean exports. The economic development successes of Korea and the other East Asian Tigers have been viewed by many neoclassical economists as examples of successful development led primarily by freely functioning markets.

Korea's Development Model: One Example of the Asian Miracle?

Korea has undergone five somewhat distinct phases during the period of 1961 to the present (see *Figure 2*). These phases were matched by a series of five-year economic development plans. The 1961–72 period was one in which major policy reforms and institution building promoted export-oriented industrialization. In the second phase, which began in 1973 and continued through 1979, a heavy- and chemical-industry drive was implemented through subsidized credit, special

tax policies, selective protection, entry restrictions, and direct government involvement in industrial policymaking. In the third period, from 1980 to 1996, the government pursued the same export-led strategy while it emphasized domestic price stability and market liberalization. The fourth phase is the period of the Asian financial crisis of 1997 and 1998. A fifth phase, a time of recovery and strengthened growth, including new development models, began in 1999.

Figure 2: Stages of Industrial Policy in Korea since 1961

1961 1972	Initiation of export-led growth (light industries)
1973 1979	Promotion of heavy industry and the chemical industry
1980 1996	Stabilization, liberalization, and renewed growth
1997 1998	Asian financial crisis
1999 current	New development models

Initiation of Export-Led Growth, 1961–72

The first five-year plan, starting in 1962, aimed at promoting import-substituting industries. To promote the targeted industries, the government provided many policy tools, including import restrictions, tax incentives, custom rebates, and selected promotion of inward FDI (Taniura 1989). To repay foreign loans, the government soon shifted the target to export-oriented industries (Cho 1998). The promotional policies for targeted industries were accompanied by policies—including entry restrictions for targeted industries, allocation of export rights to specific markets, and allocation of product lines among incumbents in a specific industry—that directly shaped industrial structure (Kodama 1995). Specific industries were targeted, but, because the government targeted export growth, the government plan often worked “with the market.” Rhee et al. (1984, 36) state:

The Korean policymaking style is not so much a deliberate one of careful planning and debate, but more one of diving in, getting started, observing results, adjusting policy and repeating the process until the appropriate mix is found. This willingness to implement new policies without careful deliberate planning was generally a virtue for export policymaking—primarily because the test of those policies was success on the international marketplace.

Promotion of Heavy Industry and the Chemical Industry, 1973–79

The first phase of industrial policy in Korea was followed by the heavy- and chemical-industry (HCI) drive in the 1970s, when economic activity was increasingly concentrated in the *chaebol* because it was easier for the government to implement its policies through a smaller number of firms. Korea launched an HCI drive in 1973 by the identification of and support for six strategic industries: steel, petrochemicals, (nonferrous) metals, shipbuilding, electronics, and machinery.² Steel, petrochemicals, and metals were selected “with a view to enhancing self-sufficiency in industrial raw materials” and the others because “they are going to be developed into technology-intensive industries” (Kim 1993, 18). Korean policymakers envisioned and planned the quick transition from labor-intensive industry to this narrow range of heavy and capital-intensive industries even before the official presidential declaration on HCI policy on 12 January 1973. Promotive measures and foundations for these HCI industries were laid down first during the second five-year plan (Brennan 2001).³

During the HCI push of the 1970s, it is estimated that the government was directly or indirectly in command of almost two-thirds of the investment resources of the economy (Park 1988, 339). Defenders of the HCI program point out that in early stages of economic development serious imperfections exist in private markets, particularly imperfect information. In this situation, governments may well have better information about the potential profitability of certain industries and may be less risk averse than the private sector. In addition, there may be externalities beyond private profits that benefit the entire economy.

Of great importance, also, during the 1960s and 1970s was the decision by Korean government administrators to allow checks and balances from the international marketplace to act as filters for the system. Thus, while some cronyism did exist, preferential credit was not handed out indiscriminately. A stringent test of export competitiveness was applied, and those who failed this test were jettisoned from the favored programs (Sohn, Yang, and Kim 2002).

Stabilization, Liberalization, and Renewed Growth, 1980–96

In the 1980s, a limited set of policy measures—including limited trade liberalization, passage of a competition law, deregulation, and some privatization—aimed at strengthening market mechanisms. Nevertheless, the role of the state and the

2. Yang Jun-sok, one commentator for this study, pointed out in an e-mail on 10 March 2003 that, in part as a result of fears that the Nixon administration was considering a reduction of ground forces in Korea, the shift to heavy industry was a political move to foster defense industries.

3. The second five-year plan (1967–71) designated synthetic fibers, petrochemicals, and electronic equipment as major sectors for protection against imports and for promotion by fiscal and financial measures. Promotion laws were issued during this period for industrial machinery (1967), shipbuilding (1967), electronics (1969), steel (1970), and petrochemicals (1970).

reliance on the *chaebol* remained strong. Still, during the first half of the 1980s, Korea succeeded in curbing inflationary pressures as the stabilization program was firmly maintained; the cost to the economy was a low-growth performance.

The major changes in trade policy included intensive promotion of export goods and market diversification, reform of the export support systems, lowering of tariff rates to expand the import of goods to be used in manufacturing, and expansion of loans associated with the export of durable goods such as machinery and ships. Foreign-debt management was also given high policy priority. The essence of the debt-management policy was to reduce the debt-service ratio from 13.2 percent to 11.1 percent during the fifth five-year plan (Song 1997).

As of 1986 the Korean economy had begun to realize high economic growth, stable prices, and a trade surplus. The broad policy direction of the sixth five-year plan was to enhance the efficiency and strengthen the international competitiveness of the Korean economy in general by reforming the free enterprise market system. The seventh five-year plan was formulated in 1991 after Korea became a member of the United Nations (UN), after the collapse of the Soviet Union, and when Korea's per capita GDP reached \$7,000 (see Table 1). On paper, it emphasized the role of the private sector in the preparation and implementation of the plan. This plan was suspended and replaced before the end of its second year by the New Economy five-year plan (1993–97) prepared by the Kim Young-sam government. The stated purpose of the 1993 plan was to elevate Korea to the level of advanced industrial countries by 1997.

The Asian Financial Crisis, 1997–98

The onset of the financial crisis toward the end of 1997 turned Korea's economy around, and the downside of the old development paradigm surfaced with a vengeance. The 1970s paradigm had tightened the bonds among the government, industrial corporations, and the financial sector. These bonds over time had two negative consequences.

- Businesses favored by the government captured the lion's share of government credits and aid, while many new start-ups in potentially profitable areas were starved. During the 1970s, also, the implicit too-big-to-fail syndrome began to exert a large impact on both the government and the *chaebol*, with the usual attendant problems of moral hazard—*chaebol* increasingly figured that, no matter what their actions, public resources would always bail them out.
- The financial sector weakened, and banks and other lending institutions felt a growing pressure to allocate loans on the basis of the government's priorities rather than on the basis of normal credit risk criteria. The partial liberalization of financial markets also allowed many Korean banks to create foreign branches that operated outside of the prudential supervision of Korean banking authorities. The Korean government also turned a blind eye to the creation by the *chaebol* of nonbank financial institutions within their corporate structures.

Increasingly, this resulted in the *chaebol*'s forcing profitable subsidiaries to guarantee loans to less-profitable subsidiaries, which hid overall corporate weakness (Graham 2003).

When the crunch came in 1997, the most important symbol of the weaknesses of the Korean corporate structure and financial institutions was the enormous and quickly increasing debt ratios of the leading *chaebol* (**Table 2**).⁴ Sohn, Yang, and Kim (2002, 20) state:

Although it cannot be denied that Korea's development strategy contributed greatly to its economic "miracle," such legacies of the strategy as "implicit guarantee" for *chaebol* by the government, the growth of *chaebol* to such a size that they were "too big to fail," as well as the weak financial sector with little capacity for credit evaluation, were based, in part, on such development strategy.⁵ These result in moral hazard problems on the part of the Korean financial and corporate sectors.

In response to the financial crisis, Korea liberalized its regulation of financial services, FDI, capital flows, and trade. In the financial sector, agreements with the International Monetary Fund (IMF) reinforced the independence of the Bank of Korea (BOK), and Korea's National Assembly passed legislation that allowed banking, insurance, securities, and other nonbank financial institutions to enter each other's lines of business. In addition, in April 1998 the Financial Supervisory Commission (FSC) was established in Korea to supervise the combined financial services sectors. One of its first tasks was to preside over major financial restructuring, including decisions about which banks were not salvageable and how to construct an exit strategy for those institutions that would have to be closed. In addition, the FSC supervised the decisions and timetable for compliance with the international Basel capital adequacy standards. By the end of 2001, the FSC (in conjunction with the Korea Asset Management Corporation,

4. An excellent new appraisal (Noland and Pack 2003) of the impact of targeted industrial policy in the postwar development of three key East Asian economies—Japan, Korea, and Taiwan—concludes that targeting accelerated the growth of the three economies by about 0.3 percent annually. Therefore, because these economies were growing at about 10 percent annually, the targeting policies were not the predominant explanation for their success. In addition, although all three economies had experienced a devastating loss of physical capital during World War II, each also started with high ratios of human capital to per capita incomes. Also, each had experienced at least some industrialization and had some capital market sophistication before the war. And, in each country, state intervention encouraged rent seeking, some corruption, and, more important, the subordination of the financial system to political ends.

5. In their note 6, Sohn, Yang, and Kim (2002, 20) state, "It is interesting to note that in the 1980s, some American observers argued that such Asian-style government-led development strategy was exactly what America needed to develop critical "high-tech" industries."

which had been created to purchase nonperforming loans from banks and other financial institutions) had reduced the number of commercial banks to 11, the number of merchant banks to 9, and the number of investment trusts to 8 (Graham 2003).

Table 2: Debt Ratios and the Number of Affiliated Companies for 30 Major Chaebol, 1995–98

	1995	1996	1997	1998
Debt ratio	355.7	347.4	386.5	518.9
Number of affiliated companies	623	669	819	804

Source: Sohn, Yang, and Kim 2002, 24.

FDI in Korea was substantially liberalized through the enactment of the Foreign Investment Promotion Act of 1998 and subsequent administrative actions, and after 1997 FDI in the Korean economy rose dramatically compared with prior years. As of September 2001, more than 1,000 business areas were completely open to foreign investment, 8 business sectors partly opened, and only radio and television broadcasting entirely closed. As of the end of 2002, estimates indicate that almost 99 percent of all business sectors were open to foreign investment. In addition, all types of investment are now permitted, including establishment of new businesses, acquisition of existing shares, and long-term loan investment. Further, cross-border mergers and acquisitions (M&As) have been liberalized, and requirements for government approval have been abolished. Land acquisition by foreigners has also been opened up, with very few exceptions related to cultural and historical landmarks.

A second channel for FDI is privatization. More than 30 of 108 public enterprises—constituting 70 percent of employees and sales revenues of previously public enterprises—have been sold off, fully or partly. Among the most important public enterprises partly or totally privatized were companies in printing and publishing, steel, oil pipelines, chemicals, tobacco, telecommunications, electric power, and natural gas (Sohn, Yang, and Kim 2002).

In the area of capital account liberalization, the 1998 Foreign Exchange Transaction Act permitted international wire transactions on profits received from equity trading and on principal and interest on long-term loans and foreigners' remittances. Second, the domestic bond market was fully opened, removing all restrictions on foreign purchase of debt securities and ceilings on foreign purchase of public debt instruments. For foreign exchange transactions, all controls on foreign exchange by businesses were abolished in 1999, and in 2000 such restrictions were removed on foreign exchange transactions by individuals (Graham 2003).

A series of measures liberalized trade; some were instituted as a result of an agreement with the IMF, and some resulted from independent action by the Ko-

rean government (a good deal of liberalization had already occurred during the 1980s and 1990s). The Import Diversification Program (IDP) was eliminated, the number of adjustment tariffs was reduced, and some services sectors were liberalized further. Originally introduced in the late 1970s, the IDP had aimed to diversify the sources of imports and alleviate chronic trade deficits with certain trade partners (particularly Japan, and particularly in automobiles and electronic products). The number of items included grew to more than 600 in the 1980s, but during the 1990s the Korean government reduced IDP items at the request of the IMF. In June 1999, the program was completely eliminated.

A second IMF-mandated measure was a reduction in the use of so-called adjustment tariffs. Adjustment tariffs were temporary tariffs placed on certain goods defined as sensitive, allegedly to head off import surges. Although these temporary tariffs remained below the “bound” rates Korea had accepted in the WTO and thus were technically legal, Korea’s trade partners had long complained that they constituted significant trade barriers because of their volatility and randomness. As a part of the IMF agreement, the number of goods subject to such temporary tariffs was substantially reduced.

In April 1998, the Korean government agreed to liberalize certain key services sectors, including securities dealing, insurance, and property leasing. At the same time, additional financial services deregulation was adopted as a part of agreements with the OECD (Sohn, Yang, and Kim 2002).

New Development Models: Keys to Competitiveness and Growth

Korea’s development paradigm is now at a crossroads. Most of the impressive economic growth in the past was underpinned by strong capital accumulation and growth in labor inputs, to which the role of government as the nationwide resource mobilizer and manager was critical. But the development model predicated on the rapid expansion of manufacturing and the role of the *chaebol* faltered badly by the end of the 1990s. A recent World Bank and OECD report (Dahlman and Andersson 2000, 31) noted that Korea is “caught between the rapid advance of the export-oriented developing countries in the region, and especially China, on the one hand, and the G7 (developed countries) on the other and is currently under strong pressure to shift its development strategy.”

The World Bank and OECD report suggests two alternate models that, in combination, would allow Korea to build on its earlier successful growth and development path. The first model entails a concerted public–private partnership and effort to continue to climb the technological competitiveness ladder through a more comprehensive, market-based set of science and technology (S&T) policies, including increased emphasis on the production of a technologically sophisticated labor force and a drive to produce first-rate research universities. In addition, a complementary medium-term strategy would be to take advantage of Korea’s strategic location at the center of a potential hotbed of regional growth and through public–private partnerships lay the foundation for becoming a business hub in Northeast Asia. Such a strategy will demand major changes in the

mind-set of both the government and the citizens—a turnabout in attitudes toward FDI and a commitment to build a services economy that complements the successes of Korea’s manufacturing sector (Kim H. 2003).

Role and Direction of S&T Policy during Industrialization

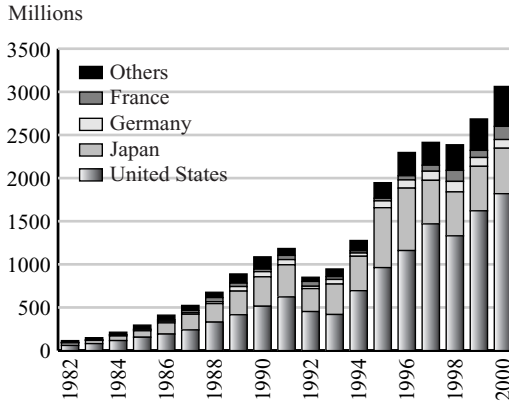
In its growth strategy for S&T, Korea will be partly building on earlier public policy initiatives. Several studies (for example, Dahlman et al. 1987) suggest that the success story of Korea’s industrialization stemmed from S&T policies and strategies that attempted—with mixed results—to create an S&T infrastructure to underpin overall industrial policy. These S&T strategies aimed first to assimilate foreign technologies by developing the necessary technological capability to use and adapt imported technologies efficiently, especially in targeted industries. But in more recent years the Korean government has also demonstrated an awareness of the necessity for native-grown technologies that are based on a broader and deeper scientific base.

Early Foreign Technology Import Policy

Initial government policies aimed at importing foreign technologies—particularly the machinery necessary for early industrial development. Successive Korean administrations believed that the technological capability needed for labor-intensive export industries in the 1960s and for heavy industry and chemicals in the 1970s could be acquired easily from foreign sources. Beginning in the 1960s, Korea made concerted efforts to facilitate the international transfer of packaged technology. Technology transfer was obtained through imports of capital goods, FDI, and technology licensing. To promote technical collaboration, Korea followed the path of Japan in the import of technology: between 1962 and 1985, it imported \$1.3 billion worth of technology (Kang 1989, 54). **Figure 3** shows that technology imported to Korea generally increased over the 1982–2000 period and reached \$3.1 billion in 2000. There is a particularly large jump from \$694 million in 1994 to almost \$1 billion in 1995. Since 1982, most (around 60 percent) technology imports have come from the United States; Japan has supplied about 17 percent.

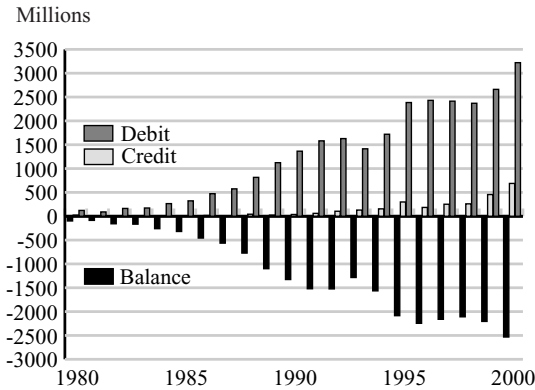
To gain leading-edge technology to support selected industries, the Korean government spent a huge amount of foreign exchange each year to pay royalties for licensing fees (see **Figure 4**). The government felt that licensing was an effective way to speed the learning process and that Korea could reduce its development costs because substantial R&D costs had already been incurred by the licensors. **Figure 4** shows that Korean industries and large firms relied heavily on foreign licensing to obtain technology, especially highly sophisticated technology. Thus, although Korea achieved a leading position in world markets in such industries as dynamic random access memory (DRAM) semiconductors, container vessels, steel, videocassette recorders, and microwave ovens, the price of achieving this status was very high.

Figure 3: Korea's Imports of Technology, by country of origin, 1982–2000, millions of U.S. dollars



Source: KOITA various.

Figure 4: Balance of Royalties and License Fees in Korea, 1980–2000, millions of U.S. dollars



Source: BOK various.

Evolution of S&T Policy

Even though new policies to produce an indigenous technological capacity were slow in coming, by the early 1990s key policy officials were advocating increased support for Korea-based S&T. Despite the financial crisis of 1997 and the ensuing economic hardships, the Korean government has strengthened its commitment to S&T development by raising its R&D expenditures from 3.6 percent (\$3 billion) of its total budget in 1998 to 4.7 percent or \$3.8 billion in 2002. The

number of researchers in S&T has grown from 18,500 to 160,000 over the past two decades (KOSIS 2003).

This quantitative growth has been accompanied by rapid increases in S&T outputs—international scientific publications and international patents, for example. The *World Competitiveness Yearbook* for 2002 (IMD 2002) places Korea 10th in the world in S&T competitiveness on the basis of indicators such as R&D investment, number of researchers, degree of protection of intellectual property rights (IPR), and others. S&T expansion has also brought about rising concerns over effectiveness as well as the efficiency of the investments.

Profile and Achievement of R&D Activities

Korea's capability in S&T has grown steadily since the 1980s together with its rapid economic development. The amount of R&D investment as well as the number of researchers has increased remarkably. Investment in R&D increased over time from 212 billion *won* in 1980 to 13.9 trillion *won* in 2000 (see **Table 3**). The increase between 1999 and 2000 was 16.2 percent. Investment as a proportion of GDP has risen from 0.56 percent in 1980 to 2.65 percent in 2000.

In 2000 the government and the public sector provided 24.9 percent (3.5 billion *won*) of the total R&D funding, whereas the private sector contributed 75.1 percent (see **Figure 5**). Before 1983, however, R&D expenditures were divided almost evenly between the private sector and the government–public sector.

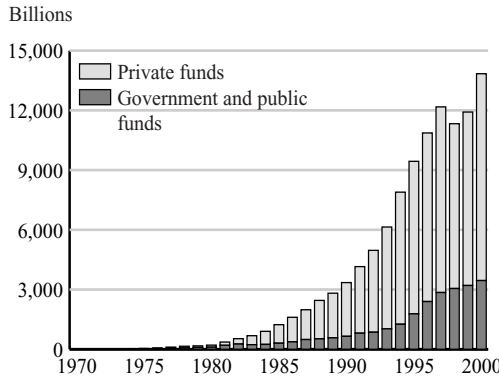
In 2000, research institutes spent 2.0 billion *won* (that is, 14.7 percent of total R&D expenditure). Universities and colleges disbursed 1.6 billion *won* (11.3 percent) and companies expended 10.3 billion *won* (74 percent). Total R&D ex-

Table 3: Trend of R&D Expenditures in Korea, 1970–2000

Year	R&D expenditure (billion <i>won</i>)	R&D expenditure growth rate (%)	GDP (billion <i>won</i> current prices)	Ratio to GDP (%)
1970	11	n.a.	2.725	0.39
1975	43	304.3	10.228	0.42
1980	212	396.3	37.789	0.56
1985	1,237	484.3	81.312	1.52
1990	3,350	170.8	178.797	1.87
1995	9,441	181.8	377.350	2.50
1996	10,878	15.2	418.479	2.60
1997	12,186	12.0	453.276	2.69
1998	11,337	-7.0	444.367	2.55
1999	11,922	5.2	482.744	2.47
2000	13,849	16.2	521.959	2.65

Source: KOSIS various.

Figure 5: R&D Expenditures in Korea by Source of Funds, 1970–2000, billions of won

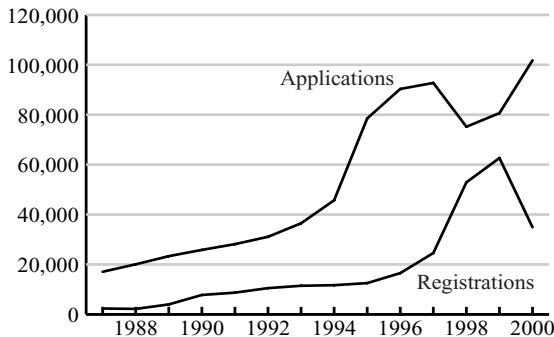


Source: KOSIS various.

penditure classified by type of work shows that, in 2000, 1.8 billion *won* (12.6 percent of total) was invested in basic research, 3.4 billion *won* (24.3 percent) in applied research, and 8.7 billion *won* (63.1 percent) in development research. Korea increased its R&D intensity steadily, but “it was not until in the 1990s [that] Korea finally reached the level of Western countries” (Sakakibara and Cho 2000, 4).

Indicators of R&D achievement are the total number of patents filed and awarded (**Figure 6**) as well as the import of technology (Figure 3). The recent trend in Korea is that R&D expenditure has produced more innovative and value-added results. After 1994, the number of patent applications increased dramatically, and after 1997 the number of patent registrations also grew.

Figure 6: Patent Applications and Registrations in Korea, 1987–2000



Source: KIPO 2002.

An international comparison of patents—an indicator of R&D—is presented in **Table 4**. Dahlman and Andersson (2000) diagnosed Korean R&D activities as “high input” with “biased composition of output”; in other words, the generation of codified knowledge (in the form of patents and publications) is relatively low compared with the knowledge embodied in traded goods.

Table 4: Patents in Korea Compared with Patents in Selected Countries, 2000

Patents	Korea	France	Germany	Japan	UK	U.S.
Applications (1,000 cases)	172.2	160.2	262.6	486.2	233.3	331.8
Registration (1,000 cases)	35.0	36.4	41.6	125.9	33.8	157.5

Source: WIPO 2000.

Challenges for Korea’s Innovation System

Several recent reports (Dahlman and Andersson 2000; MOST 2000) have set forth the challenges facing the Korean innovation system and have made recommendations for meeting those challenges. Among the changes needed in a broader context are reforms of the Korean education system; greater interaction and alliances among government, universities, and corporations; continued deregulation of key technology sectors, particularly those associated with information and communication technologies; greater exposure to, and alliances with, international institutions in order to tap into global knowledge networks; greater transparency in financial markets; and greater flexibility in labor markets.

Although a comprehensive approach, encompassed by the above list of changes, will be necessary, this book concentrates on specific reforms to the institutions and priorities of the R&D system itself. The main components of the formal R&D system are the public and private universities, the government research institutes (GRIs), and certain corporations (usually they are large companies that are part of a *chaebol*, with heavy concentrations in a few areas such as communications equipment, computers, and semiconductors). Also, self-financing is predominant in both the public and private sectors—government funds more than 80 percent of the GRIs, and industry funds more than 90 percent of its own research. Universities show more diversity, but they carry out only a small fraction of research activities.

At this point in its development history, the most important weakness of the current Korean R&D system is the lack of a solid, comprehensive, basic research effort. While Korea ranks well among OECD countries in total R&D spending as a percentage of GDP, it ranks almost last in spending on basic research as a portion of total R&D. While it is true that some large Korean firms perform more basic research than their private-sector counterparts in industrialized countries,

the public research sectors in Korea—the universities and the GRIs—spend less and perform much less basic research than comparable institutions in almost all other OECD countries. The major problem lies with the universities, which, in great contrast to universities in other countries, are still oriented toward general education and generally lack specialized advanced facilities and programs in key physical and biological sciences. This flaw is accentuated in the private universities, where funds for basic science are quite low or nonexistent (Dahlman and Andersson 2000).

In the early 1980s, aware of the general lack of a domestic knowledge base, the Korean government launched a series of national R&D programs (NRDPs) to be run out of the GRIs. The aim and purpose of these new national programs were to provide depth in research areas that were not likely to be covered by the private sector and to provide a resource for more upstream research in general. Unfortunately, though there have been some successes, by and large the GRIs have been much too oriented to targeted research in whatever technologies represented the current fad, and the GRIs have resisted giving priority to more basic, upstream research where payoffs were not readily demonstrable. One reason for this was the tendency for ministries of the government to use GRIs merely as agencies to carry out their own research priorities. In addition, GRIs tended to follow the lead of the private sector, resulting in a good deal of overlap with corporate R&D efforts. Most fundamentally, compounded with the weakness of the universities (about two-thirds of all NRDP funds have gone to GRIs, with only 9 percent to universities), the misplaced priorities of the GRIs have resulted in a general lack of long-term basic research in the Korean innovation system.

Finally, structural imbalances in the private sector contribute to a lack of productivity in the Korean R&D effort. Large companies that are part of one of the *chaebol* perform almost all of the private-sector R&D. Generally, this R&D is conducted in large, centralized laboratories that are tied tightly to existing product lines and near-term research. While they do perform some basic research, in general they lack flexibility and creativity. Small and medium-sized enterprises (SMEs) perform virtually no research, either alone or in conjunction with government-sponsored programs (Dahlman and Andersson 2000).

A New S&T Policy Agenda

Korea needs to reorient its R&D strategies in relation to both priorities and management. For building a domestic knowledge and technology base, over time the universities should be given new roles, responsibilities, and resources. They must strengthen their basic research capabilities as well as create a linkage with advanced scientific education. The highly successful U.S. university system combines top-flight research with a deep commitment to advanced scientific education and the production of graduates with doctorate degrees across a wide spectrum of scientific disciplines. Although it will take time, the Korean government should begin immediately to reprogram and add new resources for basic research in the universities. Over the long run, most government-sponsored basic research

should be directed to a new breed of research universities. In turn, the universities, under government supervision to minimize duplication, should begin to specialize in particular scientific disciplines (MOST 2003).

A reorientation of the GRIs is also necessary. Like the universities, they should be pushed to contribute much more to the knowledge base and to realign their research priorities away from program areas that already receive strong attention and resources from the private sector. This reorientation could be assured by the establishment of clearer guidelines for project funding and a tighter system of GRI program evaluation.

The government should also explore new symbiotic relations between the GRIs and the universities. Centers of scientific excellence could be created through alliances between individual GRIs and universities. It is also important to make it much easier for scientists to operate in multiple environments and move more freely among universities, GRIs, and corporate laboratories. Collaboration between universities and corporate laboratories—which should be monitored carefully to avoid distortion of science priorities—should be encouraged. One incentive that could be introduced is a system by which the universities and the private sector share the proceeds from intellectual property in joint projects.

Also, the government should place major emphasis on strengthening the technological capabilities of the private-sector SMEs. The government could redirect the priorities of the GRIs and mandate new programs that link up with associations of SMEs in strategic program areas. In addition, both the United States and the European Union (EU) have created successful programs to increase the absorptive capacity of their SMEs, and the Korean government should explore similar diffusion efforts.

Korea's Northeast Asia Business Hub Strategy

Korea's traditional export-oriented development strategy was based mainly on mobilizing Korea's abundant labor force to produce manufacturing goods for export to the world market. The R&D strategy described in the preceding section represents an extension of that vision, with the goal of steady advancement up the technological competitive ladder in manufacturing goods. In January 2002, President Kim Dae-jung formally espoused a complementary strategy—the Northeast Asia business hub strategy—and announced several concrete actions to fulfill that goal (MOFE 2002).

The Northeast Asia business hub strategy has been described as an inward-globalization strategy to make Korea a “global business-friendly economy that acts as the regional center for trade, financial flows, and information flows by land, sea, and air from neighboring countries as well as from MNCs [multinational corporations]” (Ahn 2003, 11). When fully developed, it is expected to be a closely integrated regional trade and investment community that includes China, Japan, Korea, and—later—Asian Russia. Korean government officials are candid in admitting that the driving force behind regional integration in Northeast

Asia stems “in large part from the emergence of China as a world economic power” (Ahn 2003, 10).⁶

One foundation of the new strategy is based solidly on geographic propinquity: Korea is located between Japan (the center of a Pacific Ocean economy) and China (the center of a newly emerging continental economy). Trade among these countries (and Russia) has grown tremendously over the past decade. Further, intraregional trade as a percentage of total trade among these trading partners has also increased greatly in recent years.

Table 5, which traces container shipments between Korea and Japan and between Korea and China in recent years, also highlights the strategic geographic advantage of Korea within the region.

Korea will have to make a number of changes in policy (and national character) in order to become a truly competitive regional hub. This study will focus on two of the most essential: welcoming and utilizing FDI as a key development tool, and deregulating and liberalizing the business services (including financial, distribution, and legal services) that provide the foundation for international commerce.

Table 5: Container Shipments on Korea-China Route and Korea-Japan Route, 1995–98 (in TEU)

		1995	1996	1997	1998
Korea-China	Local	160,736	208,552	229,945	234,058
	Feeder	91,295	85,322	84,215	104,361
	Total	252,034	293,874	314,160	337,519
China-Korea	Local	145,753	155,297	185,845	132,853
	Feeder	171,505	163,339	233,853	259,858
	Total	317,258	318,636	419,698	392,711
Korea-Japan	Local	190,990	189,752	191,663	201,332
	Feeder	24,743	30,130	39,195	31,400
	Total	215,733	219,886	230,858	232,732
Japan-Korea	Local	141,658	139,488	139,807	105,549
	Feeder	14,075	13,941	13,549	13,953
	Total	155,733	153,429	153,356	119,502

Source: Ahn 2002, 14–5.

6. Obviously, one difficult obstacle in the way of all these plans is the continued and, indeed, growing alienation of North Korea from the Asian community as well as the world community. The assumption—large though it may be—of this book is that somehow, at least in the medium term, North Korea will be integrated into the regional economic and political system. Note also that, in addition to the impact of China, regional integration in Northeast Asia has also been spurred by the effects of the financial crisis of the 1990s and the decision of the United States to give regional trade policies priority, as evidenced first by NAFTA and now by the negotiation of the FTAA.

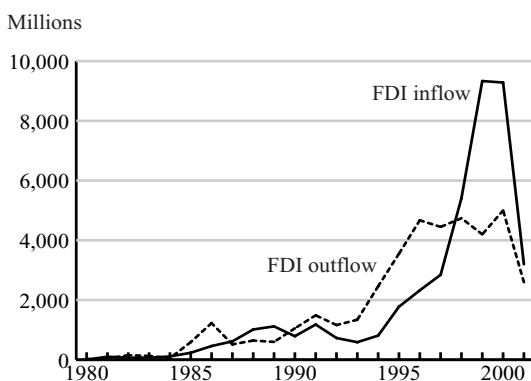
FDI as an Instrument of Korea's Overall Development Policy

In the history of Korea's modern economic development from the early 1960s until the Asian financial crisis, FDI did not figure prominently in Korea's development paradigm (*Figure 7*). The Korean government preferred foreign borrowing to FDI because of its fear of Korean industries being dominated by foreign entities. Only at the end of the 1980s did the government finally acknowledge that FDI could be a key channel to introduce not only the equity capital but also the management know-how and technological base essential to modern business ventures. In the 1990s, the government moved gradually to liberalize its FDI policy.

The sectoral distribution of FDI (*Table 6*) largely followed the priorities laid down in the successive five-year development plans. Investors' motives have also changed over time. Until the mid-1980s, low-cost labor was the main advantage of investing in Korea. Korea's manufacturing sector has been the largest recipient of FDI, but its share has been declining over time, from 87 percent during 1962–71 to 45.15 percent during 1992–2001. FDI in primary sectors—agriculture, fishing, and mining—has been insignificant (consistently less than 1 percent). More recently, several manufacturing sectors that had been the leading recipients of FDI earlier in the 1990s—including chemicals, electronics, transportation equipment, and machinery—experienced a relative decline in foreign investment.

A great change in Korea's FDI regime occurred during the Asian financial crisis of 1997–98. As a result of the paradigm change in Korea's FDI regime, the years of the late 1990s witnessed bursts of FDI inflows into Korea. The Kim Dae-jung government that took office in February 1998 embarked on major economic reforms, including the strong promotion of FDI in Korea with the aim of

Figure 7: Korea's FDI Inflow and Outflow, 1980–2002, millions of dollars



Source: UNCTAD 2003.

Table 6: Sectoral Distribution of FDI Inflow to Korea, 1962–2001, in thousands of U.S. dollars and percentages

Sectors	1962–1971		1972–1981		1982–1991		1992–2001	
	\$	%	\$	%	\$	%	\$	%
Agriculture and fishery	2,096	0.79	12,712	0.79	8,577	0.12	262,221	0.39
Ceramics	10,598	3.98	15,830	0.99	95,932	1.30	869,955	1.29
Chemicals	24,106	9.06	312,751	19.55	1,060,953	14.33	4,021,766	5.97
Construction	3,680	1.38	9,800	0.61	43,269	0.58	471,273	0.70
Electricity, electronics	45,279	17.02	228,554	14.28	1,054,010	14.24	9,512,380	14.13
Electricity, gas	n.a.	0.00	n.a.	0.00	n.a.	0.00	2,911,770	4.32
Fertilizer	24,500	9.21	22,825	1.43	1,496	0.02	1,426	0.00
Financing	2,921	1.10	101,219	6.33	482,714	6.52	7,372,026	10.95
Food	5,710	2.15	52,734	3.30	327,168	4.42	2,922,927	4.34
Hotel	7,794	2.93	232,077	14.50	1,498,718	20.24	8,173,321	12.14
Insurance	n.a.	0.00	3,009	0.19	178,475	2.41	1,299,662	1.93
Machinery	21,000	7.89	98,603	6.16	471,412	6.37	3,622,675	5.38
Manufacturing	231,441	87.00	1,158,329	72.39	4,829,675	65.23	30,405,597	45.15
Medicine	3,674	1.38	17,018	1.06	268,773	3.63	561,638	0.83
Metals	17,725	6.66	82,371	5.15	86,847	1.17	1,418,777	2.11
Mining	312	0.12	5,973	0.37	9,890	0.13	58,583	0.09
Other manufacturing	7,546	2.84	23,788	1.49	71,130	0.96	1,444,690	2.15
Other service	13,841	5.20	49,876	3.12	87,403	1.18	9,875,429	14.67
Paper, lumber	1,784	0.67	11,615	0.73	48,905	0.66	2,217,343	3.29
Petroleum	42,747	16.07	41,975	2.62	569,576	7.69	814,471	1.21
Real estate	n.a.	0.00	n.a.	0.00	n.a.	0.00	635,457	0.94
Restaurant	n.a.	0.00	100	0.01	22,446	0.30	172,257	0.26
Services	32,182	12.10	423,060	26.44	2,555,601	34.52	36,610,515	54.37
Textiles, clothing	22,522	8.47	172,068	10.75	87,852	1.19	362,958	0.54
Trading	42	0.02	368	0.02	165,850	2.24	1,899,502	2.82
Transport equipment	4,250	1.60	78,197	4.89	685,621	9.26	2,634,681	3.91
Transport, storage	3,904	1.47	26,611	1.66	15,955	0.22	1,026,153	1.52
Wholesale, retail	n.a.	0.00	n.a.	0.00	60,771	0.82	4,217,850	6.26
Total	266,031	100.00	1,600,074	100.00	7,403,743	100.00	67,336,916	100.00

Source: MOCIE various.

overcoming the financial crisis and strengthening the international competitiveness of the Korean economy.

In 2002, as a part of its regional hub strategy, the Korean government also offered substantial incentives to foreign investors in a new group of special economic zones, where large-scale foreign investors have been granted a 100 percent tax exemption for the first seven years and a 50 percent reduction for three additional years. There is also a 100 percent exemption from all customs duties, special excise taxes, and value-added taxes for three years as well as exemption from land and property taxes for five years, with a potential 50 percent reduction for an additional three years. Similar inducements are being granted to small-scale investors.

There are also special regulatory exemptions. In the special economic zones, foreigners are allowed to set up their own schools, hospitals, and pharmacies. Finally, the zones allow much more flexible labor market regulations (Ahn 2003, 14–5).

These measures potentially add up to a new era of openness to foreign investment as a means of introducing both new technologies and management techniques to the Korea economy. What will take more time, however, is changing the mind-set of both bureaucrats and citizens so that foreign takeovers of domestic companies and new greenfield investments are no longer viewed as threats to the national patrimony but as valuable tools to increase competitiveness in world markets and enhance the standard of living for all Koreans.

Services: The Vital Link

As noted above, the second pillar of Korea's business hub strategy is a strategic approach toward the evolution of Korea into a major services economy. The long-neglected services sector in Korea is increasingly seen as the most vital element of a twenty-first century economy (Noland 2003). The rationale for this strategic change has been persuasively set forth by Kim Hwi-seok (2003), of the Korea Institute for Industrial Economics and Trade, who recently stated:

To date Korea has concentrated on a strategy of using its manufacturing industry as the primary vehicle for economic growth. However, the growth potential of the manufacturing industry has significantly eroded due to the emergence of newly industrialized economies such as China... (T)he time has come to develop new methods to utilize the long-neglected services industry as a momentum for economic growth... (W)ith the establishment of effective strategies and the efficient distribution of policy resources, the service industry does have the potential to serve as a high-powered vehicle for economic growth.

Since the mid-1970s, there has been a steady increase in the percentage of Korean GDP devoted to services (*Table 7*). Table 6 shows also that, between 1992 and 2001, services received more than half of all FDI: 54.37 percent.

Table 7: Korea's Service Sector, Percentage of GDP, 1970–2001

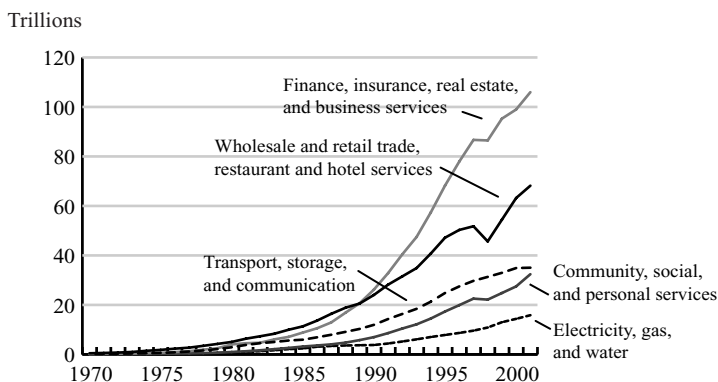
Year	Contribution of Total Services-Producing Industries to GDP (current prices, billion won)	Services-Producing Industries as Percentage of GDP
1970	.956	35.06
1975	3.466	33.89
1980	13.768	36.43
1985	31.710	39.00
1990	72.984	40.82
1995	377.350	43.84
1996	418.479	44.03
1997	453.276	44.20
1998	444.367	44.21
1999	482.744	45.68
2000	521.959	45.78
2001	545.013	47.24

Source: BOK 2003.

The leading recipients of FDI were financial services, hotels, wholesale and retail services, and other services that include telecommunications, consulting, market research, and advertising. *Figure 8* traces the growth of key services sectors and shows the striking takeoff in growth during the 1990s.

As a result of the reforms undertaken during the 1990s financial crisis, many new business services sectors—including real estate rental and sales, securities and insurance, commodity exchanges, and investment trusts—were opened fully

Figure 8: Growth of Korea's Services Producing Industries, 1970–2001, trillions of won



Source: KOSIS various.

to FDI. Only a few services sectors are either still fully closed (radio and television broadcasting) to outside investment or partly restricted (publishing, air transportation, telecommunications, specialized banking, cable and satellite broadcasting, and electric power).

An Illustrative Example: Distribution Services

Kim June-dong (2003) recounts how the recent experience of the distribution services sector serves as a model to illustrate how liberalization and economic reforms can increase productivity, serve as a magnet for foreign investment, and produce spillover effects on the entire economy. If Korea is to attain its goal of becoming a true business hub, the model provided by distribution services must be replicated in other services areas.

Until the mid-1990s, distribution services was one of the least productive and developed sectors in Korea. As late as 1996, mom-and-pop stores with fewer than five employees made up 80 percent of Korea's retail market. Over the past half decade, however, a dramatic transformation has taken place in the wholesale and retail markets. This transformation has two sources: deregulating internally and lifting restrictions on FDI in the distribution services sector.

Among the most important reforms was the elimination of store- and space-related limits on retailing for both domestic and foreign firms. This resulted in a large increase in the number of large-scale discount stores—"hypermarkets," the Koreans call them. By mid-2002, more than 200 hypermarkets had been established, with more than 25 percent of them foreign owned (*Table 8*).

In turn, competition in Korean retail markets changed markedly from a manufacturer-dominated structure to one strongly influenced by the market power of

Table 8: Establishment of Hypermarkets in Korea, 1997–2002

Store name	Year of entry	Number of stores					
		1997	1998	1999	2000	2001	Jan.–June 2002
Carrefour	1996	3	6	11	20	22	22
Wal-Mart	1996	4	4	5	6	9	12
Costco	1998 ^a	2	3	3	4	5	5
Tesco	1999 ^b	1	1	2	7	14	16
Total–foreign companies		10	14	21	37	50	55
Total–Korean companies		48	67	86	114	141	152
Share of total number of stores (%)							
Total–foreign companies		17.2	17.3	19.6	24.5	26.2	26.6
Total–Korean companies		82.8	82.7	80.4	75.5	73.8	73.4

Source: Kim J. 2003, 216.

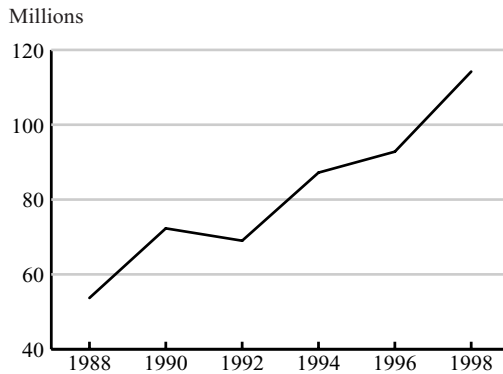
a In 1994 Costco first entered the Korean market by acquiring a local company

b In 1997 Tesco first entered the Korean market by acquiring a local company

large-scale domestic and foreign retail companies. Manufacturer domination had operated to deter productivity improvement and price competition. The increased buying power of the new retail operations shifted pricing power away from the manufacturers, however, and resulted in price competition. Further, foreign multinational firms (and domestic firms soon after) introduced advanced techniques in merchandising and inventory management as well as new technologies such as point-of-sale systems.⁷ **Figure 9** shows the steeply rising trends of sales per employee for hypermarkets, particularly in the late 1990s.

The recent history of the Korean distribution sector—especially one major branch, retail sales—demonstrates the kind of evolution that both the public and the private sectors in Korea will have to plan and execute in order for Korea to become a business hub in the foreseeable future. Observers also point out that no single sector can advance on its own—ancillary activities such as legal, financial and insurance, electronic commerce, and telecommunications services will need to undergo comparable advances for the full effects of the potential services revolution to be realized.

Figure 9: Sales per Employee in Large Retail Stores in Korea, 1988–1998, millions of won



Source: Kim J. 2003, 220.

7. Point-of-sale systems allow managers to have real-time information about all aspects of the sales process; they include computerized cash registers, optical scanners, magnetic cards, and complete transportation and inventory information.

The Evolution of Korea's Trade and Investment Patterns

Trade-oriented industrialization has been the basic growth strategy of Korea since the early 1960s, making foreign trade inseparable from industrial development. When the first five-year plan (1962–66) began, the total value of Korean exports amounted to only \$55 million, but by 2002 this had increased to \$161 billion. This rapid expansion of exports and its interrelationship with Korea's growth strategy, policy instruments, incentive systems, and institutional arrangements were examined in Chapters 1 and 2. Chapter 3 provides a detailed look at the post-Korean War history of Korea's trade and investment patterns and relationships.

Overview of Korea's Trade and Investment Patterns

The efficacy of export-led growth has been an article of faith for policymakers in East Asia. Starting as one of the Asian Tigers, Korea has focused on exports of manufactures (especially to the United States) and has relied on the openness of its trading partners to sustain its pace of expansion (*Table 9*).

Korean Trade since 1960

Korea's trade statistics show dramatic export growth between 1960 and 1980 (*Table 10*). Spurred by the government's industrial policy, Korea's industrialization focused on increasing exports, and export growth rates during the period outpaced import growth rates. In the 1980s, both export and import growth rates slowed, and trade became more balanced. The trade balance began to deteriorate in 1990, however, and reached a record of $-\$20.6$ billion in 1996. As a result of the 1997 financial crisis, growth stagnated even though the Korean *won* dropped precipitously in value. Exports dropped slightly, but imports decreased dramatically. As Korea's economy was restored, both imports and exports rebounded, showing healthy year-on-year growth. Although Korea's economy experienced a setback in 2001—with negative growth rates for both imports and exports—it

has run a trade surplus since 1998. By 2002 both exports and imports had surpassed nominal levels attained before 1997.

Table 9: East Asian Countries' Dependence on Exports and Percentage of Exports to the United States, 2001

Countries	Exports as percentage of GDP	Percentage of exports to United States
China	26.77	24.34
Hong Kong	108.35	20.93
Japan	9.75	30.07
Korea	35.49	20.93
Singapore	142.11	15.41
Taiwan	43.54	22.50

Source: ADB 2002.

Table 10: Korea's Trade Statistics, selected years, 1960–2002

Year	Exports (\$ millions)	Export Growth, 5 year Period (%)	Imports (\$ millions)	Import Growth, 5 year Period (%)	Trade Balance (\$ millions)
1960	33	n.a.	344	n.a.	-311
1965	175	430	463	35	-288
1970	835	377	1,983	328	-1,148
1975	5,081	509	7,274	267	-2,193
1980	17,504	244	22,291	207	-4,787
1985	30,283	73	31,135	206	-852
1990	65,015	115	69,843	40	-4,828
1995	125,058	30	135,119	32	-10,061
2000	172,268	20	160,481	34	11,787
2002	161,071	7	150,055	6	11,016

Source: KITA various.

Korea's Major Import Partners (1980–2002)

Throughout the past two decades, Japan has been Korea's biggest import partner, followed by the United States (*Table 11*). However, the trade shares of Japan and the United States were significantly reduced by 2002 owing to the growing importance of China as one of Korea's major sources of imports. China represented only 3 percent (\$2.27 billion) of Korea's total imports in 1990, but China's share grew to 11 percent (\$15.72 billion) of total imports by 2002.

Table 11: Sources of Korea's Imports, 1980, 1990, 2002

1980			1990			2002		
Total imports = \$21.95 billion			Total imports = \$69.84 billion			Total imports = \$137.55 billion		
Rank	Country	%	Rank	Country	%	Rank	Country	%
1	Japan	27	1	Japan	27	1	Japan	20
2	U.S.	22	2	U.S.	24	2	U.S.	15
3	Saudi Arabia	15	3	Germany	5	3	China	11
4	Kuwait	8	4	China	3	4	Saudi Arabia	5
5	Australia	3	5	Saudi Arabia	2	5	Australia	4
6	Others	25	6	Others	39	6	Others	45

Source: KITA various.

Saudi Arabia, like Japan and the United States, has been one of Korea's five main sources of imports since 1980, which indicates the importance of oil imports for the Korean economy, in particular during the 1980s. Saudi Arabia provided 15 percent (\$3.29 billion) of Korea's total imports in 1980, a share that decreased significantly by 1990 (\$1.72 billion) but increased to 5 percent in 2002 (\$6.9 billion). Korea's imports from other countries continued to increase between 1980 and 2002, a trend that indicates a diversification of Korea's imports.

Excluding Korea's five major sources of imports, the number of countries that provided more than 1.4 percent of Korea's total imports increased from 6 in 1980 to 10 in 1990. The number reached 12 in 2002, reflecting Korea's continuing import diversification. These countries included countries of Southeast Asia and East Asia (Indonesia, Malaysia, and Taiwan), Europe (Germany, the United Kingdom [UK], Italy, and France), and the Middle East (United Arab Emirates and Kuwait).

Korea's Major Export Partners (1980–2002)

Since 1980, the United States has been Korea's biggest export market except in 1973—before 1980 the United States ranked second (see *Table 12*). The share of Korea's exports to the United States has decreased significantly, however, from 30 percent (\$19.36 billion) in 1990 to 20 percent (\$29.83 billion) in 2002. A significant trend between 1990 and 2002 was a fast-growing Chinese market for Korea's exports. In 1980 and 1990, the amount of Korea's exports to China was insignificant, but in 2002 China took in about 14 percent (\$21.23 billion) of Korea's total exports and had replaced Japan as Korea's second-biggest export market. The growing share of the Chinese market for Korea's exports is a sign of Korea's export-market diversification.

Before the surge of exports to China, more than 40 percent of Korea's exports headed to the United States and Japan. China's emergence as a major export market for Korean products has lessened Korea's heavy concentration on

Table 12: Destinations for Korea's Exports, 1980, 1990, 2002

1980 Total exports = \$17.37 billion			1990 Total exports = \$65.02 billion			2002 Total exports = \$147.65 billion		
Rank	Country	%	Rank	Country	%	Rank	Country	%
1	U.S.	27	1	U.S.	30	1	U.S.	20
2	Japan	17	2	Japan	19	2	China	14
3	Hong Kong	5	3	Hong Kong	6	3	Japan	9
4	Saudi Arabia	5	4	Germany	4	4	Hong Kong	6
5	Germany	5	5	Singapore	3	5	Taiwan	4
6	Others	41	6	Others	38	6	Others	47

Source: KITA various.

the U.S. and Japanese markets. Table 12 shows that the shares of Korea's three major export markets had become more evenly distributed by 2002. Also, Hong Kong sustained its share—approximately 5 percent of Korea's total exports—throughout the period. In 2002, other countries took 47 percent of Korea's exports, which was larger than their 38 percent in 1990. The number of countries whose share of Korea's exports was greater than 1.4 percent grew from 8 in 1980 and 1990 to 12 in 2002. These countries included Southeast Asian and East Asian countries (Indonesia, Thailand, Taiwan, and Singapore), European countries (UK, Netherlands, France, and Germany), Canada, and Australia.

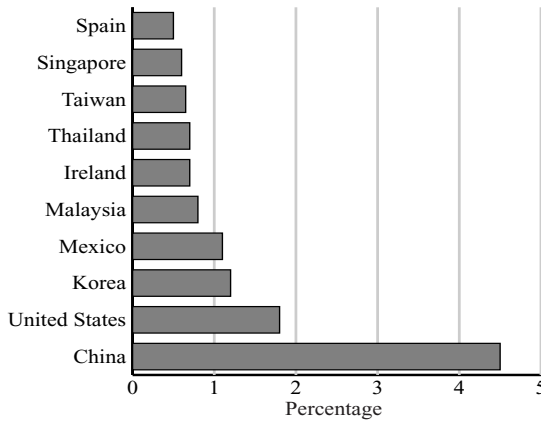
Korea's Market Export Share and Competitiveness

According to the *World Investment Report 2002* (UNCTAD 2002), significant changes are taking place in world trade, and a number of developing countries and economies in transition are among the principal beneficiaries. Korea is as well. The report states: “[I]f one focuses on those economies that have *gained* market share during 1985–2000, . . . a list [emerges] containing mostly developing economies, led by China, and also including a number of economies in transition” (UNCTAD 2002, 143). Korea is the third country on the list of overall winners (*Figure 10*).

Korea's overall market share increased from 1.5 percent to 2.5 percent during the period of 1985–2000, with export success based largely on high- and medium-technology manufactures (*Figure 11*): exports of high-technology manufactures rose from 14 percent to 38 percent of total exports, and exports of medium-technology products rose from 22 percent to 29 percent.

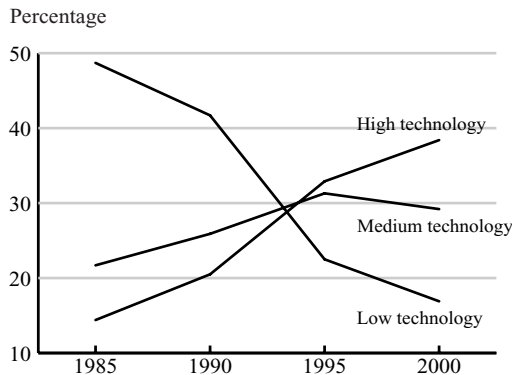
Five high-technology exports (semiconductors, computers and computer parts and accessories, telecom equipment, and electrical machinery, and electrical apparatus) alone accounted for the majority of Korea's export products. Passenger motor vehicles as well as ships, boats, and floating structures represented another significant export item (*Table 13*).

Figure 10: Winner Economies, based on percentage of export market share gains, 1985–2000



Source: UNCTAD 2002, 144.

Figure 11: Korea’s Competitiveness in the World Export Market, 1985–2000, percentage of Korean exports



Source: UNCTAD 2002, 177.

Note: Low technology comprises textiles, garments, paper products, glass and steel, and jewelry; medium technology comprises products of the automotive industry, processing industry, and engineering industry; and high technology comprises electronics, pharmaceutical products, turbines, aircraft, and optical and measuring instruments.

Changes in Korea’s Trade Structure

Changes in Korea’s export structure have led to related changes in its industrial structure as a result of the export-oriented industrialization strategy. Pronounced shifts in the composition of exports have occurred regularly since the first five-

year plan in 1962. One gauge of this changing export structure is the list in **Table 14** of Korea's top five exports in various years.

Along with the rising proportion of manufactured goods for export, the leading types of manufactured exports also changed. During the 1960s, the major manufactured exports were labor-intensive goods such as plywood, wigs, and sweaters—all of which depended on relatively simple technology. In the 1970s, the major export goods shifted to textiles, ships, steel plate, and other products which relied on capital and somewhat more complex technology and more highly skilled labor. By the early 1980s, export commodities had become even more capital intensive. The year 1986 may have been a turning point, a time when manufactured exports shifted decisively to skill-intensive goods such as computers, semiconductors, color televisions, and automobiles.

The pattern of predominant export manufactures shifted over time from (a) labor-intensive goods, to (b) other capital-intensive goods, to (c) capital-intensive and skill-intensive goods, to (d) capital-and-technology-intensive and high-wage goods, and now to (e) research-intensive, capital-intensive, and high-skill-intensive goods.

Korea's imports reflect its lack of natural resources as well as its national trade promotion policies. Korea's industrialization has needed to be undergirded by imported energy (see **Table 15**). Further, Korea's promotion of heavy industries in the 1970s and technology-intensive industries more recently has caused a

Table 13: Korea's 10 Major Export Commodities, 1991, 1996, and 2001, in millions of U.S. dollars

SITC	Product	1991	1996	2001
776	Thermionic, cold cathode or photo-cathode valves, tubes, and other semiconductors	6,645	17,305	14,742
764	Telecommunications equipment, not specified elsewhere	2,116	4,404	12,273
781	Motor cars and other motor vehicles	2,143	9,089	12,029
793	Ship, boats, and floating structures	4,126	7,127	9,699
334	Petroleum oils and oils from bituminous minerals	1,396	3,678	7,736
752	Automatic data processing machines	2,106	4,707	7,485
759	Parts suitable for use with various office machines and data processing machines	688	733	5,714
653	Fabrics, woven, of man-made textile materials	3,729	6,273	3,390
655	Knitted or crocheted fabrics	520	1,447	2,478
775	Household-type electrical and nonelectrical equipment	1,025	1,909	2,201

Source: UNCTAD 2002.

Note: SITC refers to standard international trade classification category.

Table 14: Korea's Major Exports, 1980–2002, by HSK two-digit code

Rank	1980		1990		1995		2000		2002	
	Items	%	Items	%	Items	%	Items	%	Items	%
1	Electrical machinery and equipment and parts	11.18	Electrical machinery and equipment and parts	22.72	Electrical machinery and equipment and parts	30.45	Electrical machinery and equipment and parts	26.92	Electrical machinery and equipment and parts	27.04
2	Articles of apparel and clothing accessories	9.56	Nuclear reactors, boilers, machinery	8.02	Nuclear reactors, boilers, machinery	9.85	Nuclear reactors, boilers, machinery	17.26	Nuclear reactors, boilers, machinery	17.07
3	Iron and steel	6.71	Footwear, headgear, umbrellas, walking sticks	6.62	Vehicles other than railway or tramway rolling-stock	7.48	Vehicles other than railway or tramway rolling-stock	8.86	Vehicles other than railway or tramway rolling-stock	10.63
4	Footwear, headgear, umbrellas, walking sticks	5.23	Articles of apparel and clothing accessories	5.08	Man-made filaments	4.92	Mineral fuels, mineral oils, bituminous substances	5.44	Ships, boats, and floating structures	6.57
5	Articles of iron or steel	4.85	Iron and steel	4.68	Ships, boats, and floating structures	4.42	Ships, boats, and floating structures	4.78	Plastics and plastic articles	4.50

Source: KITA various.

Table 15: Korea's Major Imports, 1980–2002, by HSK two-digit code

Rank	1980		1990		1995		2000		2002	
	Items	%	Items	%	Items	%	Items	%	Items	%
1	Mineral fuels, mineral oils, bituminous substances	30.25	Nuclear reactors, boilers, machinery	17.74	Nuclear reactors, boilers, machinery	17.60	Mineral fuels, mineral oils, bituminous substances	23.68	Mineral fuels, mineral oil, bituminous substance	21.33
2	Nuclear reactors, boilers, machinery	9.38	Mineral fuels, mineral oils, bituminous substances	15.78	Electrical machinery and equipment parts	14.30	Electrical machinery and equipment parts	22.13	Electrical machinery and equipment parts	21.04
3	Electrical machinery and equipment and parts	6.76	Electrical machinery and equipment and parts	12.51	Mineral fuels, mineral oils, bituminous substances	14.07	Nuclear reactors, boilers, machinery	13.01	Nuclear reactors, boilers, machinery	11.73
4	Cereals	4.79	Iron and steel	5.11	Iron and steel	5.11	Optical, photographic, cinematographic, measuring devices	4.21	Optical, photographic, cinematographic, measuring devices	4.10
5	Organic chemicals	4.50	Organic chemicals	4.92	Optical, photographic, cinematographic, measuring devices	4.45	Iron and steel	3.73	Iron and steel	3.99

Source: KITA various.

rapid rise in machinery imports because Korea's own machine industry for much of the period was not as advanced as that of its competitors.

Korea-U.S. Trade: Asymmetrical but Crucial

The trade relationship between the United States and Korea has always been asymmetrical. The United States was and is Korea's most important trading partner (first in exports and second in imports) although Korea's trade dependence on the United States is lessening dramatically. In 2002 Korea's exports to the United States accounted for 20.2 percent of its total exports, the highest among Korea's trading partners; this was followed by exports to China (a 14 percent share). **Table 16** shows that in 1970, more than 30 years ago, almost two-thirds of Korea's total exports went to the United States. Korea's imports from the United States have declined over the period of 1990–2002 from a 24.3 percent share to a 15.2 percent share of Korea's total imports.

Naturally, Korea is not as important a trading partner for the United States as the United States is for Korea. Nevertheless, Korea still ranks as the seventh-largest trading partner of the United States (following Canada, Mexico, Japan, China, Germany, and the UK) and as the seventh-largest recipient of U.S. exports in 2002. Korea took in 3.31 percent of total U.S. exports and supplied 3.05 percent of total U.S. imports (Census 2003).

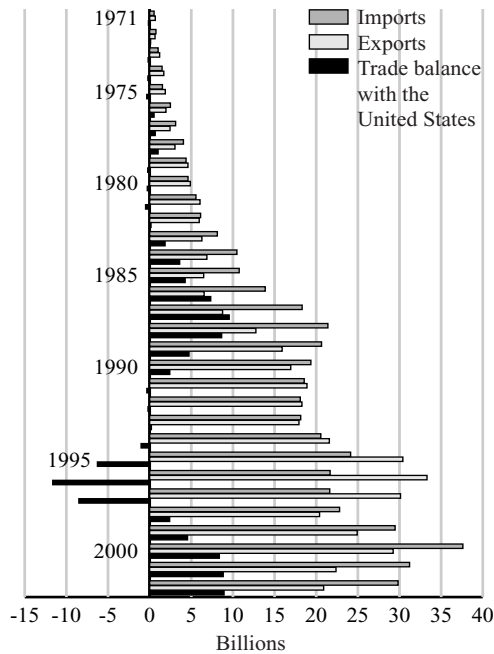
The asymmetrical dependence of Korea and the United States can be measured by the ratio of bilateral trade volume to GDP in each country. The ratio is estimated at 6.25 percent for Korea but only 0.56 percent for the United States (Commerce 2003).

Although bilateral trade between Korea and the United States grew tremendously in size, until 1981 the bilateral trade balance was persistently—with the exception of 1978—in favor of the United States. It shifted into Korea's favor beginning in 1982 and has since grown significantly, reaching a peak at \$8.96 billion in 2002 (**Figure 12**). Korea showed a trade deficit with the United States in 1991 and 1992 and also from 1994 until 1997, but has maintained a surplus since the economic crisis of 1997.

Korea's 1998 recession, during which its gross domestic product shrank by 6.7 percent, led to a sharp decline in its demand for imports from all countries, including the United States (Ahearn 1999). Conversely, Korea's exports to the United States rose significantly between 1998 and 2001, propelled by the strong U.S. economy, which increased U.S. demand for foreign goods and services, and by the depreciation of the *won*, which made Korean products cheaper for Americans to buy. In 2002, the slowing U.S. economy led U.S. imports from Korea to stagnate.

Since Korea began its outward-oriented economic development in the mid-1960s, access to the U.S. market has been critical to Korea's export success. Since 1965, except for a single year—1973—the United States has been the largest market for Korea's exports.

Figure 12: Korea's Imports, Exports, and Trade Balance with the United States, 1971–2002, billions of U.S. dollars



Source: KITA various.

The dependence of Korea on the U.S. market has been more critical in some of the leading export sectors than in others. In 2002, Korea's three largest exports to the United States were automobiles, radio-telephone-television equipment, and computer equipment (*Table 17*). In the other direction, the largest—by far—U.S. export to Korea was electronic integrated circuits and microassemblies (*Table 18*).

Korea's Increasing Involvement with Asia

Ties among Northeast Asian countries (Japan, Korea, and China) have been evolving slowly since the 1970s; each country was busy developing its own economy, but each began to revive contact with its neighbors in Asia.

Although North America—Canada, Mexico, and, in particular, the United States—was the largest market outside of Asia for East Asian goods (East Asia includes China, Hong Kong, Korea, and Japan), Asian trade with North America is declining slowly from its peak at the end of the 1980s when the United States absorbed 38 percent of Asian exports (*Figure 13*) (IMF 2003). In 2002 North America took in about 29 percent of Northeast Asia's exports (IMF various). One reason for this is that intraregional trade in East Asia is expanding rapidly (*Figure 14*), even more rapidly than trade among NAFTA members and EU members.

Table 16: Trade Dependence between Korea and the United States, 1970–2002, in millions of U.S. dollars and percentages

	1970	1980	1985	1990	1995	2000	2002
Korea							
Total exports	835	17,505	30,283	65,016	125,058	172,268	162,471
Exports to U.S.	532	4,607	10,754	19,360	24,131	37,611	32,780
Share of exports to U.S. (%)	63.71	26.32	35.51	29.78	19.30	21.83	20.18
Total imports	1,984	22,292	31,136	69,844	135,119	160,481	152,126
Imports from U.S.	678	4,890	6,489	16,942	30,404	29,242	23,009
Share of imports from U.S. (%)	34.17	21.94	20.84	24.26	22.50	18.22	15.19
Overall trade balance	-1,149	-4,787	-8,53	-4,828	-10,061	11,787	10,345
Trade balance with U.S.	-146	-283	4,265	2,418	-6,273	8,369	9,771
United States							
Total exports	42,469	224,250	215,915	387,401	575,204	771,994	681,874
Exports to Korea	678	4,890	6,489	16,942	30,404	29,242	22,576
Share of exports to Korea (%)	1.60	2.18	3.01	4.37	5.29	3.79	3.31
Total imports	39,866	249,750	338,088	498,434	749,374	1,224,417	1,647,746
U.S. imports from Korea	532	4,607	10,754	19,360	24,131	37,611	35,572
Share of imports from Korea (%)	1.33	1.84	3.18	3.88	3.22	3.07	3.05

Sources: Census 2002; KITA various.

Table 17: Korea's Major Exports to the United States, selected years

Rank	1990		1995		2000		2002	
	Items	%	Items	%	Items	%	Items	%
1	Footwear with outer soles of rubber, plastics, leather, uppers of leather	10.6	Electronic integrated circuits and micro assemblies	26.3	Electronic integrated circuits and micro assemblies	14.2	Motor cars and other motor vehicles	20.9
2	Electronic integrated circuits and micro assemblies	7.9	Automatic data processing machines and units thereof, magnetic or optical readers	7.2	Motor cars and other motor vehicles principally designed for the transport of persons	13.4	Transmission apparatus for radio-telephony, radio-telegaphy, radio-broadcasting, television cameras	11.2
3	Motor cars and other motor vehicles principally designed for the transport of persons	5.8	Electrical parts of machinery or apparatus, not specified	7.0	Automatic data processing machines and units thereof, magnetic or optical readers	10.4	Automatic data processing machines and units thereof, magnetic or optical readers	7.4
4	Automatic data processing machines and units thereof, magnetic or optical readers	5.6	Motor cars and other motor vehicles principally designed for the transport of persons	6.1	Parts, accessories (other than covers, carrying cases and the like)	9.1	Electronic integrated circuits and micro assemblies.	7.1
5	Articles of apparel and clothing accessories of leather	4.9	Video recording or reproducing apparatus, whether or not incorporating a video tuner cameras	2.1	Transmission apparatus for radio-telephony, radio-telegaphy, radio-broadcasting, television	6.8	Parts, accessories (other than covers, carrying cases and the like)	5.2
6	Containers	2.9	Transmission apparatus for radio-telephone, radio-telegaphy, radio-broadcasting, television cameras	1.8	Petroleum oils, oils obtained from bituminous minerals, preparations thereof	2.0	Petroleum oils, oils obtained from bituminous minerals, preparations hereof	1.9
7	Travel goods, handbags, brief-cases, spectacle cases, similar containers	2.3	Electric instantaneous or storage water heaters and immersion heaters, electric space heating apparatus, and other electric-thermic appliances for domestic purpose	1.8	Electric instantaneous or storage water heaters and immersion heaters, electric space heating apparatus, and other electric-thermic appliances for domestic purpose	1.5	Certain parts and accessories for motor vehicles	1.9
8	Reception apparatus for radio-broadcasting	2.2	Containers	1.7	Certain parts and accessories of the motor vehicles	1.0	Electric instantaneous or storage water heaters and immersion heaters, electric space heating apparatus, and other electric-thermic appliances for domestic purpose	1.6
9	Video recording or reproducing apparatus, whether or not incorporating a video tuner	2.1	Turbo-jets, turbo-propellers and other gas turbines	1.6	Video recording or reproducing apparatus, whether or not incorporating a video tuner	1.0	Video recording or reproducing apparatus, whether or not incorporating a video tuner	1.6
10	Women's or girls' suits, ensembles, ensembles, jackets, blazers, dress, skirts, and other clothing (other than swimwear)	1.9	Women's or girls' suits, ensembles, ensembles, jackets, blazers, dress, skirts, and other clothing (other than swimwear)	1.2	Women's or girls' suits, ensembles, ensembles, jackets, blazers, dress, skirts, and other clothing (other than swimwear)	1.0	New pneumatic tires, or rubber	1.3

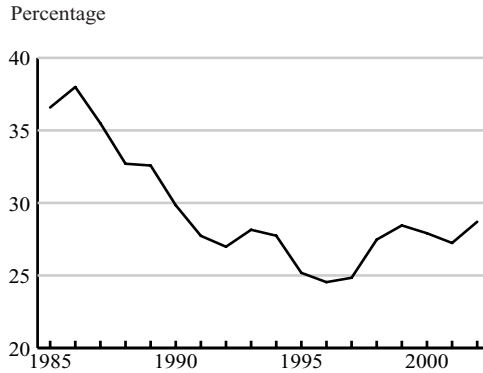
Source: KITA various.

Table 18: Korea's Major Imports from the United States, selected years

Rank	1990		1995		2000		2002	
	Items	%	Items	%	Items	%	Items	%
1	Electronic integrated circuits and micro assemblies	6.4	Electronic integrated circuits and micro assemblies	9.8	Electronic integrated circuits and micro assemblies	23.4	Electronic integrated circuits and micro assemblies	19.7
2	Raw hides and skins of bovine or equine animals	4.9	Aircraft (helicopters, aero planes), spacecraft (including satellites), and sub-orbital and spacecraft launch vehicles	5.0	Electrical apparatus for line telephony or line telegraphy, including line telephone sets with cordless handsets and telecommunication apparatus for carrier-current line systems or for digital line systems, videophones.	4.8	Machines and mechanical appliances having individual functions not specified or included elsewhere	3.0
3	Maize (corn)	4.3	Machines and mechanical appliances having individual functions not specified or included elsewhere	4.5	Machines and mechanical appliances having individual functions not specified or included elsewhere	3.8	Meat of bovine animals (frozen)	2.4
4	Aircraft (helicopters, aero planes), spacecraft (including satellites), and sub-orbital and spacecraft launch vehicles	3.7	Maize (corn)	4.1	Automatic data processing machines, magnetic or optical readers, machines for transcribing data onto data media in coded form, machines for processing such data	3.2	Automatic data processing machines, magnetic or optical readers, machines for transcribing data onto data media in coded form, machines for processing such data	2.2
5	Petroleum oils, oils obtained from bituminous minerals	3.6	Automatic data processing machines, magnetic or optical readers, machines for transcribing data onto data media in coded form, machines for processing such data	2.9	Arts, accessories (other than covers, carrying cases and the like)	1.9	Electrical apparatus for line telephony or line telegraphy, including line telephone sets with cordless handsets and telecommunication apparatus for carrier-current line systems or for digital line systems, videophones.	2.1
6	Cotton (not carded or combed)	3.0	Turbo-jets, turbo-propellers, and other gas turbines	2.8	Oscilloscopes, spectrum analyzers	1.8	Raw hides and skins of bovine or equine animals	2.0
7	Ferrous waste and scrap, remelting scrap ingots of iron or steel	3.0	Raw hides and skins of bovine or equine animals	2.5	Raw hides and skins of bovine or equine animals	1.7	Dirigibles, gliders; powered aircraft, spacecraft and launch vehicles	2.0
8	Turbo-jets, turbo-propellers, and other gas turbines	2.8	Ferrous waste and scrap, remelting scrap ingots of iron or steel	2.2	Meat of bovine animals (frozen)	1.6	Turbo-jets, turbo-propellers and other gas turbines	1.9
9	Automatic data processing machines, magnetic or optical readers, machines for transcribing data onto data media in coded form, machines for processing such data	2.5	Dirigibles, gliders; powered aircraft, spacecraft and launch vehicles	2.1	Dirigibles, gliders; powered aircraft, spacecraft and launch vehicles	1.6	Ferrous waste and scrap, remelting scrap ingots of iron or steel	1.5
10	Wood in the rough, whether or not stripped of bark or sapwood, or roughly squared	2.4	Transmission apparatus for radio-telephone, radio-telegraphy, radio-broadcasting, television cameras, still image video cameras, and other video camera recorders	1.7	Other measuring or checking instruments and machines, profile projectors	1.4	Other measuring or checking instruments and machines, profile projectors	1.3

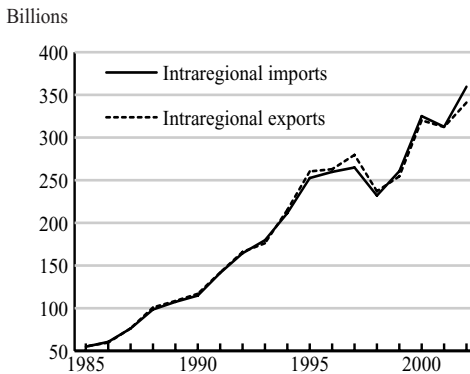
Source: KITA various.

Figure 13: East Asia's Total Exports: Share of Exports to North America (%)



Source: IMF 2003.

Figure 14: Intraregional Trade in East Asia, 1985–2002, billions of U.S. dollars



Source: IMF 2003.

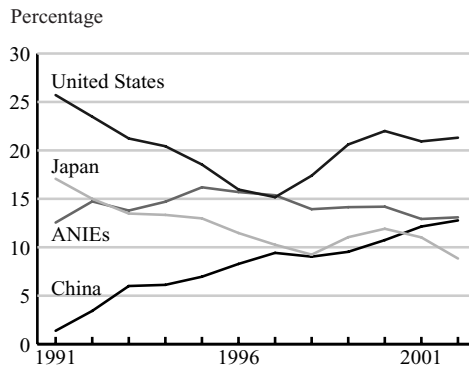
Evolving Trade Patterns: Japan, China, the Association of Southeast Asian Nations (ASEAN), and Taiwan

In trade policy, what matters most is the share of a country's total trade with one country or region, which measures the relative interdependence among economies. As more of the Northeast Asia region's trade is destined for regional markets, the region's companies and governments are more likely to invest in contacts, infrastructure, and policies that support intraregional trade. Between 1985 and 2002, Korea's exports increased more than fivefold, from \$30 billion in 1985 to \$161 billion in 2002. To bolster bilateral trade, starting in 1973 when Japan accounted for about 40 percent of total Korean trade, Japan accorded Korea ben-

efits under its generalized system of preferences (Yamazawa 2001, 12). However, Japan's share of Korea's trade has declined markedly since then, and, by 1991, Japan accounted for under 20 percent of Korea's exports. In 2002 that share fell to about 9 percent. Similarly, Japan's share of Korea's imports fell to about 26 percent in 1991 and further to about 18 percent in 2002.

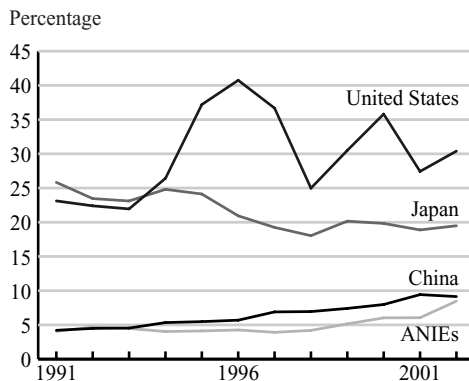
Much of this shift in Korea-Japan trade share represents growing trade ties between the United States and Korea as well as the 1990s revival of Korea-China trade, which had been in hiatus before 1987. By 2002 China accounted for 13.18 percent of Korean exports and 10.48 percent of Korean imports, and the trend was toward further increase (*Figure 15* and *Figure 16*).

Figure 15: Korea's Export Links with Major Asian Countries and the United States, 1991–2002, percentage of Korea's total exports



Sources: IMF various; KITA various.

Figure 16: Korea's Import Links with Major Asian Countries and the United States, 1991–2002, percentage of Korea's total imports



Sources: IMF various; KITA various.

Intraregional trade is an important element in the total composition of trade for East Asia. Petri (1993) concludes that intraregional trade has always been a substantial part of the region's trade composition. Intraregional trade can also be seen as a source of steady East Asian growth throughout the 1990s despite a worldwide recession between 1990 and 1992 (Barfield 1997). **Table 19** shows that the East Asian economies tend to depend more on intraregional trade than on external trade (Ahn 2003, 10).

Table 19: East Asia's Trade with the World's Economic Regions, 1985–2000, in billions of U.S. dollars and percentages

Region	1985		1990		1995		2000	
	Value	%	Value	%	Value	%	Value	%
EU	80	11.6	220	15.4	369	14.3	421	13.4
NAFTA	196	28.5	350	24.5	552	21.4	630	20.1
East Asia	256	37.3	588	41.1	1,321	51.2	1,370	43.7
World	687	100.0	1,431	100.0	2,578	100.0	3,137	100.0

Source: Ahn 2003, 23.

The general direction of Asian economic regionalism and intraregional trade over the preceding two decades is clear if the 1997–98 Asian financial crisis is discounted. Newly industrializing economies (NIEs, which include Korea, Hong Kong, Singapore, and Taiwan), followed by ASEAN-4 (Thailand, Malaysia, Indonesia, and the Philippines), China, and now Vietnam have pursued outward-oriented economic development strategies while they stimulated inward flows of FDI, including FDI from more industrialized Asian economies.

The increasing dependence on trade within Asia is clearly shown by the measure of intraregional trade as a share of total trade of the region. **Table 20** provides regional trade data for Japan, China, and Korea. The percentage of trade that is regional has increased significantly for both Japan and Korea.

Korea's exports and imports to Asian economies (including ASEAN-4, ANIEs [the Asian newly industrializing economies of Hong Kong, Singapore, Taiwan], Japan, and China) comprised \$65.4 billion (in imports) and \$70.4 billion (in exports) in 2002; this was 43.6 percent of Korea's total imports and 43.7 percent of its total exports (**Figure 17**).

Despite the growing intraregional trade and, in particular, the role of Japan in East Asia, the United States is still the overwhelmingly dominant economy for this region. Its importance as a market and as a source of investment continues to be large.

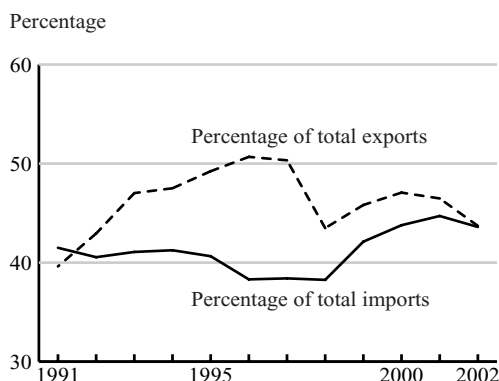
Japan has traditionally been an important source of investment and technology for Korea. **Table A-2** in Appendix A shows that Korea's dependence on Japanese exports of machinery continues. During the 1991–2000 period, the six major import groups from Japan consisted of specialized machinery for industries

Table 20: Total Trade and Intra-regional Trade; China, Japan, and Korea; 1980, 1990, and 2000

Trade	Date	China	Japan	Korea
Total trade (\$ billion)	1980	38.0	271.2	39.8
	1990	115.4	522.9	134.9
	2000	455.4	858.8	332.8
Trade with Asia (\$ billion)	1980	18.1	66.8	13.0
	1990	71.5	158.7	50.4
	2000	249.2	356.6	151.3
Trade with Asia as percentage of total trade	1980	47.6	24.6	32.6
	1990	61.9	30.4	37.4
	2000	54.7	41.5	45.5

Source: IMF various.

Figure 17: Trade between Korea and Asian Economies as a Percentage of Korea's Total Trade, 1991–2002



Source: KITA various.

(4.8 percent in 1991; 6.8 percent in 2000), electrical machinery and apparatus (2.4 percent in 1991 [not shown]; 4.7 percent in 2000) and telecommunications equipment (3.3 percent in 1991; 4.1 percent in 2000).

Korea's Investment Linkages with Japan, China, ASEAN, and Taiwan

FDI from countries outside East Asia generally outweighs investment from countries within the region. Intra-regional direct investment is mainly from NIEs to China, and investment from ASEAN-4 is increasing significantly. The increase in intra-regional direct investment from NIEs is closely associated with East Asia's expanded share in the global trade of IT-related goods as well as the increase in

intraregional trade primarily for IT-related goods. As a result, NIEs have been relocating and expanding their production centers, particularly for IT-related goods.

For East Asian and Southeast Asian countries, excluding Japan, the inward FDI-GDP ratio is very high compared with that of the world as a whole (*Table 21*). It seems that this is the most important characteristic and that the other characteristics, such as export-led growth, have been created by active inward FDI.

Like trade, investment also helps link the economies of Asia. China is the focus of most FDI in the region. Japan and Korea host relatively small amounts of foreign capital, although Japanese investors hold more than \$5 billion in assets in the Korean market, second only to U.S. FDI in Korea (Yamazawa 2001). As of 2000, China was host to almost \$350 billion in FDI—almost 3.5 times greater than the combined FDI in Japan and Korea (both Korea and Japan hold multibillion-dollar stakes in the Chinese economy). Korea's FDI inflows rose from \$200 million in 1985 to \$9 billion in 2000, then dropped to \$3 billion in 2001. Outward FDI accelerated during the 1990s, rising from an annual average of less than \$1 billion in the period 1988–93, to \$3 billion in 1994–96, and to \$29.4 billion in 1997–2001 (UNCTAD 2002).

Assessment of China's Special Place

With its strong growth potential, deriving from its huge population and largely underdeveloped market, China has increasingly emerged as a major center for trade and investment. As China has pursued market-oriented economic reform, FDI inflows to China have increased substantially. In 2002, China received \$50

Table 21: Inward FDI as Percentage of GDP, by Economy and Region; 1990, 1995, 2000

Economy	1990	1995	2000
Korea	3.40	13.70	10.00
Japan	0.30	0.60	1.10
China	7.00	19.60	32.30
Hong Kong, China	198.10	125.00	263.80
Singapore	77.90	71.50	103.80
Taiwan	6.10	5.90	9.00
Region			
South, East and South-East Asia	17.40	18.90	36.40
ASEAN	17.30	22.89	46.55
ASEAN without Singapore	10.57	17.49	40.19
World	8.90	10.00	20.00

Source: UNCTAD 2001.

billion, the largest FDI inflow in the world. Large-scale investments in China will continue as a result of political stability and more liberal FDI regulations.

China's manufacturing sector receives 50 percent of its FDI. As a manufacturing center, China's export shares in the world trade have been growing significantly. China's exports of manufacturing goods represented 4.7 percent of world exports in 2000, a huge increase from 1.7 percent in 1990. China's share of total U.S. imports was 8.85 percent in 2002, up from 3 percent in 1991. In the same period, China's share of Korea's total imports increased to 10 percent from 4 percent.

Along with its strong increase in exports, imports into China have grown rapidly. As China's industrialization has proceeded, China has demanded more material and machinery to expand its production capacity. Asian Development Bank (ADB 2002) statistics demonstrate a close relation between China's import growth and industrialization. Throughout the 1990s, more than 70 percent of China's imports fell into three standard international trade classification (SITC) categories—chemicals, basic manufactures, and machine and transport equipment. China has increasingly—and particularly during the 1990s—imported what it needs from ANIE countries; their share of China's total imports grew to 26 percent in 2000 from 9 percent in 1991.

Although most imports have gone into China's manufacturing sector, local markets for consumer goods have also strengthened. China's rapid economic development has created local demand for imported consumer goods and has provided more opportunities for foreign companies to profit from Chinese consumers. Samsung Electronics, for example, considers China as one of its priority markets. It sold \$1.81 billion worth of consumer electronics in China in 2002 and expects to triple these sales figures by 2005 (Roberts and Moon 2002). In particular, Samsung is promoting its high-end products, and its success shows that growing numbers of Chinese consumers can afford and demand expensive and sophisticated goods.

China's WTO membership has been assessed to be beneficial for China's economy. While the world economy was stagnant, *China Daily*, in "WTO Entry Boosts China's Economy," on 18 November 2002, reported that "China's exports increased by 19.4 percent in the first three quarters of 2002" and that FDI inflows surged. The article continued, "More than 2,300 regulations were abolished under the State Council in the first half of 2002," and stated that this government effort to fulfill the WTO commitment had boosted investors' confidence and the outlook for the Chinese market.

Positive growth will continue as long as China's labor-intensive exports expand. In addition, a more integrated China will benefit neighboring Asian countries. China's accession to the WTO is forecast to increase its economic output by 2.2 to 5.5 percent annually (Lardy 2002).

Korea's Growing Dependence on the Chinese Market

Korea is becoming increasingly dependent on the Chinese market for its exports; Korea's exports to China increased from 1.4 percent in 1991 to 10.7 percent in 2000. By contrast, during the same time period, Korea's export dependence on the United States and Japan dropped from 25.9 percent and 17.1 percent, respectively, to 21.9 and 11.9 percent.

Over the years, China's major exports to Korea have been textile materials and products, crude oil and petroleum, corn, coal, and other raw materials. Other bulk export commodities include chemical raw materials, rolled steel, leather goods, shoes, fodder, and mechanical and electrical products. In recent years, China's sales to Korea of electronic components and other products with high added value (i.e., telecommunications equipment) have been mounting steadily. Chemicals, electronics, and iron and steel are China's major imports from Korea (see *Table A-3* and *Table A-4* in Appendix A).

The Rise of Asian Regionalism in the Context of Worldwide Trends

The formation of bilateral and regional FTAs has been a worldwide trend in recent decades. Currently, more than 130 such agreements are in place (WTO 2000). The renewed impetus for intra-Asia and Asia-U.S. FTAs, combined with the equally strong movements centered around the EU and North and South America, has raised again the economic and political debate over the virtues and dangers of bilateral and regional preferential trade agreements—and whether they are building blocks or stumbling blocks to achieving global free trade. This puzzle has no clear answer.

So-called free trade agreements short of full multilateral concessions do result in discriminations between members and nonmembers and, as economists have frequently pointed out, produce both trade creation and trade diversion.⁸ Trade creation results from a lowering of barriers between the members of bilateral, subregional, and regional agreements. Trade diversion occurs when exports from efficient sectors of a country outside the agreement are diverted merely because of lower tariff rates. This distorts international competition and may reduce world economic welfare. Judging such agreements from the multilateral perspective of the WTO depends in part on whether the trade creation effects outweigh the trade diversion effects.

Other considerations and factors also need assessment. One danger comes from the possibility that nonmembers of FTAs may be provoked to retaliate by raising tariff barriers or creating trade-diverting agreements with other nonmembers. The key question is whether incentives to consolidate smaller FTAs into larger FTAs and ultimately move to a global FTA are greater than counterincentives to block new entrants or block amalgamation of FTAs such as NAFTA and the EU-centered bilaterals. Fragmentation could very well prevail over a movement

8. For an excellent and timely analysis of the dangers of FTAs and of a world of large trading blocs, see Gordon 2001.

toward global free trade in the foreseeable future—without some changes in the WTO and new guidelines.

A stalemate that produces a proliferation of small FTAs with little movement toward consolidation has a number of downsides. In the first place, it would result in an enormously fragmented and complicated trading system—imagine a world of dozens of FTAs, each with its own interim timetables, tariff levels, and nontariff-barrier liberalization rules—and huge costs to multinationals such as IBM, Siemens, or Hyundai of sorting out trade rules for each trade group. Jagdish Bhagwati, an international trade economist, labeled this unfortunate phenomenon the spaghetti-bowl effect (Bhagwati and Panagariya 1996).

Another problem is how to accommodate the so-called rules of origin (ROOs) negotiated domestic content requirement of FTAs. In NAFTA, for example, 200 pages are devoted to ROOs, and this will be multiplied many times in a world of numerous overlapping FTAs.

Finally, some critics of FTAs have predicted—and recent history has proved them correct—that members of FTAs would discriminate against nonmembers when imposing trade remedies such as antidumping and safeguards rules. Indeed, in imposing the recent Section 201 steel safeguards action, the United States loudly stated that it had excluded Canada and Mexico from high steel tariffs on the basis of their membership in NAFTA—a policy that is contrary to the WTO founding principle of nondiscrimination. In May 2003, a WTO panel ruled that discrimination in favor of Canada and Mexico violated WTO rules. The United States is appealing the ruling to the WTO Appellate Body (ITR, 8 May 2003). As a part of the upcoming FTAA negotiations, a number of South American countries have already made it clear that exclusion from U.S. antidumping laws is a central goal.

U.S. and Korean Responses to Bilateralism and Regionalism

For several decades after the founding of the multilateral trading system, both the United States and Korea eschewed trade agreements outside of the GATT. Only in the late 1980s did the United States—at the initiative of other trading partners—entertain the idea of bilateral and regional trading arrangements. It first negotiated an FTA with Canada and then went on to agree to the trilateral NAFTA under President George H. W. Bush. It was also under the former president Bush that the United States launched the effort to create the Free Trade Area of the Americas (FTAA) agreement. The administration of President George W. Bush shows how U.S. trade strategy has changed. Although the first priority for trade liberalization is still centered in WTO negotiations and the current Doha Round, the administration of the second President Bush has announced a complementary policy of “competitive liberalization,” under which the United States is committed to negotiating FTAs with all comers in all regions. Thus, agreements have been signed with Jordan, Singapore, and Chile; and negotiations have begun with Australia, Morocco, and the Central American Trade Association (Barfield 2002).

Like the United States, Korea long avoided agreements beyond the GATT and the WTO, but Korea's position changed dramatically at the end of the 1990s. Motivating factors for Korea's decision to pursue the establishment of FTAs were not only the fear of being left out of the recent trend of growing regionalism but also the onset of the Asian financial crisis. Some Korean policymakers believed that the current account deficit that preceded the financial crisis made painfully clear the danger of failing to secure stable access to foreign trade and financial markets.

The Korean government is currently pursuing FTAs with smaller strategic countries as a precursor to establishing trade agreements with its larger trade partners. Korea chose Chile as its first FTA candidate, but Korean officials are also studying the pros and cons of a number of other FTAs, including agreements with Japan, ASEAN, China, Mexico, and others.

The increased interest in FTAs raises the important question of whether these more limited, often regionally or bilaterally based trading agreements are beneficial to the participating economies. As FTAs become a more commonly considered policy option, it is increasingly important to evaluate how the economic effects of FTAs compare with the effects of broader multilateral trading arrangements as well as how the FTAs affect world trade flows in general.

For situations in which analysis is required prior to the fact—when a decision to establish an FTA needs to be made, for example—the most common technique in recent years has been simulation with a computable general equilibrium (CGE) model.⁹ This model takes cross-sectoral data from a single base period, not only for trade but also for production and consumption, and imposes a detailed theoretical structure on the interactions among different data elements. These models take the form of equilibrium constraints and assumptions on economic behavior. The models are put to use by changing the underlying data (in the case of FTAs, removing tariffs between member economies) and observing how the remaining variables adjust.

Proposed Bilateral FTAs for Korea

Japan and the United States are two countries that are important to Korea's external trade. What would be the effect of a bilateral FTA with each?

The Potential of a Korea-Japan FTA

The proposal for a bilateral agreement between Korea and Japan has been discussed between the governments of the two countries and has attracted considerable interest from some affected domestic interest groups.

9. Another basic approach to the empirical assessment of FTAs is the gravity model approach. It uses a cross section of bilateral trade data and attempts to estimate a normal trade pattern. This technique can be useful in providing information on trade effects of FTAs (this is particularly the case if the cross sections are available for several time periods). Because this approach requires the application of statistical techniques to existing data, it is usually used after agreements are put in place, when it can confirm the presence of trade creation and/or diversion.

The most sensitive issues appear to stem from lingering political resentment over imperial excesses during the period when Korea was subject to Japan's control before 1945. The proposal has also been reviewed exhaustively by academic and government economists: five recent studies—a pair of studies (Sohn 2000; McKibbin et al. 2002) by the Korea Institute for International Economic Policy (KIEP) and single studies by the Institute of Developing Economies, Brown et al., and the Institute for International Economics (IIE)—have estimated the potential effect of a Korea-Japan FTA on welfare, trade, and productivity. All studies use CGE models to analyze the proposed agreement; some use static CGE models and some use dynamic CGE models. KIEP's second model (McKibbin et al. 2002) aims to rectify problems found in other studies.

Static Models

The findings of the static models (Sohn 2000, Choi and Schott 2001, Brown et al. 2001, and IDE 2000) are summarized in **Table 22**. The most striking results of these simulations are that Korea's GDP and trade balance with Japan would be reduced. Sohn predicts that Korea's GDP level will decrease by 0.07 percent, Choi and Schott predict a 0.28 percent decrease, and Brown et al. predict a 0.23 percent decrease. Sohn predicts that Korea's trade balance with Japan will decline by \$60.9 million. The study by Choi and Schott concludes that Korea's bilateral trade balance with Japan would deteriorate.

It is well known that some Korean industries and farmers oppose a prospective Korea-Japan FTA precisely because it would exacerbate their bilateral trade deficit with Japan (Choi and Schott 2001; Yamazawa 2001). Japan would reap small welfare gains resulting from a small increase in its global exports and imports. Estimates of gains to Japan's GDP range from an increase of 0.01 percent to 0.18 percent. These static estimates do not indicate that there is a great deal of benefit to a bilateral FTA between Japan and Korea.

Japan's IDE report (2000) contradicts the findings of the other three static studies in the sense that it estimates that Korea's GDP would rise by 0.06 percent, a result that can be attributed to a difference in model structures, simulation methods, levels of shock of trade liberalization, and selection of data.

Dynamic Models

With the introduction of dynamic effects,¹⁰ Sohn (2000) and IDE (2000) models show larger effects of the proposed FTA on Korea's economy (**Table 23**). In real GDP, for example, IDE reports a large increase, 10.4 percent in Japan and 8.7 percent in Korea, and Sohn shows a 2.9 percent increase in Korea. Cheong (2002,

10. In dynamic models, firms of each area studied are assumed to exhibit intertemporal optimization behavior; that is, besides employing labor, capital, and land as well as intermediates to conduct production, firms also make investment decisions to maximize their intertemporal profits. Thus capital accumulates endogenously over time.

25) notes, “[T]hese estimates are very hypothetical and, therefore, criticized because the assumptions of the large change of TFP (total factor productivity) growth are purely exogenously given.”

In the analysis of dynamic effects, Sohn (2000) assumes a 10 percent increase in productivity—an annual 1 percent increase during a 10-year period—for heavy and chemical industries in Korea. IDE (2000) assumes a 30 percent

Table 22: Economic Impact of a Korea-Japan FTA, CGE static models

Results		KIEP (2000)	HE (2001)	Brown et al. (2001)	IDE (2000)
		GTAP parameters (static)			
Korea	Welfare level (%)	-0.19	—	—	0.34
	GDP (%)	-0.07	-0.28	-0.23	0.06
	Trade balance with Japan (\$ million)	-60.90	—	—	-38.85
	Total trade balance	-15.43	—	—	-2.70
Japan	Welfare level (%)	0.14	—	—	0.03
	GDP (%)	0.04	0.01	0.18	0.00
	Trade balance with Korea (\$ million)	60.90	—	—	38.85
	Total trade balance	—	—	—	54.79

Note: The Global Trade Analysis Project (GTAP) model is a multiregion, multisector, computable general equilibrium model, with perfect competition and constant returns to scale; www.gtap.agecon.purdue.edu/default.asp.

Table 23: Economic Impact of a Korea-Japan FTA, CGE dynamic models

Results		KIEP (2000)	IDE (2000)
		GTAP parameters (dynamic)	
Korea	Welfare level (%)	11.43	7.09
	GDP (%)	2.88	8.67
	Trade balance with Japan (\$ million)	-4.4	-24.60
	Total trade balance	30.14	408.00
Japan	Welfare level (%)	—	9.29
	GDP (%)	—	10.44
	Trade balance with Korea (\$ million)	—	24.60
	Total trade balance	—	182.00

Note: The Global Trade Analysis Project (GTAP) model is a multiregion, multisector, computable general equilibrium model, with perfect competition and constant returns to scale; www.gtap.agecon.purdue.edu/default.asp.

increase of productivity, at an annual rate of 3 percent during a 10-year period, for metal products, transportation equipment, electronic equipment, and other machinery and equipment industries. IDE also predicts a 10 percent annual increase for textiles and wearing apparel, other manufactures, and services industries for both countries.

Recent research by Cheong (2002) improved Sohn's estimation method by incorporating the effects of capital accumulation into a standard CGE model instead of specifying TFP growth exogenously.

KIEP's New Model

The result of a new KIEP study carried out in 2001 (McKibbin et al. 2002) is significantly different from those reported in previous studies (*Table 24*). This study used a new model with economies of scale, capital accumulation effects, and Korean parameters. The differences in the model (compared with the 2000 model) make a significant impact on the estimated effects of a bilateral FTA between Korea and Japan. In addition to having other extensive effects, Korea's GDP is predicted to rise by 0.22 to 0.33 percent in the short term and by 0.82 to 1.90 percent in the midterm to long term.

The Problem of Agriculture

The intense political opposition in both Japan and Korea to liberalization of agriculture makes it conceivable that a Korea-Japan FTA would seek to exclude

Table 24: Economic Impact of a Korea-Japan FTA, the 2001 KIEP Model

Results	GTAP parameters				GTAP + Korea parameters			
	CRS		Economies of scale		CRS		Economies of scale	
	Short term	Mid to long term	Short term	Mid to long term	Short term	Mid to long term	Short term	Mid to long term
Real GDP	0.22	0.82	0.30	1.90	0.21	0.96	0.33	1.79
Price level	0.37	-0.31	0.23	-0.46	0.48	-0.19	0.31	-0.26
Welfare level	0.28	0.44	0.33	1.31	0.30	0.66	0.38	1.39
Savings	0.68	3.06	0.60	7.91	0.77	2.84	0.71	5.05
Capital volume	0.13	1.38	0.12	2.50	0.13	1.76	0.13	2.52
Terms of trade	0.03	-0.46	-0.01	-0.76	0.13	-0.35	0.09	-0.49
Trade balance	-1.0	2.3	-1.0	6.4	-1.1	1.6	-1.1	3.4

Source: McKibbin et al. 2002, 48.

Note: The Global Trade Analysis Project (GTAP) model is a multiregion, multisector, computable general equilibrium model, with perfect competition and constant returns to scale; www.gtap.agecon.purdue.edu/default.asp.

important segments of bilateral farm trade (as in the EU-Mexico FTA, the Japan-Singapore FTA, and, to a lesser extent, the Canada-U.S. FTA). However, excluding agriculture could run counter to Korea's and Japan's WTO obligations because regional trade agreements are permitted under the WTO only if (among other conditions) they include "substantially all trade."

In view of concerns that have been expressed over the possible exclusion of agriculture from a Japan-Korea FTA, the proposed FTA between the two countries is simulated in the static IIE study (Choi and Schott 2001) both with and without the agriculture sector. The exclusion of agriculture yields an unambiguous improvement in the welfare outcome for Korea. This suggests that the inclusion of agriculture in any Japan-Korea FTA would result in significant trade diversion, primarily in the form of increased South Korean agricultural exports to Japan (Choi and Schott 2001, 119). The removal of agriculture from the agreement eliminates this trade diversion. For a breakdown of recent trade between Korea and Japan, see *Table A-1* and *Table A-2* in Appendix A.

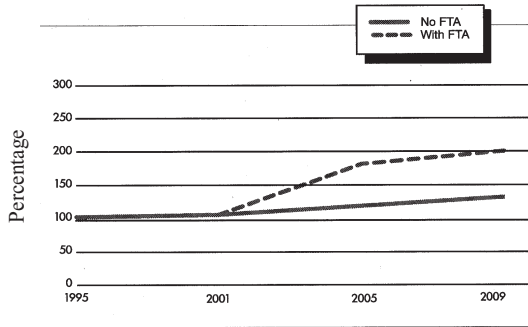
The Impact of a Korea-U.S. FTA

In 2001, both the U.S. International Trade Commission (USITC 2001) and the Institute for International Economics (Choi and Schott 2001) investigated the economic effects of a proposed Korea-U.S. bilateral free trade treaty. In addition, several studies of the welfare effects of a variety of subregional, regional, and cross-regional trading arrangements have looked at the impact on the U.S. and Korean economies of broader trade liberalization initiatives, up to APEC-wide negotiations.

On the basis of CGE modeling results, the USITC projected that four years after the implementation of a U.S.-Korea FTA, U.S. GDP would increase 0.2 percent over baseline growth, while Korean GDP would add 0.7 percent to current baseline growth. On the basis of somewhat different assumptions, Choi and Schott (2001) found a wider band of potential welfare effects for Korea, ranging from 0.4 percent to 2.0 percent. This small but positive effect for both countries should be placed in perspective, particularly for the United States, where total trade as a share of GDP was about 26 percent in 2000 and U.S.-Korea trade represents less than 3 percent of total U.S. trade. Thus, for all of these simulations, the impact on the U.S. economy would range from small to miniscule.

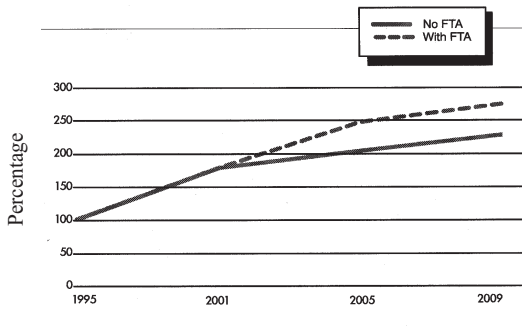
The USITC (2001) found that, after four years, total U.S. exports and imports would be approximately 0.8 percent and 1.0 percent higher, respectively, than if the FTA had not been implemented. For Korea, the FTA would result in an increase in total worldwide exports of 3.5 percent relative to the baseline, while total imports would increase by 6.2 percent. Bilaterally, the effects on exports and imports in each country would be more noticeable. The existence of an FTA would cause U.S. exports to Korea to be 54 percent higher than if there were no FTA (*Figure 18*); and Korea's exports to the United States are projected to be 21 percent higher (*Figure 19*).

Figure 18: U.S. Exports to Korea with and without an FTA, 1995=100



Source: USITC 2001, 5-5.

Figure 19: Korea's Exports to the United States with and without an FTA, 1995=100



Source: USITC 2001, 5-5.

At the Sectoral Level

The estimated effects on trade are quite large for both Korea and the United States in those sectors where trade barriers are currently high. Thus, the largest gains for the United States will be in agriculture and manufacturing. At a more detailed commodity level, U.S. exports of beef and cheese could possibly rise by 60 percent, and exports of beer could increase approximately 100 percent. U.S. exports of all manufacturing products to Korea would rise by about \$8 billion, while exports of agricultural products would rise by about \$10 billion.

Conversely, Korea's exports to the United States would also rise steeply in sectors, such as textiles, where U.S. barriers are excessive—with textile and apparel products rising by \$7 billion and other manufacturing products by \$2.9 billion (see *Table 25* and *Table 26*).

Table 25: Effects of U.S.-Korea FTA on Selected U.S. Imports, 2005 (est.) relative to baseline (1995)

Commodity	Korea	World	Korea	World
	%		millions of 1995 dollars	
Rice	1.72	1.13	— ^b	4
Meat products	14.04	0.87	— ^b	31
Fruits and vegetables	1.55	1.10	— ^b	56
Dairy products	550.35	1.39	15	28
Rest of agriculture	31.73	1.17	178	1,229
Natural (extractive) resources	0.56	— ^a	1	252
Textiles and apparel	125.19	3.37	7,008	3,150
Mineral and metal products	14.45	0.76	383	808
Other manufacturing	8.30	0.87	2,887	5,860
Services	-4.95	0.61	-209	1,094
Total	21.40	0.98	10,262	12,512

Sources: GTAP 2002; USITC 2001. a Less than 0.5 percent; b Less than \$500,000

Table 26: Effects of U.S.-Korea FTA on Selected U.S. Exports, 2005 (est.) relative to baseline (1995)

Commodity	Korea	World	Korea	World
	%		millions of 1995 dollars	
Rice	1,026.93	-1.47	— ^b	-14
Meat products	120.70	7.12	716	602
Fruits and vegetables	108.73	— ^a	69	-26
Dairy products	954.62	15.46	207	190
Rest of agriculture	216.00	9.27	9,432	8,084
Natural (extractive) resources	17.61	-1.00	91	-20
Textiles and apparel	49.19	-1.13	163	-196
Mineral and metal products	21.39	— ^a	396	-236
Other manufacturing	37.40	— ^a	8,021	1,109
Services	1.26	-1.07	8	-2,098
Total	53.95	0.84	19,175	7,396

Sources: GTAP 2002; USITC 2001. a Less than 0.5 percent; b Less than \$500,000

Domestic Production

Changes in trade flows affect both sectoral and overall production in national economies. In most cases, an increase in exports provides the incentive to increase the output of a particular sector, while increased competition and imports usually result in a decrease in domestic production, at least in the short term. As

increases and decreases in incentives operate across a number of sectors, productive resources are reallocated, and cross-sectoral demand for different factors of production is altered. Because the supply of the factors of production is constrained at any given time, expansion of some sectors will be accompanied by contraction in other sectors.

For the United States, these induced production changes are quite small, given that U.S. trade with Korea is quite small in relation to total U.S. trade and production. The largest increase—just under 1 percent—would come in the combined agricultural sectors. The largest decrease would occur in the textiles and apparel industries, with output declining by 1.3 percent (*Table 27*). The decrease results from both a sharp increase in textile and apparel imports from Korea and the expansion of resources in U.S. agriculture, which squeezes factors of production out of textiles and apparel.

For Korea, the reverse would occur: production in textiles and apparel would increase by 18.2 percent, while production would decrease in other sectors because of both an increase in U.S. imports and the squeeze on factors of production. Specifically, the USITC (2001) estimates that after four years, total Korean agricultural production would be 5.5 percent lower as a result of U.S. imports and a booming textile and apparel sector. Also, trade diversion and the loss of market access would cause other regions to suffer small welfare losses as a result of the U.S.-Korea bilateral FTA: GDP in the EU would drop 0.1 percent against the baseline, and GDP for the rest of East Asia would drop by 0.16 against the baseline.

Table 27: Effects of U.S.-Korea FTA on Korea and on the World, 2005 (est.) relative to baseline (1995)

Commodity	Korea	World	Korea	World
	%		millions of 1995 dollars	
Rice	— ^a	-0.82	4	-300
Meat products	0.72	-2.97	1,006	-24
Fruits and vegetables	— ^a	-0.78	99	-136
Dairy products	0.54	-2.32	641	-137
Rest of agriculture	0.98	-8.44	13,636	-8,222
Natural (extractive) resources	— ^a	— ^a	-39	-85
Textiles and apparel	-1.30	18.19	-3,678	12,525
Mineral and metal products	— ^a	-0.95	-108	-1,217
Other manufacturing	— ^a	— ^a	584	-1,519
Services	— ^a	1.41	22,857	7,352

Sources: GTAP 2002; USITC 2001.

^a Less than 0.5 percent

Prospects for Future U.S.-Korea Trade and Investment Relations

This final chapter describes the issues facing the United States and Korea in three venues—the multilateral, the regional, and the bilateral. Specifically, the study addresses common and competing goals for the two countries in the Doha Round of WTO negotiations, the challenges and potential responses to growing regional arrangements in Asia, and, finally, bilateral trade and investment issues. Where appropriate, recommendations are advanced to the governments of both countries.

Common and Competing Goals in WTO Doha Round

The launching of the Doha Round of WTO multilateral trade negotiations in November 2001 presented new challenges for U.S.-Korea trade relations. Among the goals set forth in the Doha Declaration are new or amended negotiated agreements on industrial tariffs, services, intellectual property, agriculture, subsidies, government procurement, tariff peaks in textiles, and other areas. In addition, there are the so-called Singapore issues that were agreed at the 1996 ministerial meeting in Singapore. These included working parties on investment and the environment, transparency in government procurement, trade facilitation, and trade and development. This study will not attempt to analyze all of these issues; it will merely highlight some of the most important in relation to the United States and Korea.

Recent economic studies with the CGE model have evaluated how the Doha Round will affect the Korean economy. One study (Choi and Park 2002) simulated eight separate policy scenarios ranging from virtually full liberalization in all manufacturing, agricultural, and services sectors back through various partial liberalizations (25 percent, 50 percent, etc.). Results showed that real GDP and welfare for Korea would increase, respectively, by 2.55–4.21 percent and 3.06–4.62 percent under the various scenarios calculated. Similar studies for the U.S. economy demonstrate positive welfare effects of 1.59 percent (the scenario as-

sumes a 33 percent reduction in all trade barriers, including reduction in agricultural protection, tariffs on manufactures, and services barriers (Brown et al. 2002, table 4).

U.S. and Korean Goals at Doha

Both the United States and Korea go into the Doha Round with a set of liberalization goals, some of which are quite similar and some of which are at odds with those of the other trading partner. In general, the United States and Korea are likely to team up on industrial tariff reduction (although there will be separate priorities and modalities for proceeding) and on services liberalization (although again with different priorities and with different sensitive sectors). The major conflicts will come in reform of agriculture and reform of WTO antidumping rules.

In December 2002, the United States formally proposed a bold and sweeping reduction of all industrial tariff rates among WTO nations by 2015 (USTR 2002e). Under the U.S. proposal, during phase one (2005–10), all duties now set below 5 percent would be eliminated. The effect of this proposal would be to make more than three-quarters of imports into the United States, the EU, and Japan duty free by 2010. The United States also proposed a separate initiative for “highly traded goods” under which zero-for-zero negotiations would be undertaken with the goal also of eliminating all tariffs by 2010. Among the sectors suggested for inclusion in these negotiations were agricultural equipment, construction equipment, chemicals and allied products, information technology and electronic products, pharmaceuticals, steel, toys, medical equipment, and wood products. Finally, the U.S. proposal would “harmonize” all high-tariff products (particularly textiles and apparel) at 8 percent by 2010, and then eliminate all tariffs in these sectors by 2015.

Korea will probably welcome much of the U.S. proposal. For example, although it asks for deep and quick tariff reductions, the U.S. proposal largely follows a formula approach (labeled the Swiss formula in WTO terms) as opposed to an across-the-board or request–offer approach (Choi et al. 2002). For only a select group of sectors does it suggest a zero-for-zero approach. In addition, one of Korea’s announced goals for the Doha Round is a sharp reduction in high and peak tariffs (Choi et al. 2002, 127–8). Undoubtedly, however, there are some industrial sectors (such as chemicals and automobiles) where political sensitivities will present problems. On balance, though, the United States and Korea will generally be working from a common framework in this area.

For services, the United States has made liberalization in individual sectors its chief negotiating goal. In a July 2002 announcement (USTR 2002d), the USTR targeted some 15 sectors including telecommunications, financial services, express delivery, energy and environmental services, education, professional services, distribution services, advertising, and audiovisual services. In addition, the United States urged as a general priority a sizable increase in sectoral commitments to commercial presence (investment) and to temporary entry for pro-

fessional services workers (Yerkey and Pruzin 2002). For its part, Korea has submitted request–offer communications to some 36 WTO members, mainly in the areas of telecommunications, construction, distribution, financial services, and maritime services (Choi et al. 2002, 77–8). In the financial-services area, Korea has an advantage over many other developing countries in that as a result of the Asian financial crisis in 1997 it initiated a number of financial-services regulatory reforms on its own or as a result of negotiations with the IMF (Choi et al. 2002, 100).

For the United States, maritime services will present the most difficult negotiating issue, not only with Korea but also with many other WTO members. There will almost certainly be a strong attack on U.S. protection in this area, with many members balking at opening other services areas without some movement in maritime services on the part of the United States. Korea, on the other hand, is likely to find strong pressure to liberalize its relatively closed legal, education, medical, and health services sectors (Choi et al. 2002, 77–8).

Agricultural negotiations will present the greatest challenges in the overall Doha Round negotiations and for the prospects of reaching accommodation between the United States and Korea. Korea will join Europe and Japan in resisting major changes, while the United States will take a leadership role, along with the Cairns Group¹¹ of agricultural nations and many developing countries, in pushing for sweeping reforms (Choi et al. 2002, 65–7).

The United States has already attempted to preempt the opposition by setting high goals for reform of WTO rules on agricultural supports. In July 2002, the USTR unveiled an ambitious proposal to cut farm subsidies in the WTO trade talks (USTR 2002c). Under the U.S. proposal, WTO members would be required to eliminate all agricultural export subsidies over a five-year period after the negotiations conclude in 2005. Further, the United States wants a reduction in average global import tariffs on farm products from about 62 percent in 2003 to 15 percent over the same five-year period. Finally, the U.S. proposal would reduce trade-distorting government subsidies for agriculture by more than \$100 billion by restricting subsidies to 5 percent of the total of domestic agricultural production.

Because it does not export large quantities of farm products, Korea will not be affected by the proposals of the United States and others such as the Cairns Group for drastic reductions in export subsidies (Choi et al. 2002, 71). Korea will, however, be subject to major adjustment challenges if agreements are reached in the Doha Round for big reductions in tariffs and trade-distorting internal subsidies. Important areas will be dairy goods (applied tariffs are just under 40 percent), beef (tariffs are in the 30–70 percent range), fruit, vegetables, beverages, and juices (many tariffs are in the area of 50 percent), and prepared foods such as

11. Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand, and Uruguay are members of the Cairns Group.

peanut butter, soups, jams, and jellies (the tariff range is 30–50 percent). Finally, in a class by itself is the problem of rice; strict Korean quotas limit rice imports severely.

Korea, along with Japan and the EU, has already attacked the U.S. proposal as going beyond the mandate given for the trade talks at Doha (Bridges 2002). These are just the opening gambits in a negotiating struggle that will be decided at the very last moments of the Doha Round.

Another difficult negotiation—the results will once again be known only at the very end of the round—is on reform of WTO antidumping rules. On antidumping reform, the United States (and the EU to some extent) will find itself isolated from almost all other members of the WTO. In the run-up to Doha, in controversy over the goals and framework of future negotiations, skirmishing over antidumping reform began even before the round was launched. In a last-minute compromise that papered over deep differences, the Doha Declaration provides for negotiations “aimed at clarifying and improving disciplines” under the WTO’s existing antidumping and subsidies agreements, but the mandate also states that such negotiations will preserve the “basic concepts, principles and effectiveness of these Agreements and their instruments and objectives.” (WTO 2001a).

Korea, along with other vociferous *demandeurs* for reform, has joined a group called Friends of Antidumping (Choi et al. 2002, 142–4). In June and October of 2002, the group put forward a substantial, specific list of changes to existing rules, including the elimination of the practice of zeroing-out export prices that are above the average of the home market; rewriting and tightening the instructions regarding how costs of production are calculated; similarly tightening the criteria for determining whether an industry in the importing country has been materially injured; mandating that antidumping duties be set only high enough to repair the alleged injury, and not higher; and, finally, introducing a public-interest test to all national antidumping regimes that would take into account the costs of dumping duties to downstream industries and ultimate consumers.

In December 2002, the United States signaled its strong opposition to many of the proposals put forward by the Friends of Antidumping, arguing that the proposals violate the Doha Declaration and do not preserve the “basic concepts, principles and effectiveness” of the antidumping agreement. The issue is now fully joined, and a game of chicken is likely to be played out over the next two years. Many developing countries have adamantly stated that they will not sign off on other trade liberalization agreements in the Doha Round unless major reforms of the antidumping agreement are enacted. The Office of the United States Trade Representative (USTR), on the other hand, is under a strong mandate from the U.S. Congress to hold the line. Thus, this issue, along with agricultural reform proposals, will almost certainly be decided as a part of some kind of grand bargain in the final days of the Doha Round negotiations.

On the Singapore issues—transparency in government procurement, trade facilitation, investment, and competition policy—the United States and Korea

will more often find common cause than disagreement, particularly on the less controversial issues of trade facilitation and government procurement. In general, it is the EU that is pressing for inclusion of investment and competition policy in the negotiations.

The United States has no strong negotiating goal regarding competition policy, not least because of continuing divisions among U.S. government agencies. It is interesting that Korea is taking the lead in pushing for some kind multilateral framework for competition policy, in contrast with the opposition of most developing countries, particularly countries in Asia (Choi et al. 2002, 249–51). Neither the United States nor Korea will be among the WTO members pushing for significant new WTO rules and regulations on investment although the United States may play to the galleries by offering itself as a mediating force between the EU and developing countries.

On another new issue, trade and the environment, the most likely outcome is for an agreement to continue studying the relation between multilateral environment agreements (MEAs) and WTO rules. Developing countries, however, will oppose negotiating fixed rules governing these relations during this round. The Korean government, at least rhetorically, has pledged to take an active part in any environmental negotiations.

U.S.-Korea WTO Trade Dispute Cases

The United States and Korea have increasingly turned to the new WTO dispute settlement system for independent judgments on trade disputes (See **Table B-1** in Appendix B for details of each case). Since the creation of the WTO in 1995, U.S.-Korea trade disputes have resulted in twelve WTO dispute settlement cases that have affected a small but important share of the U.S.-Korea trade flows. Choi and Schott (2001) state that U.S.-Korea WTO dispute settlement cases filed before 2001 (the first 10 cases) involved almost \$2.5 billion of U.S. exports to Korea and about \$1.9 billion of Korea's exports to the United States in 1999. This was about 8 percent of total U.S.-Korea merchandise trade volume.

Although the two countries have initiated an equal number of cases against each other, a pronounced difference exists between the products and protection instruments involved in the cases of each country. WTO dispute settlement cases filed by Korea came in reaction to the U.S. antidumping and safeguards regime. Three out of the six Korean cases addressed U.S. antidumping measures against Korea's exports of electronic products (color television receivers, July 1997), semiconductors (DRAMs of 1 megabyte and above, August 1997), and steel products (steel plate, sheet and strip, August 1999). Two more cases addressed U.S. safeguards actions against steel products (steel line pipe, June 2000; and a wide range steel of products, March 2002). One separate case reflected complaints against the U.S. Continued Dumping and Subsidy Act of 2000 (the Byrd Amendment, January 2001) (WTO 2002).

Cases brought by the United States were concerned mostly with Korea's regulatory systems such as distribution provisions, certification and test stan-

dards, tariffs, and government procurement practices. Five cases out of the six filed by the United States against Korea were related to agricultural and food products: testing and inspection of agricultural products (April 1995), the shelf life of products (May 1995), inspection of agricultural products (May 1996), taxes on alcoholic beverages (May 1997), and imports of fresh, chilled, and frozen beef (February 1999). Another case addressed government procurement issues (February 1999).

The WTO dispute settlement cases between the United States and Korea clearly reveal the diverse nature of trade policies implemented by the two countries with respect to both the domestic sectors for which they seek protection and the trade protection instruments they use. Differences in their protected sectors and in their use of trade instruments are likely to create divergent priorities for the two countries during further bilateral and multilateral trade negotiations and are hallmarks of the greatest challenges facing negotiators from the two countries.

The Rise of Asian Regional Agreements: U.S. and Korean Perspectives

The sudden increase in the number of negotiated and proposed regional and sub-regional trade agreements over the past few years has taken both trade officials and scholars by surprise. Although trade economists have long studied the potential effects of various FTAs around the world, recent events and proposals have spawned a veritable cottage industry of studies by academics and national departments of trade. Economic effects constitute one important basis for judging the pros and cons of individual new trade agreements, but also to be factored in are a number of geopolitical factors—security, diplomatic, and political goals and realities.

Costs and benefits of new trade agreements by Asian countries—whether with one another or with other trading partners—will likely depend as much on geopolitical factors as economic consequences. This is particularly true with regard to the United States and South Korea because the exigencies created by the Cold War and a divided Korean peninsula (never more intrusive than at present) created a relationship in which political and security issues are inextricably entwined with economic issues.

Chapter 4 provided a discussion of the economic effects of two bilateral FTAs that have been much discussed: a Korea-Japan FTA and a Korea-U.S. FTA. Selected larger subregional trade arrangements would have other economic effects and impacts on the U.S. and Korean economies as well as noneconomic consequences. To simplify this analysis, the results of one set of simulations (Scollay and Gilbert 2001) will form the basis for judgment.

The specific results used in *Table 28* are the net economic welfare effects and the terms of trade (changes in exports and imports) effects. Scollay and Gilbert (2001) used a static model that captures only short-term effects, but not dynamic, longer-term effects such as the exploitation of economies of scale and

Table 28: Effects of Various Asian Trade Agreement Formations on Korea's and U.S. Welfare, Exports, and Imports

Formation	Changes in Korea's:			Changes in U.S.:		
	Welfare (% of initial GDP)	Exports (export values FOB, % change from base y)	Imports (imports values CIF, % change from base y)	Welfare (% of initial GDP)	Exports (exports values FOB, % change from base y)	Imports (imports values CIF, % change from base y)
APEC formation	1.08	23.40	23.15	0.01	7.16	6.56
APEC MFN basis	1.63	26.28	26.08	-0.01	7.26	6.69
APEC MFN (excluding U.S.)	0.94	22.17	21.92	0.06	1.58	1.43
APEC MFN (excluding U.S. and Japan)	0.93	22.06	21.81	0.05	1.34	1.20
AFTA-CER-Japan-Korea-China (western Pacific)	1.20	23.66	23.54	-0.06	-1.33	-1.26
East Asian and western Pacific formation	-0.28	8.21	8.12	-0.01	-0.25	-0.23
Japan-Korea (excluding agriculture)	-0.15	6.24	6.16	-0.01	-0.23	-0.22
Japan-Korea-China	0.80	19.49	19.42	-0.02	-0.35	-0.34
AFTA-Japan-Korea	0.18	12.07	11.96	-0.02	-0.67	-0.64
AFTA-Japan-Korea-China (East Asia)	1.18	22.96	22.85	-0.03	-0.80	-0.78
AFTA-CER-JAPAN-Korea-China (western Pacific)	1.20	23.66	23.54	-0.06	-1.33	-1.26
AFTA-CER-Japan-Korea	0.19	12.94	12.83	-0.05	-1.16	-1.08
AFTA-CER	-0.05	-0.30	-0.30	-0.01	-0.21	-0.20
FTAA	-0.10	-0.62	-0.62	0.06	3.69	3.43
APEC MFN and FTAA	1.01	22.90	22.65	0.07	9.59	8.82
Asian APEC preferential and FTAA	1.56	25.71	25.50	0.06	10.02	9.26
Western Pacific bloc and FTAA	1.12	23.13	23.01	0.01	2.29	2.10
Global	1.83	39.96	39.38	-0.05	19.98	18.48

Source: Scollay and Gilbert 2001.
 Definitions: base y: base year (base year = 1.00); APEC MFN basis: Assumed that APEC members continue to practice open regionalism, understood in the sense of collective implementation of unconditional MFN liberalization, or concerted unilateralism; APEC preferential basis: Assumed that members remove tariffs against each other, but not against nonmembers; CIF: Cost, insurance, and freight; FOB: Free on board

the impact over time of positive changes in investment and productivity. Their model is therefore likely to be at the lower bound of positive effects. These results are not, of course, exact and should be taken as giving the range and direction of change. In many circumstances, CGE models such as these have produced conflicting results, but simulations of liberalization by various APEC countries have shown a broad consistency among earlier and current studies.

For Korea, from a purely welfare gain–loss perspective, the larger Asian FTAs yield the most positive results:

- An APEC preferential liberalization under which APEC members remove tariffs against each other but not against nonmembers would boost Korea’s economy by an additional 1.63 percent of GDP;
- A western Pacific (AFTA¹²-CER¹³-Japan-Korea-China) FTA would boost Korea’s GDP by 1.20 percent;
- An AFTA-Japan-Korea-China (East Asia) FTA would add 1.18 percent;
- An APEC most-favored-nation (MFN) liberalization under which APEC members remove tariffs against each other *and* against nonmembers would add 0.94 percent of GDP to Korea’s economy;
- An APEC FTA, excluding the United States, would boost Korea’s economy by 0.94 percent; and
- An APEC FTA, excluding Japan, would boost it by 0.93 percent.

The Scollay-Gilbert model indicates that potential bilateral FTAs with Japan have a negative effect on Korea’s GDP: –15.0 percent with agriculture excluded; –0.28 percent with agriculture included.

For the United States, the picture is more complicated; several explanatory points need to be made before tracking the impact of individual FTAs on U.S. GDP. First, in most cases the impact is miniscule, and, given the imprecision of CGE model results, the best interpretation would be that these FTAs would have practically no positive or negative impact on U.S. GDP. Second, given the size of the U.S. economy, it may well be (though this is not inevitable) that the future dynamic effects (economies of scale, productivity enhancement) of trade liberalization that are not captured would produce much more positive results. Third, given the relative openness of the U.S. market in manufacturing and agriculture, the real welfare gains from future liberalization may come in the services sectors, where current models are inadequate and may well understate future positive benefits.

In general, however, progressively more comprehensive East Asian–western Pacific trade blocs that exclude the United States result in progressively greater welfare losses for the United States. Thus, the United States would be negatively

12. ASEAN free trade area.

13. Australia-New Zealand Closer Economic Relations (CER) Trade Agreement.

impacted most by a western Pacific FTA (−.06 percent of GDP); followed by a Japan-Korea-CER-AFTA (South Asia, plus Japan and Korea) FTA at −0.015 percent and an East Asia FTA (Japan-Korea-China-AFTA) at −0.013 percent. On the other hand, various APEC-based liberalizations generally yield small but positive welfare gains for the United States.

For many of the proposed or consummated Asian FTAs, trade diversion from countries excluded from each particular pact is pervasive though often small. For Korea, particularly, the impact of trade diversion from U.S. companies will present an important calculation and problem. For the United States, although the amount of diversion may be small in terms of GDP, for the affected industries and sectors the impact might provoke substantial constituent opposition and pressure from the U.S. Congress.

In the end, geopolitical factors in both the United States and Korea will play significant roles, especially given recent events and trends in Asia. For example, China in the past several years has begun to move decisively toward a leadership role in trade with Southeast Asia, as evidenced by its persistent wooing of the nations of ASEAN for an FTA. Japan has signaled a redirection of its trade policy toward more intra-Asian trade agreements; however, unlike China and possibly because of a general stasis in Japanese internal politics, Japan has largely failed to carry through its new goals. Korea must decide whether it really wants to pursue bilateral or trilateral trade arrangements (Korea-Japan, Korea-China, or Korea-China-Japan) that will quite possibly lead to greater political involvement with these two powers and less with the United States. Would a move toward integrating with United States and Latin America make more sense for Korea from both an economic and a political standpoint?

While the United States is much the larger economic and political power—indeed, the only superpower—it, too, faces real challenges in responding to the rapidly evolving patterns of Asian regionalism. Both economics and geopolitics dictate that the United States cannot afford to be left out of these Asian trends; yet little thought seems to have gone into the specifics of a U.S.-Asia regional policy. USTR has trumpeted “competitive liberalization” and has announced its intent to negotiate FTAs with many and sundry nations—Chile, Singapore, Jordan, Morocco, Australia, and Central America—but neither U.S. Trade Representative Zoellick nor any other U.S. official has provided any sense of priority or order to this process.

Optimal Choices for the United States and Korea

The best option for both the United States and Korea is to take a leadership role and summon the political courage to make the necessary compromises to achieve a successful outcome to the WTO Doha Round (Gordon 2003). A proliferation of numerous bilateral or trilateral FTAs would be the most negative outcome among the choices of various Asian regional pacts. For small-scale FTAs, in almost all cases the economic welfare of the participants is little enhanced; more important, each such arrangement would increase the level and complexity of trade diver-

sion and create a bewildering set of new trade rules and rules of origin—Bhagwati and Panagariya's spaghetti-bowl effect. A plethora of small FTAs would also most likely lead to greater trade tension and conflicts. Finally, the attention and resources that would need to be devoted to these small FTAs would divert human resources and political capital from the attainment of larger trade and investment goals.

Thus, as the economic studies cited above amply demonstrate, the first and best regional options revolve around APEC. For both the region as a whole and for individual nations, APEC-wide liberalization yields the most significant economic welfare gains. Politically, negotiations within the APEC framework get around the problem of integrating Taiwan, Hong Kong, and China into a trade framework. And both Australia and New Zealand, which are often left out of subregional FTA proposals, could be included.

The largest challenge to APEC today is the modality that hitherto has governed the negotiating process. So-called concerted unilateralism, by which each APEC nation liberalizes unilaterally and no reciprocal rules are applied, has not to date produced meaningful results; and APEC liberalization seems to have stalled. The United States and Korea—and, most significantly, Japan and China, as the other major forces behind APEC liberalization—face crucial choices in the immediate future. One path, which seems increasingly unlikely, is to reinvigorate concerted unilateralism. The other is to explore the possibility of adopting a more traditional modality: that is, converting APEC into a reciprocity-based and binding FTA.

Economic simulations show that, whatever the means to get there, an APEC preferential agreement does result in the greatest welfare gains for APEC members, both large and small; however, the problems inherent in this approach are enormous. Would Japan and Korea, for instance, agree to binding rules for agriculture? Would the United States make unacceptable demands regarding labor and the environment? In addition, an APEC-wide FTA would have the strongest negative impacts on other regions such as Europe and Latin America in the multilateral trading system. This could increase trade friction and conflict; or, conversely, it could spur these regions to take the lead in greater MFN liberalization through the WTO.

Two other obvious potential configurations in Asia are a western Pacific FTA or an East Asian FTA. A western Pacific trade bloc, joining Northeast Asia, Southeast Asia, and Australia–New Zealand would also generate substantial welfare gains for participants; but, as with an APEC FTA, it would have a negative impact on the economic welfare and terms of trade of nations outside the agreement—most notably the United States. For Korea, and for other nations, the political consequences of joining such a bloc could be damaging if their membership produced a backlash from U.S. industry that would translate into protectionist intervention by the U.S. Congress. It is, therefore, in the interest of both the

United States and Korea to work to avoid either a western Pacific or East Asian FTA that does not include the United States.¹⁴

Both Korea and the United States face the immediate problem of the disjuncture between the economic logic underlying Asian regional proposals and political realities. Asian nations today are busily proposing and negotiating small, bilateral FTAs, largely because they present fewer political problems. This trend, however, will result in a bad economic outcome and in greater political tensions and conflicts. Thus, it is in the interest of both the United States and Korea to think beyond the short-term economic and political attractions of small FTAs and use their influence to channel the pressures for greater Asian regional arrangements toward large-scale economic agglomerations such as APEC or an inclusive western Pacific-based FTA.

Proposals for Reform of Article 24 of the GATT

The United States and Korea should also unite to clarify and strengthen multilateral rules governing all forms of bilateral and plurilateral trade agreements through amendments to Article 24 of the GATT. Because of the dangers of static and numerous FTAs, the newly launched Doha Round of WTO negotiations should be a vehicle for major reform of the rules governing bilateral, subregional, and regional agreements. Such a reform would be in the interest of both the United States and Korea, and the two nations could make common cause in pressing for such reforms. The issue should be of particular importance for Korea now that its government has announced that it does not intend to exclude agriculture from future FTAs. Korea, therefore, will want especially to see to it that other Asian FTAs are held to stricter accountability under new WTO rules.

The GATT in Article 24 has always accommodated bilateral and plurilateral agreements and also provided rules by which they should be governed. During the Cold War in the 1950s, however, these rules were violated so that Europe could build a new economy based on bilateral and regional discrimination against outside nations. The time has come, however, to rethink and reformulate rules for FTAs and enforce the sensible rules on the books that have been ignored for four decades (Barfield 2002).

14. Yang Jun-sok has thoughtfully made the case for Korea's joining an Asian-based FTA that does not include the United States. He has noted that Korea and other Asian nations have views different from the United States on a number of trade issues: antidumping and safeguards policies, intellectual property, government procurement, investment, the timing of agricultural-market opening, and labor and environmental standards. He believes that individual countries of Asia are in a weak bargaining position on these and other issues but that together in a trade bloc they could negotiate from greater strength with a U.S.-based (presumably FTAA) trade bloc. Yang also notes, however, that it is not clear that in the near or medium term Asian countries will be able agree to an FTA, and on some issues—investment, agriculture, and even antidumping—there may well be divisions that match issues with the United States.

Current WTO rules provide for two restrictions on FTAs:

- They must operate across the board and not exclude major sectors of the economy; and
- Tariffs on imports from nations outside the proposed FTA must not on the whole be higher than they were before the conclusion of the agreement.

Because of the huge measurement and definitional problem, the second rule will always be difficult to enforce—particularly now that nontariff barriers in services and intellectual property need to be incorporated somehow in the trade restriction formula. The first rule is much more clear-cut, however, and enforcement will be essential given the contemplated structure of a number of Asian bilateral and subregional agreements.

Initially, both Japan and Korea planned largely to exclude agriculture from the FTAs they propose. Neither wanted to expose its weak and uncompetitive agriculture sector to international competition. Recently, however, both Japan and Korea have announced that they would not exclude this important sector from their future FTAs proposals. This is good news and should be supplemented by support for major changes in Article 24. It is in the interest of Korea as well as Japan to join the United States and other WTO members in clarifying that FTAs must include all major sectors of the economy.

Several new restrictions should also be considered in order to tie FTAs more closely to the global free trade goals of the WTO:

- The WTO should prescribe that, for future FTAs, the member nations agree that they will adopt the lowest tariff and the most liberal trade and investment rule as the baseline for the agreement. This would mean that in no instance would other WTO members face increased trade barriers as a result of bilateral, subregional, or regional agreements.
- A new rule should dictate that, after a certain period (somewhere between five and ten years), the terms of the FTAs would be opened up on an MFN basis to all members of the WTO.
- Nations entering into FTAs should be obligated to submit to full surveillance by the new WTO trade policy review mechanism. The WTO should have the authority to monitor and trace evolving trade patterns by sector and by industry before and after the agreement is signed. In this manner, it could assess the amount of trade diversion and issue rulings dictating changes in the framework of the FTA in question or compensation for injured parties.
- Article 24 of the GATT should be amended to include a mandate that all FTAs be open to any other members of the WTO should they apply. This principle of open regionalism would become an indispensable tool in thwarting the creation of preferential trade blocs and in encouraging what trade economist Richard Baldwin has called the “domino theory” of regionalism—that is, increasing the pressure for

countries outside of FTAs to take steps to secure membership in one or more regional arrangements and thus providing momentum for a future global free trade arrangement. If these reforms to Article 24 are put in place, they will go far to ensure that FTAs become building blocks rather than stumbling blocks for global free trade and competition.

Current Trade Disputes and Investment Issues between the United States and Korea

With more than \$58 billion in trade flows, Korea and the United States will naturally confront bilateral trade issues and disputes, and government executives and private-sector corporate officials of the two countries may even exchange acrimonious comments. Such situations occurred in the past, but no current U.S.-Korea trade dispute—although they are important and worrying—rises to the level of crisis. An attempt at detached and unbiased brief descriptions of the issues raised in key sectors and with regard to key policies that affect trade flows is followed by recommendations to handle these disputes in a less contentious manner through public-private partnerships with business, labor, and other civil-society organizations.

Korea must also deal with the overhang of history, particularly its industrial policies of the 1970s and 1980s. In a number of instances—automobiles, steel, and semiconductors are notable examples—the previous overt Korean government aid to these sectors colors the current negotiating positions of the United States and other Korean trading partners. The situation is further complicated by the short-term negative impact of the 1997 financial crisis, which produced new temporary government bailouts. Even where evidence of current overt government protection or subsidy is weak or unclear, suspicion remains that informal guidance and government bureaucrats and institutions are still offering help.

Automobiles

While it was subject to a series of government controls designed to prevent excess competition among domestic producers as well as limit importation from foreign car manufacturers, the Korean automobile industry throughout the 1980s and the 1990s recorded major growth. Moving from ninth place among world car manufacturers in 1991 to fifth place in 1994, Korea exported more than half of its domestic car production by 1998 (USTR 1998, 270). At the same time, Korea imported fewer cars than any other major auto-producing country, which caused a major auto trade imbalance and subsequent trade friction with the rest of the world.¹⁵

15. In 1996, the foreign share in the Korean auto market was less than 1 percent, a proportion that still holds true. In Japan it is 6 percent; and in France, Germany, and the United States it is over 25 percent (Manyin 2002).

Since the early 1990s, the United States has expressed serious concerns with respect to the limited access of exported U.S. automobiles to the Korean “sanctuary” market. Complaints constantly mentioned:

- High taxes and tariffs;
- Stringent standards and certification procedures;
- Restrictions on advertising and retail financing; and
- Anti-import sentiments and actions.¹⁶

Nowadays, the auto trade imbalance between the United States and Korea continues to disappoint U.S. manufacturers, whose market share in Korea has remained insignificant.¹⁷ Open access to the Korean market still depends on several outstanding trade issues that are subject to current negotiations between the two countries:

- Korea imposes an 8 percent tariff rate on imported cars¹⁸ (more than three times higher than the U.S. tariff), plus multiple taxes levied on top of that. The U.S. position is that taxes based on engine size have a disproportionate effect on imported vehicles. Despite isolated tax reductions,¹⁹ tariffs and remaining taxes continue to hinder the competitiveness of U.S. cars in the Korean market.
- The United States is concerned with a range of standards and classification issues, including the Korean government’s plans to implement a pass-by noise standard, apply new taxation standards for sport-utility vehicles, and change the fuel economy labeling laws and tire safety inspection rules (USTR 2001).
- U.S. manufacturers complain about the negative sentiment of Korean consumers toward imported automobiles (Manyin 2002).

16. In December 1996 and early 1997, the Korean National Tax Office engaged in a broad audit action directed at all leasers of imported autos. Although the action was withdrawn after complaints by foreign governments, the threat of tax audits for lessees has continued to have a chilling effect on import sales.

17. With 7,747 automobiles exported to Korea in 2001, U.S. car makers retained a modest 0.7 percent share in Korea. At the same time, Korean exports to the United States soared. With a record of 470,000 vehicles exported to the United States in 2001, Korean manufacturers attained a 2.7 percent market share (USTR 2002a, 278).

18. U.S.-Korea bilateral consultations led to automobile tariff reductions from 15 percent to 10 percent in 1994, and to 8 percent in 1995 (USTR 1995). The United States has continued to demand additional tariff cuts, from 8 percent to 2.5 percent.

19. Notable is Korea’s temporary reduction, from November 2001 through June 2002, of the special consumption tax (USTR 2002a). During bilateral negotiations in August 2002, the Korean government committed itself to alter tax regulations on cars with an engine size above 2400cc to 10 percent by 2004 (Cooper 2002a, 3). During a December 2002 bilateral meeting, it was agreed that sport-utility vehicles exported to Korea would not be subject to a special exercise tax between 7 and 14 percent (Cooper 2002c, 2).

The Korean government counterclaims that the low market share of imported automobiles is due to Korean consumers' decreased purchasing power after the 1997 crisis and their preference for smaller vehicles, the lack of advertising, and the poor marketing of foreign brands. The Korea Automobile Importers and Dealers Association (KAIDA) underlines the constant increase of foreign car imports and claims that the market share of imported cars is much higher in value terms because imported cars are normally upscale models sold to wealthy customers. However, the absolute number of car imports in Korea remains insignificant when compared with the domestic sales of Korean automobiles (*Table 29*).

As with U.S.-Japan automobile relations, one key mitigating factor in the future will be the rise of cross investment in the two countries' automobile companies and FDI, particularly investment by Korean companies in greenfield plants in the United States. Thus, the partnership between General Motors and Daewoo, launched on 15 October 2002 (Cooper 2002b, 3), and the new Hyundai Motors manufacturing plant in Alabama²⁰ (Starner 2003) represent an effective way to not only redress the imbalance in the U.S.-Korea bilateral automotive trade but also trigger meaningful corporate restructuring in Korea's motor vehicle sector, allowing U.S. firms to compete successfully in the Korean market.

U.S. negotiators should also face up to certain realities. Over the near term, U.S. automobile exports to Korea are likely to be squeezed from two sides. Japanese companies that until 1999 were excluded from the Korean market will certainly move to compete more vigorously in the small-car, low end of the market. Because the high-end, luxury-car market in Korea up until now has been dominated by German (BMW, Mercedes) and Japanese (Lexus) brands, U.S. automobile companies are not likely to see a large increase in exports to Korea. It would still make political sense, however, for the Korean government to lower the 8 percent tariff on imported cars. Such a move would remove a major negotiating point and would likely expose the weakness of U.S. automobile exporters in a more open, competitive market.

Steel

Neither the United States government nor the Korean government comes to the table with clean hands regarding public intervention and protection with regard to the steel industry. The United States has long been concerned with the Korean government's involvement in and support for—through extensive ownership and subsidization—Korea's steel industry and related steel-using sectors. In turn, Korea and other U.S. trade partners have long criticized the policies of the U.S. government that protect the increasingly uncompetitive integrated steel companies. Current U.S.-Korea bilateral trade dialogue focuses on termination of the Korean government's ownership in the Korean steel industry, market-based restructuring

20. In April 2002, Hyundai Motors began construction in Alabama of an automobile manufacturing plant that should produce 300,000 automobiles per year beginning in 2005.

Table 29. Sales of Imported and Domestically-Produced Cars in South Korea

Units/Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003 (January- April)
Sales of Imported Cars	3,865	6,921	10,315	8,136	2,075	2,401	4,414	7,747	16,119	5,927
Sales of Domestically-Produced Cars	1,140,399	1,149,409	1,238,940	1,151,287	568,063	910,725	1,057,620	1,065,161	1,225,210	391,182
Market Share of Imported Cars in Total Domestic Sales (%)	0.34	0.60	0.83	0.70	0.36	0.26	0.42	0.72	1.30	1.49

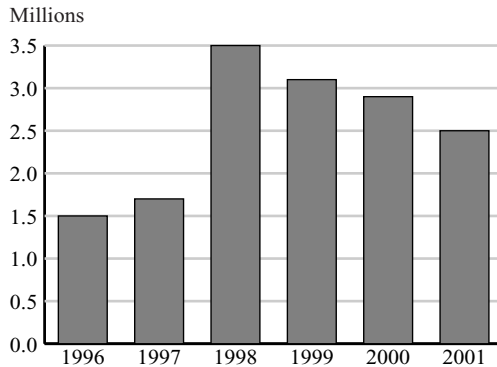
Source: KAIDA, 2003, <http://www.kaida.co.kr/eng/statistic/DomesticCar.jsp>.

of the Korean steel industry and elimination of government subsidies, and continued U.S. protection of integrated steel companies through the use—and misuse—of trade remedy laws (antidumping and safeguards).

After the consolidations and bankruptcies in Korea during the 1990s, the 1997 depreciation of the *won* helped large Korean integrated producers, who saw their export profitability soar due to a decrease of their *won*-denominated costs to levels among the lowest worldwide.²¹ Korea's steel exports to the United States more than doubled in 1998 over the previous year (*Figure 20*). In February 2000, the United States announced safeguards measures on steel, with the introduction of high tariff-rate quota restriction with a three-year duration. However, in February 2002, the WTO Dispute Settlement Body ruled that the U.S. action was inconsistent with the Agreement on Safeguards (Manyin 2002).

In March 2002, however, the United States announced additional large-scale safeguards measures on various steel products, with tariffs ranging from 8 percent to 30 percent for three years (ITR 2002).²² As expected, Korea together with a group of another seven countries challenged U.S. safeguards measures at the WTO. In July 2003, a WTO panel ruled that these safeguards were illegal under WTO rules (ITR 2003b). The Bush administration immediately appealed the rul-

Figure 20: U.S. Imports of Steel from Korea, 1996–2001, millions of short tons



Source: Manyin 2002, 8.

21. In contrast, the 1997 financial crisis and related currency depreciation in Korea were particularly damaging for mini-mill-based firms, many of which went out of business because of high *won*-denominated prices for imported ferrous scrap.

22. Canada and Mexico were exempted, and Korea's POSCO (Pohang Iron and Steel Company) through its West Coast joint venture was granted an exception for 750,000 metric tons of hot-band steel.

ing, and a decision by the WTO appellate body will be forthcoming by the end of 2003 (Meller 2003).

As the sixth-largest exporter to the U.S. steel market in 2001, Korea exported steel to the United States worth \$1,052 million, representing more than 5.7 percent of U.S. steel imports (WTO 2001b, 120). Therefore, Korea is likely to become one of the economies most affected by the U.S. safeguards because the U.S. measures cover approximately 70 percent of Korea's steel exports and induce a potential 20 percent export reduction effect (McKibbin et al. 2002).

The U.S. safeguards measures supplement the use of antidumping and countervailing measures as protection instruments for the steel industry. As of June 2002, the United States maintained effective antidumping measures for 18 product categories imported from Korea; 13 of these involved steel. Most of the steel measures (8 out of the 13) were imposed after the import surge of 1998.²³ As in the area of safeguards, Korea has won several WTO cases against the United States. Following the escalation of international trade protectionism and sluggish economic performance in the United States, Korea's steel exports to the United States dropped by more than 30 percent in value terms between the record year 1998 and 2001 (Manyin 2002, 8). Unfortunately for Korea, while winning individual cases can give psychological satisfaction, only a wholesale revamping of national trade remedy laws in the WTO will yield long-term positive economic consequences.

The United States has long demanded that the Korean government reduce public ownership and cease subsidies for domestic steel firms. However, it still maintains control over the Industrial Bank of Korea (IBK), POSCO's second-largest single shareholder. With more than 60 percent of the Korean steel industry's output in 1999, POSCO's monopoly position for some key steel products makes government control even more worrisome (Manyin 2002, 9–10). In fairness to the Korean government, the POSCO situation is in transition. While it is true that IBK is POSCO's second-largest shareholder—the share amounts to only 3 percent—foreign investors now own 60 percent of POSCO. In addition, the government has announced plans to fully divest itself of IBK stocks when market conditions improve. Once again, as with steel, history colors current perceptions; as a tactical move, the new Korean administration would be well advised to divest itself quickly of IBK stock.

As for the U.S. position, one can only hope—without great optimism, however, given the strength of the steel lobby in Congress—that the current outburst of protection will be the last major effort in relation to the steel industry. Economics and technology may in the end finally decide the issues. The more advanced U.S. mini-mills now account for about half of all steel produced in the

23. Antidumping measures concerned stainless steel wire rod, stainless steel plate in coils, stainless steel sheet and strip in coils, cut-to-length carbon quality steel plate, polyester staple fiber, structural steel beams, stainless steel angle, and steel concrete reinforcing bars.

United States, and the number of workers in integrated mills is down to fewer than 150,000 (from more than 500,000 in the early 1980s). The recent wave of bankruptcies—and, more important, the liquidations—of a number of integrated mills may have paved the way for a restructured domestic steel industry, one that can more effectively compete with new technologies both at home and abroad (Barfield forthcoming).

Semiconductors

Semiconductors, the largest export and import item for the United States, have constituted a key trade issue between United States and Korea ever since the latter half of the 1990s. Korea's semiconductor exports to the United States amounted to \$2.2 billion in 2000, accounting for more than 5 percent of Korea's exports to the United States and for much more than its exports to the United States of iron and steel (\$1.5 billion) (Manyin and Cooney 2003). The United States has accused Korea of subsidizing and building up the production capacity of Korean semiconductor manufacturers, government support that has occasionally triggered dramatic falls of the global prices for semiconductors.

In 1998, reacting to the low prices of semiconductors worldwide, Korean companies reduced their production. Later that year, Korean authorities pursued a big-deal strategy to restructure Korea's semiconductor industry; they allowed Hyundai Electronics (the world's second-largest manufacturer) to take over LG Semicon (the world's third-largest manufacturer), creating the world's largest semiconductor manufacturer with a 20 percent global market share. Some observers were surprised that the U.S. Federal Trade Commission objected to neither the production cut nor the takeover. Industry analysts recognized that a big-deal approach would increase chip prices by reducing competition and, thus, eliminate U.S. discontent with the price drops associated with excessive competition and overcapacity in the chip industry (Yang 2000, 123–4; Graham 2000).

In 2001, a major trade dispute erupted between the United States and Korea; it was related to Korea's support packages for Hynix, the semiconductor division of Hyundai Electronics. In January 2001, the state-owned Korea Development Bank (KDB) included Hynix in a bond-refinancing program, under which creditor banks rolled over 80 percent of the company's debt of 1.625 trillion *won* (\$1.35 billion), repackaged it, and resold it to the public with government guarantees. In May 2001, 17 of Hynix's Korean creditor banks bought 1 trillion *won* (\$833 million) in Hynix bonds. More than 5 trillion *won* (\$4.2 billion) was attached to a new financial package from bank creditors in October 2001, including debt-for-equity swaps, further debt rollovers, new loans, and loan write-offs. The support culminated in December 2002 when Hynix was granted relief for \$4.2 billion in debt, including debt rollovers, loans from state-owned creditors, decreased interest rates, debt-for-equity swaps, and preferential loans for Hynix's key accounts (Manyin and Cooney 2003).

Critics of the debt relief for Hynix assert that government-controlled banks orchestrated the assistance packages as government-sponsored bailouts that kept

Hynix afloat and allowed it to export semiconductors at below-market prices. In response, Korea argues that decisions to aid Hynix have been entirely in the hand of the company's creditors, guided by commercial considerations. Many state-owned banks accepted losses of 75 percent through debt write-offs rather than increase their exposure to Hynix. The Korean government also argues that foreign banks (Citibank and Commerzbank) that oversee credit decisions of Hynix's main creditor (Korea Exchange Bank) supported the rescue packages (Manyin and Cooney 2003).

In November 2002, Micron initiated a countervailing-duty case against Hynix and Samsung, stating that the Korean government's subsidies allowed Korean companies to cut prices and take market share in the United States from both Micron and Infineon (a German company). In June 2003, the U.S. Department of Commerce ruled that Hynix had received unfair subsidies and, pending a decision by the USITC that subsidies were harming U.S. companies, Hynix became subject to countervailing duties of 44.7 percent (the EU also had imposed countervailing duties of 33 percent several months before). In turn, the Korean government announced that it would contest the decision before the WTO (ITR 2003a).

Pharmaceuticals

With \$4.9 billion in sales in 1999, Korea ranked 12th among the largest pharmaceutical markets worldwide. Imports of pharmaceuticals by Korea accounted for 20 percent of the domestic market. U.S.-Korea trade disputes about pharmaceuticals concern market access for U.S. imports, which have been hindered by a series of factors:

- Lack of transparency in the Korean Ministry of Health and Welfare (MOHW);
- Discriminatory nature of Korea's safety and testing requirements for foreign drugs;
- Poor protection for intellectual property rights (IPR) for medical patents; and
- New reimbursement policy proposals for prescription drugs.

The United States takes issue with Korea's policy on pharmaceuticals in several ways:

- Several U.S.-Korea agreements exist to provide a framework for dialogue, transparency, and prenotification between the two countries with respect to health care changes and reform issues intended by the Korean government.²⁴ However, the United States complains that Korea has often failed to provide the U.S. government with advance notice of proposals for reforms and changes (USTR 2002a).

24. The agreement on pharmaceutical pricing issues was concluded in 1999, and the bilateral health care reform working group was established in January 2002.

- Following the introduction of health care reforms and cost-containment measures from 1999 to 2001, new issues arose that concerned safety and testing requirements for foreign drugs in Korea. They include batch testing of biologics and vaccines for product registration; border testing for already approved biologics, vaccines, and drugs; requirements for duplication in Korea of clinical trials already completed outside Korea, ostensibly because of ethnic sensitivity; and authorization for local clinical studies.
- Lax intellectual property protection, limited concern for business confidentiality, and inadequate security for data continue to pose market access barriers for foreign drug manufacturers in Korea (USTR 2002a).
- The United States is particularly concerned with the proposed implementation of a reference price system that transfers some of the pharmaceutical costs from the insurer to the patient (USTR 2002a). Under the reference price system, if a patient chooses to use a medication that exceeds a certain price ratio, the patient would assume partial monetary responsibility for that selection. Korea argues the measure is necessary to overcome the current crisis of Korea's National Health Insurance Scheme (NHIS), which recorded a \$2 billion deficit at the end of 2002 (Embassy 2003). Conversely, the United States believes that the reference price system would not only deprive Korean consumers of appropriate drugs based on safety, efficacy, and quality but also discriminate against foreign drug manufacturers, particularly against the providers of new, research-intensive drugs. Furthermore, Korea is also considering changes to the A-7 pricing system,²⁵ changes that are particularly worrisome for the U.S. government (USTR 2002a, 279–80).

Intellectual Property Rights

During the 1990s, Korea was a constant member of the Special 301 priority watch list, partly because of intellectual property–related concerns. Despite significant steps to strengthen its IPR enforcement and legislation, reforms still need to prevent production and sale of pirated products into Korea's domestic market, exportation of products pirated in Korea, and importation of products pirated in third countries (USTR 2002a; USTR 2002b).

Although Korea has progressed on strengthening its intellectual property legislation, especially the Copyright Act and the Computer Program Protection

25. In 1999, Korea agreed to price new, innovative drugs at the average ex-factory price of A-7 countries (France, Germany, Italy, Japan, Switzerland, UK, United States).

Act, the United States believes that additional changes are still needed.²⁶ Trade-secret protection remains particularly deficient, with government regulations requiring submission of very detailed product information as part of certification procedures. In turn, cases have been recorded when government bodies made confidential business information available to Korean competitors (USTR 2002a, 269).

With regard to pharmaceuticals, Korea is committed to provide full protection against unfair commercial use of test data submitted for marketing approval. However, remaining problems are mostly due to the lack of coordination between Korean health authorities and IPR authorities on marketing approvals for drugs. Situations occurred when this lack of coordination resulted in granting of marketing approval for products that may infringe existing patents (USTR 2002a, 269).

On the positive side, in July 2002, the Korean Trade Commission issued the first ruling on parallel importation; it ordered two unauthorized domestic distributors of popular U.S. computer games to stop importation and ruled in favor of a third distributor that has a trademark for similar products sold in Korea (Lim 2002). The ruling provided a set of guidelines regulating parallel importation, which had never been specifically banned or restricted in Korea.

Agriculture

Korea represents the fourth-largest export market for U.S. agricultural products, and 44 percent of Korea's farm imports in 2000 came from the United States (Manyin 2002, 12). Korea has long resisted opening up its markets for agriculture, particularly for rice and beef, and U.S. producers have long complained about Korea's tariff and nontariff barriers in agriculture.

Under the Uruguay Round's Agreement on Agriculture, Korea bound tariffs for agricultural products, set its tariff rate for rice at 5 percent, committed itself to lower duties on more than 30 agricultural products of primary interest to U.S. exporters, and established tariff-rate quotas intended to provide minimum access on markets previously closed. However, some duties remain very high,²⁷ and over-quota tariffs are prohibitive for a number of agricultural products²⁸ (USTR 2002a, 255–6). In addition, some requirements related to standards, testing, la-

26. Amendments to the Copyright Act should strengthen technical protection measures, clarify the establishment of liability for online service providers, clarify the availability of injunctive ex parte relief in civil enforcement actions, and include provision of exclusive transmission rights for sound recordings and provision of the full 50 years of protection for preexisting sound recordings (USTR 2002a, 268).

27. Korea imposes tariff rates of above 40 percent for several products of interest for U.S. exporters: beef, shelled walnuts, table grapes, canned peaches and fruit cocktail, distilled spirits, apples, pears, and citrus fruits.

28. Natural and artificial honey, skim and whole milk powder, barley, barley malt, potatoes and potato preparations, and popcorn.

beling, and certification continue to pose excessive market barriers for U.S. exporters of agricultural goods.

The beef quota agreed in 1989 under GATT was completely eliminated in 2001, but beef tariffs currently remain at 42 percent. Korea also failed to provide the committed minimum market access for imported beef in 1997, 1998, and 1999. Furthermore, U.S. beef exporters faced impediments to entry and distribution because of Korea's restrictive domestic regulation and excessive support for domestic farmers. In July 2000, a WTO panel concluded that Korea's import regime discriminates against imports from the United States and other foreign suppliers owing to the requirement that foreign beef be sold in separate retail stores and the imposition of other restrictions. In September 2001, Korea complied with the WTO panel findings, putting an end to one of the most contentious U.S.-Korea trade issues in recent years (USTR 2002a, 258–9).

The Korean government exercises full control over the purchase, distribution, and end use of rice, and imported rice is allowed only for industrial or processing purposes. Importation was long limited to low-quality rice,²⁹ which is relegated to storage facilities in Korea. Most important, rice importation is subject to quantitative restrictions unlikely to be dismantled before 2004 (USTR 2002a, 259). Korea has repeatedly stated that it would not allow imported rice to be distributed directly to consumers; this has generated strong protests from international trade partners, including the United States.

Current disagreements also concern Korea's labeling and rule-of-origin requirements for genetically modified foods, quarantine policies, import certification requirements, and test standards, all of which U.S. exporters perceive as import barriers.

Clearly, Korea—like Japan and the EU—maintains one of the world's most restricted markets for agricultural products through a variety of tariffs, quotas, and other administrative means. As the United States itself has proclaimed in other bilateral and regional trading negotiations, however, many of these issues do not lend themselves to bilateral solutions but must be a part of overall multilateral settlement in the Doha Round. Further, the United States has undercut its own leadership in regard to agricultural trade liberalization by enacting a new farm support bill that increases internal support subsidies as well as export subsidies. Somewhat in mitigation, however, the United States has advanced (in good faith because the U.S. agricultural sectors, by and large, have endorsed the proposals) a sweeping set of liberalizing changes that will set the parameters of reform in the Doha Round. Thus, in the end, while it is understandable that Korea would resist major reforms ahead of the Doha negotiations, the new Korean administration will be well advised to begin to prepare domestic political and agricultural interests for significant changes down the road.

29. In 2001, Korean state trading enterprises for the first time purchased high-quality rice from the United States.

Telecommunications

The United States complains about problems encountered in the Korean telecommunications sector and requests that:

- Licensing not discriminate against services suppliers and equipment makers on the basis of nationality or choice of technology;
- Foreign suppliers of telecommunications equipment and software be treated fairly in areas including procurement, certification, type of approval, protection of IPR, and technology transfer; and
- Restrictions on foreign investment in the Korean telecommunications sector be totally lifted.

Although Korea has committed itself to grant foreign firms national treatment consistent with its WTO obligations, the United States believes that excessive Korean government influence over private operators' selection of technologies and interference in private-sector negotiations involving foreign licensing and technology transfers are detrimental to the quality of services U.S. suppliers of telecommunication services and equipment can provide to Korean clients. The limited market access for suppliers of U.S. equipment and software will continue as a hot topic during U.S.-Korea trade negotiations. Although Korea agreed in 2001 to raise the ceiling for foreign equity ownership in telecommunications from 33 percent to 49 percent, this did not apply to foreign investment in local system operators and program providers. In broadcasting, retransmission of foreign channels is restricted to 10 percent of the total of all cable and satellite-broadcasting channels, and FDI in local systems operations and program providers is limited at 33 percent (USTR 2002a, 271, 282–3).

The United States also has a long history of investment restrictions in the area of television and telecommunications. Both countries would be well advised to abolish these restrictions and admit that earlier arguments related to national security questions are no longer valid or can be handled through other means without compromising defense requirements.

Financial Services

Since the 1997 financial crisis, Korea's financial services sector has undergone major structural reforms that aim "at increasing transparency and investor confidence, and generally purging the sector of moral hazard, that is, the assumption that government would make good all losses and not permit large companies to fail" (O'Driscoll et al. 2002, 262).

With \$47.9 billion in premiums paid in the 2001 fiscal year, Korea is the second-largest insurance market in Asia, after Japan, and is the sixth largest in the world. Market access for foreign insurance companies in Korea, including national treatment provisions, has been greatly improved since Korea's accession to the WTO in 1996 and to the WTO's Financial Services Agreement in 1997. Following Korea's 1997 financial crisis, nationalization and recapitalization measures worked to strengthen the unstable banking sector and prepare it for

privatization. In 1998 and 1999, the Korean government opened capital markets to foreigners, allowing nonhostile M&As of domestic financial institutions. In April 1999, Korea introduced import-export-related liberalization of foreign exchange and, in January 2001, introduced the capital transaction permission system. Korea subsequently removed the limits on foreign ownership of listed bonds and commercial papers, lifted restrictions on foreign securities traded in local markets, and removed almost entirely the limits on foreign investment in Korean stocks (USTR 2001, 291). In January 2002, following pressure from the IMF and the U.S. government, the Korean government announced a consistent plan to privatize major state-owned banks.

U.S. financial companies still complain about a nontransparent regulatory system and unduly complicated approval requirements for the introduction of new products and services in this area where they possess a clear competitive advantage. Although foreign banks are free to open subsidiaries and direct branches, Korea still restricts operations of foreign-bank branches on the basis of branch capital requirements. Such restrictions limit loans to individual customers as well as foreign exchange operations and transfers, and they impose capital adequacy and liquidity requirements.

For their part, Korean financial services firms correctly point to the complexities inherent in the U.S. federal system of banking and insurance regulation. In some cases, regulations of U.S. states still discriminate in significant ways against foreign companies. More often, the difficulties stem not from overt protection but merely from the complexity of the myriad state and local regulations that impede foreign (including Korean) financial services providers from competing effectively in these state and local markets. As with the changes pressed by the United States regarding Korean financial services laws and regulations, these issues are long range in nature and should not be the subject of precipitous retaliatory trade actions from either side.

Proposal for Dealing More Effectively with Bilateral U.S.-Korea Trade Disputes

With more than \$58 billion in total trade between the United States and Korea, it is inevitable that U.S. government and private-sector officials and the Korean government and private-sector officials will find that, even with the best of intentions, numerous trade disputes and conflicts will take more and more of their time. It is timely, therefore, to think creatively about methods and institutional arrangements to minimize and even head off at least some of these tensions and disputes.

U.S. and Korean officials might look to the model for bilateral economic relations that has had some success in easing tensions and fostering closer economic ties between the United States and Europe—the new arrangements created to carry out the New Transatlantic Agenda agreed to by the United States and the EU in 1995. That agenda included goals relating to fostering peace, development, and democracy; but it is largely devoted to contributing to the expansion of

trade and closer economic relations as well as building bridges across the Atlantic Ocean through contacts among business, labor, consumer groups, science organizations, and other civil-society groups (Pollack and Shaffer 2001).

Even though the New Transatlantic Agenda has not realized its highest initial aspirations regarding the settlement of some of the most difficult transatlantic trade issues, it has resulted in the creation of new institutions such as the Transatlantic Business Dialogue (TBD), the Transatlantic Labor Dialogue, and the Transatlantic Consumer Dialogue that have brought together government officials, private-sector leaders, consumer advocates, and leaders of other civil-society organizations to discuss common problems and recommend actions to top public officials. The groups meet twice a year and provide a continuing institutional basis for public-private interaction on common problems—and a venue through which disagreements can be vetted (Pollack and Shaffer 2001).

The most successful of these institutions thus far has been the TBD, which has been out front in pressing the United States and Europe for decisions on a number of issues. It has taken the lead, for example, in pushing for a series of mutual recognition agreements (MRAs) in areas such as pharmaceuticals, telecommunications equipment, and medical devices. The aim of these MRAs is to harmonize regulatory requirements or at least provide criteria for accepting separate-but-equal regulations. TBD participants have also been active in pressing their respective governments to mute potentially corrosive trade quarrels such as those related to the U.S. Helms-Burton Act and genetically modified organisms (GMOs). The TBD is not always successful—as the fight over GMOs between the United States and Europe clearly demonstrates—but the TBD process provides “thicker” transatlantic exchanges that have fostered a better negotiating climate.

The Korean and the U.S. governments should consider replicating and institutionalizing these public-private arrangements to deal with economic issues that face the two countries. It is true that the U.S.-Korea Chamber of Commerce and the U.S.-Korea Business Council have performed admirably, but they and other organizations would benefit from a more formal, institutional setting that brings together on a regular basis government officials and the business communities. Other public-private dialogues with labor, environmentalists, and consumer groups should also be considered.

While the U.S.-Korea trade and investment relationship is not as mature as that between the United States and Europe, it has developed to the point that new, more imaginative institutional and substantive roles for a variety of actors in the policy process should at least be placed on the bilateral trade agenda.

References

- Ahearn, Raymond J. 1999. *South Korea's Economic Prospects*. Washington, D.C.: Congressional Research Service. Report no. RS 20041. 1 February.
- Ahn, Choong-yong. 2002. Newly Emerging Economic Order in Northeast Asia and a Vision for Korea's Business Hub. Paper presented at the annual symposium of KIEP and KEI in cooperation with the Center for East Asian Studies, University of Pennsylvania, Philadelphia, 16–18 October.
- . 2003. The Newly Emerging Economic Order in Northeast Asia and a Vision for Korea's Business Hub. *Joint U.S.-Korea Academic Studies* 13. Washington, D.C.: Korea Economic Institute of America.
- Asian Development Bank (ADB). 2002. *Key Indicators of Developing Asian and Pacific Countries, 2002*. Manila: ADB.
- Bank of Korea (BOK). 2003. Statistics database.
- . Various. Statistics database. Seoul: BOK.
- Barfield, Claude E., ed. 1997. *Expanding U.S.-Asian Trade and Investment: New Challenges and Policy Options*. Washington, D.C.: AEI Press.
- . 2002. Asian Regionalism, the United States and the WTO. *Newsletter*. Washington, D.C.: Keizai Koho Center. Summer.
- . Forthcoming. *High-Tech Follies: The Irrationality of Antidumping Laws*. Washington, D.C.: AEI Press.
- Bhagwati, Jagdish, and Panagariya, Arvind, eds. 1996. *The Economics of Preferential Trade Agreements*. Washington, D.C.: American Enterprise Institute; and College Park: Center for International Economics, University of Maryland.
- Brennan, Timothy J. 2001. Innovative Techniques for Financing Export Growth in Emerging Economies: Lessons from Korea's Approach to Export Promotion in the Early 1980s. Paper prepared for first annual International Emerging Markets Finance Conference, Managing Financial Crises in Emerging Markets, 12–13 September 2001, Manchester. www.acia.sun.ac.za/projects/conferences/2002/Em_Mar/Brennan-KoreaJuly2002.doc.
- Bridges Weekly Trade News Digest* (Bridges). 2002. U.S. Agricultural Proposal Receives Mixed Reviews—Sets the State for Market Access Discussions. 6 August. www.ictsd.org/weekly/02-08-06/story5.htm.
- Brown, Drusilla K., Alan V. Deardorff, and Robert M. Stern. 2001. CGE Modeling and Analysis of Multilateral and Regional Negotiating Options. Working paper. <http://ase.tufts.edu/econ/papers/200108.pdf>.

- Brown, Drusilla K., Alan V. Deardorff, and Robert M. Stern. 2002. Computational Analysis of Multilateral Trade Liberalization in the Uruguay Round and Doha Development Round. Discussion paper no. 489, prepared for research seminar in international economics, School of Public Policy, University of Michigan, 8 December. www.fordschool.umich.edu/rsie/workingpapers/Papers476-500/r489.pdf.
- Chenery, Hollis B. and Moises Syrquin. 1975. *Patterns of Development 1950–1970*. London: Oxford University Press for the World Bank.
- Cheong, In-kyo. 2002. Korea's FTA Policy: Focusing on Bilateral FTAs with Chile and Japan. Discussion paper 02-02. Seoul: KIEP. September.
- Cho, Yoon-je. 1998. The Structural Reform Issues of the Korean Economy. Working paper 98-01. Seoul: Institute of International and Area Studies, Sogang University. September.
- Choi, In-bom, and Jeffrey J. Schott. 2001. *Free Trade between Korea and the United States?* Washington, D.C.: Institute for International Economics, Washington, D.C.
- Choi, Nak-gyoon, and Park Soon-chan. 2002. Economic Effects of the Doha Development Agenda Negotiations According to Various Scenarios. Translated by Lim Sung-woo. Policy analysis I 02-08. Seoul: Korea Institute for International Economic Policy. December.
- Choi, Nak-gyoon, Song Yoo-chul, Kim June-dong, Kang Moon-sung, Park Soon-chan, Ro Jae-bong, Yoon Mik-yung, Yoon Chang-in, Lee Sung-bong, Yang Jun-suk, and Nam Sang-yirl. 2002. Comprehensive Review of the Doha Development Agenda Negotiations during 2002. Translated by Lim Sung-woo. Policy analysis I 02-01. Seoul: Korea Institute for International Economic Policy. December.
- Christensen, L. R., and D. Cummings. 1981. Real Product, Real Factor Input, and Productivity in the Republic of Korea, 1960–1973. *Journal of Development Economics* 8:285–302.
- Cline, William. 1982. Can the East Asian Model of Development Be Generalized? *World Development* 10, no. 2.
- Cooper, Caroline G. 2002a. Policy Perspective. *Korea Insight* 4, no. 9 (September). www.keia.org/Insight/Insight-September02.pdf.
- . 2002b. Policy Perspective. *Korea Insight* 4, no. 10 (October). www.keia.org/Insight/Insight-October02.pdf.
- . 2002c. Policy Perspective. *Korea Insight* 4, no. 12 (December). www.keia.org/Insight/Insight-December02.pdf.
- Dahlman, C., et al. 1987. Managing Technological Development. World Bank staff working paper no. 718. Washington, D.C.: World Bank.
- Dahlman, Carl J., and Thomas Andersson, ed. 2000. *Korea and the Knowledge-Based Economy: Making the Transition*. Washington, D.C.: World Bank and OECD.

- Embassy of Korea in the United States (Embassy). 2003. Korea-U.S. Economic and Trade Issues. Washington, D.C.: Embassy. www.koreaembassyusa.org/bilateral/economic/eng_index.cfm.
- Global Trade Analysis Project (GTAP). 2002. Database. West Lafayette, Ind.: School of Agriculture, Department of Agricultural Economics, Purdue University. www.gtap.agecon.purdue.edu/default.asp.
- Gordon, Bernard K. 2001. *America's Trade Follies: Turning Economic Leadership into Strategic Weakness*. New York: Routledge.
- . 2003. A High-Risk Trade Policy. *Foreign Affairs* 82 (July/August 2003): 105–18.
- Graham, Edward M. 2000. Reform of the *Chaebol* since the Onset of the Korean Financial Crisis. *Joint U.S.-Korea Academic Studies* 10:83
- . 2003. *Reforming Korea's Industrial Conglomerates*. Washington, D.C.: Institute for International Economics.
- Institute of Developing Economies (IDE). 2000. Toward Closer Japan-Korea Economic Relations in the 21st Century. Chiba, Japan: IDE. Mimeo.
- International Institute for Management Development (IMD). 2002. *World Competitive-ness Yearbook*. Lausanne, Switzerland: IMD.
- International Monetary Fund (IMF). 2003. *Direction of Trade Statistics* (CD-ROM). Washington, D.C.: IMF. June.
- . Various. *Direction of Trade Statistics Yearbook*. Washington, D.C.: IMF.
- International Trade Reporter* (ITR). 2002. Washington, D.C.: Bureau of National Affairs (BNA). 7 March.
- International Trade Reporter* (ITR). 2003a. Washington, D.C.: Bureau of National Affairs (BNA). 19 June.
- International Trade Reporter* (ITR). 2003b. Washington, D.C.: Bureau of National Affairs (BNA). 3 July.
- Kang, T. W. 1989. *Is Korea the Next Japan? Understanding the Structure, Strategy, and Tactics of America's Next Competitor*. New York: Free Press.
- Kim, Hwi-seok. 2003. Strategy to Develop Korea's Service Industry as a Growth Vehicle. *Korea Focus* 11, no. 3 (May-June).
- Kim, June-dong. 2003. Inward Foreign Direct Investment into Korea: Recent Performance and Future Tasks. *Joint U.S.-Korea Academic Studies* 13.
- Kim, Lin-su. 1993. National System of Industrial Innovation: Dynamics of Capability Building in Korea. In *National Innovation Systems: A Comparative Analysis*, edited by Richard R. Nelson. New York: Oxford University Press.
- Kodama, Fumio. 1995. *Kankoku Kougtouka to Kigyoushudan* (Industrialization and business groups in Korea). Tokyo: Gakubunsha.

- Korea Automobile Importers & Distributors Association (KAIDA). 2003. Registration Statistics of Imported Cars database. Seoul: KAIDA. www.kaida.co.kr/eng/index.jsp.
- Korea Industrial Technology Association (KOITA). Various. Index on Technology Imports and Exports. Seoul: KOITA.
- Korea International Trade Association (KITA). Various. Database: Korea Trade Statistics. www.kita.net.
- Korea Statistical Information System (KOSIS). 2003. Statistical database. Seoul: Korea National Statistical Office. www.nso.go.kr/eng/searchable/kosis-list.shtml.
- . Various. Statistical database. Seoul: Korea National Statistical Office. www.nso.go.kr.
- Korean Intellectual Property Office (KIPO). 2002. Database. Dae-jeon, Korea: KIPO. <http://eportal.kipo.go.kr:8581/home/portal/ehtml/index.jsp>.
- Lardy, Nicholas R. 2002. *Integrating China into the Global Economy*. Washington, D.C.: Brookings Institution Press.
- Lim, Jam. 2002. Korean Trade Commission Issues Ruling against Parallel Importation. *International Trade Reporter* 19, no. 28 (11 July 2002): 1226.
- Manyin, Mark E. 2002. South Korea-U.S. Economic Relations: Cooperation, Friction, and Future Prospects. Washington, D.C.: Congressional Research Service. January. <http://fpc.state.gov/documents/organization/9108.pdf>.
- Manyin, Mark E., and Stephen Cooney. 2003. The Semiconductor Industry and South Korea's Hynix Corporation. Washington, D.C.: Congressional Research Service. January.
- McKibbin, Warwick J., Lee Jong-wha, and Cheong In-kyo. 2002. *A Dynamic Analysis of a Korea-Japan Free Trade Area: Simulations with the G-Cubed Asia-Pacific Model*. Working paper 02-09. Seoul: KIEP. July. [www.kiep.go.kr/Project/publish.nsf/webview6_5/9CF2F0C431B9BFE049256C17008309E1/\\$file/wp02-09.pdf](http://www.kiep.go.kr/Project/publish.nsf/webview6_5/9CF2F0C431B9BFE049256C17008309E1/$file/wp02-09.pdf).
- Meller, Paul. 2003. W.T.O. Formally Designates U.S. Steel Tariffs as Illegal. *New York Times*, 12 July. www.nytimes.com/2003/07/12/business/12STEE.html.
- Ministry of Commerce, Industry, and Energy (MOCIE). Various. Statistical database. Seoul: MOCIE.
- Ministry of Finance and Economy (MOFE). 2002. Korea's Blueprint for a Northeast Asian Business Hub. Seoul: MOFE. June.
- Ministry of Science and Technology (MOST). 2000. Dream, Opportunity, and Challenge of S&T toward the Year 2025. Seoul: MOST. <http://jschem.korea.ac.kr/stpolicy/2025.pdf> (in Korean).
- . 2003. Promotion of Basic Science and Development of High-Quality Manpower. Seoul: MOST. <http://park.org/Korea/Pavilions/PublicPavilions/Government/most/policye3.html>.

- Noland, Marcus. 2003. The Strategic Importance of U.S.-Korea Economic Relations. International Economic Policy Briefs, no. PB 03-6. Washington, D.C.: IIE. May. www.iie.com/publications/pb/pb03-6.pdf.
- Noland, Marcus, and Howard Pack. 2003. *Industrial Policy in an Era of Globalization: Lessons from Asia*. Washington, D.C.: IIE.
- O'Driscoll, Gerald P., Jr., Edwin J. Fuelner, and Mary Anastasia O'Grady. 2002. *2003 Index of Economic Freedom*. Washington, D.C.: Heritage Foundation; and New York: Wall Street Journal. 12 November. www.heritage.org/research/features/index/.
- Park, Ung-suh K. 1988. *Korea and Her Neighboring Economies*. Seoul: Seoul National University Press.
- Petri, Peter A. 1993. The East Asian Trading Bloc: An Analytical History. In *Regionalism and Rivalry: Japan and the United States in Pacific Asia*, edited by Jeffrey A. Frankel and Miles Kahler. Chicago: University of Chicago Press.
- Pollack, Mark A., and Gregory C. Shaffer, eds. 2001. *Transatlantic Governance in the Global Economy*. Lanham, Md.: Rowman & Littlefield.
- Rhee, Yung-wee, Bruce Ross-Larson, and Gary Pursell. 1984. *Korea's Competitive Edge: Managing the Entry into World Markets*. Baltimore: Johns Hopkins University Press for the World Bank.
- Roberts, Dexter, and Moon Il-hwan. 2002. How Samsung Plugged into China. *BusinessWeek*. 4 March. www.businessweek.com/magazine/content/02_09/b3772138.htm.
- Sakakibara, Mariko, and Cho Dong-sung. 2000. Cooperative R&D in Japan and Korea: A Comparison of Industrial Policy. Working paper. Los Angeles: UCLA. www.anderson.ucla.edu/research/ciber/wponline/pdf/00-6.pdf.
- Scollay, Robert, and John P. Gilbert. 2001. *New Regional Trading Arrangements in the Asia Pacific?* Washington, D.C.: Institute for International Economics.
- Sohn, Chan-hyun. 2000. Economic Effects of and Policy Directions for Korea-Japan FTA. Seoul: KIEP. Mimeo.
- Sohn, Chan-hyun, Yang Jun-sok, and Kim Seung-beom. 2002. Liberalization Measures in the Process of Korea's Corporate Restructuring, Trade, Investment and Capital Account Market Openings. Discussion paper 02-11. Seoul: KIEP. November.
- Song, Byung-nak. 1997. *The Rise of the Korean Economy*. 2d ed. Hong Kong and New York: Oxford University Press.
- Starner, Ron. 2003. Fast Track. *Site Selection Online*. May. www.siteselection.com/issues/2003/may/p282/.
- Taniura, Takao, ed. 1989. *Industrialization in Asia and Foreign Direct Investment*. Chiba, Japan: Institute of Developing Economies (IDE).

- United Nations Conference on Trade and Development (UNCTAD). 2001. *World Investment Report 2001: Promoting Linkages*. New York and Geneva: Division on Investment, Technology, and Export Competitiveness, UNCTAD. <http://r0.unctad.org/wir/contents/wir01content.en.htm>.
- . 2002. *World Investment Report 2002: Transnational Corporations and Export Competitiveness*. New York and Geneva: Division on Investment, Technology, and Export Competitiveness, UNCTAD. <http://r0.unctad.org/wir/pdfs/fullWIR02/pp143-184.pdf>.
- U.S. Census Bureau (Census). 2002. Washington: D.C.: Foreign Trade Division, U.S. Census Bureau. www.census.gov/foreign-trade/www/.
- . 2003. Washington: D.C.: Foreign Trade Division, U.S. Census Bureau. www.census.gov/foreign-trade/www/.
- U.S. Department of Commerce (Commerce). 2003. Stat-USA/Internet database. Washington, D.C.: U.S. Department of Commerce. www.stat-usa.gov/.
- U.S. International Trade Commission (USITC). 2001. *U.S.-Korea FTA: The Economic Impact of Establishing a Free Trade Agreement (FTA) between the United States and the Republic of Korea*. USITC publication 3452, investigation no. 332-425. Washington, D.C.: USITC. September. <ftp://ftp.usitc.gov/pub/reports/studies/PUB3452.PDF>.
- U.S. Trade Representative (USTR). 1995. *1995 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington D.C.: Office of the USTR. www.ustr.gov/html/1995_korea.html.
- . 1998. *1998 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington D.C.: Office of the USTR. www.ustr.gov/pdf/1998_korea.pdf.
- . 1999. *1999 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington D.C.: Office of the USTR. www.ustr.gov/pdf/1999_korea.pdf.
- . 2000. *2000 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington D.C.: Office of the USTR. www.ustr.gov/pdf/2000_korea.pdf.
- . 2001. *2001 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington, D.C.: Office of the USTR. www.ustr.gov/html/2001_korea.pdf.
- . 2002a. *2002 National Trade Estimate Report on Foreign Trade Barriers, Republic of Korea*. Washington, D.C.: Office of the USTR. www.ustr.gov/reports/nte/2002/korea.PDF.
- . 2002b. *2002 Special 301 Announcement, South Korea*. Washington, D.C.: USTR. www.ustr.gov/reports/2002/special301-wl.htm#korea.

- . 2002c. Administration Unveils Comprehensive U.S. Trade Proposal to Expand American Farmers' Access to Overseas Markets. Washington, D.C.: USTR. www.ustr.gov/releases/2002/07/02-77.htm.
- . 2002d. United States Announces Proposals for Liberalizing Trade in Services. Washington, D.C.: USTR. www.ustr.gov/releases/2002/07/02-63.htm.
- . 2002e. United States Proposes Tariff-Free World. Washington, D.C.: USTR. www.ustr.gov/new/Zero_Tariff.htm.
- World Intellectual Property Organization (WIPO). 2000. Industrial Property Statistics database. Geneva: WIPO. www.wipo.org/ipstats/en/
- World Trade Organization (WTO). 2000. Mapping of Regional Trade Agreements. Doc. no. WT/REG/W/41. Geneva: Committee on Regional Trade Agreements, WTO. http://docsonline.wto.org/gen_home.asp.
- . 2001a. *Doha Ministerial Declaration*. Sec. 28. Geneva: WTO. 14 November. www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.htm#top.
- . 2001b. *International Trade Statistics*. Geneva: WTO. www.wto.org/english/res_e/statis_e/its2001_e/stats2001_e.pdf.
- . 2002. Database on dispute settlement. www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm#2001.
- . 2003. Update of WTO Dispute Settlement Cases. Document no. WT/DS/OV/11, 25 February. <http://docsonline.wto.org/DDFDOCUMENTS/T/WT/DS/OV11.DOC>.
- Yamazawa, Ippei. 2001. Assessing a Japan-Korea Free Trade Agreement. *The Developing Economies* 39, no. 1 (March): 3–48. www.ide.go.jp/English/Publish/De/pdf/01_01_01.pdf.
- Yang, Jun-sok. 2000. Korea's Trade Relations: Conflict and Opportunity. *Joint U.S.-Korea Academic Studies* 10:105–35.
- Yerkey, Gary, and Daniel Pruzin. 2002. United States Proposes Broad Opening of Services Sector in WTO Trade Negotiations. Washington, D.C.: International Trade Reporter. 4 July. www.bna.com/itr/arch153.htm.

Appendix

Table A-1: Korea's Major Exports to Japan, 1991, 1996, and 2000

Rank	1991			1996			2000		
	Commodity	U.S. dollar amount, in thousands	% of total exports	Commodity	U.S. dollar amount, in thousands	% of total exports	Commodity	U.S. dollar amount, in thousands	% of total exports
1	Flat-rolled products of iron and non-alloy steel (673)	954,466	7.7	Thermionic, cold cathode or photo-cathode valves, tubes (776)	2,268,246	14.4	Petroleum oils and oils from bituminous minerals (334)	3,631,525	17.7
2	Thermionic, cold cathode or photo-cathode valves, tubes (776)	706,874	5.7	Petroleum oils and oils from bituminous minerals (334)	1,711,874	10.9	Thermionic, cold cathode photo-cathode valves or, tubes (776)	2,806,650	13.7
3	Articles of apparel, of textile fabrics (845)	644,741	5.2	Flat-rolled products of iron and non-alloy steel (673)	825,151	5.2	Parts suitable for use with machines 751 and 752 (759)	1,426,155	7.0
4	Petroleum oils and oil from bituminous minerals (334)	607,786	4.9	Fish, fresh (live or dead), chilled or frozen (034)	578,263	3.7	Automatic data processing machines (752)	1,310,460	6.4
5	Fish, fresh (live or dead), chilled or frozen (034)	493,178	4.0	Articles of apparel, or textile fabrics (845)	372,090	2.4	Flat-rolled products of iron and non-alloy steel (673)	663,447	3.2
6	Articles of apparel and clothing accessories (848)	457,299	3.7	Footwear (851)	335,569	2.1	Fish, fresh (live or dead), chilled or frozen (034)	566,705	2.8
Sum	of top six ranks	3,864,344	31.3		6,091,193	38.6		10,404,942	50.8

Source: KITA various.

Note: Numbers in parentheses refer to the standard international trade classification (SITC) code.

Table A-2: Korea's Major Imports from Japan, 1991, 1996, and 2000

Rank	1991			1996			2000		
	Commodity	U.S. dollar amount, in thousands	% of total imports	Commodity	U.S. dollar amount, in thousands	% of total imports	Commodity	U.S. dollar amount, in thousands	% of total imports
1	Thermionic, cold cathode or photo-cathode valves, tubes (776)	2,020,559	9.6	Thermionic, cold cathode or photo-cathode valves, tubes (776)	3,856,667	12.3	Thermionic, cold cathode or photo-cathode valves, tubes (776)	4,575,846	14.4
2	Other machinery equipment, specialized for industries (728)	1,005,435	4.8	Other machinery equipment, specialized for industries (728)	2,533,105	8.1	Other machinery equipment, specialized for industries (728)	2,151,574	6.8
3	Telecommunication equipment N.E.S. (764)	694,721	3.3	Measuring checking, analyzing, controlling instruments (874)	1,407,303	4.5	Electrical machinery and apparatus, N.E.S. (778)	1,481,134	4.7
4	Measuring checking, analyzing, controlling instruments (874)	637,915	3.0	Electrical apparatus for switching (772)	835,900	2.7	Telecommunication equipment N.E.S. (764)	1,297,074	4.1
5	Textile, leather machinery, and parts N.E.S. (724)	623,852	3.0	Electrical machinery and apparatus, N.E.S. (778)	743,964	2.4	Electrical apparatus for switching (772)	1,185,306	3.7
6	Electrical apparatus for switching (772)	623,539	3.0	Flat-rolled products of iron and non-alloy steel (673)	714,331	2.3	Flat-rolled products of iron and non-alloy steel (673)	1,178,980	3.7
Sum of top six ranks		5,606,021	26.5		10,091,270	32.1		11,869,914	37.3

Source: KITA various.

Table A-3: Korea's Major Exports to China; 1991, 1996, and 2000

Rank	1991			1996			2000		
	Commodity	U.S. dollar amount, in thousands	% of total exports	Commodity	U.S. dollar amount, in thousands	% of total exports	Commodity	U.S. dollar amount, in thousands	% of total exports
1	Synthetic fibers suitable for spinning (266)	104,718	10.4	Petroleum oils and oils from bituminous minerals (334)	738,490	6.5	Thermionic, cold cathode, or photo-cathode valves, tubes (776)	1,773,023	9.6
2	Thermionic, cold cathode or photo-cathode valves, tubes (776)	84,636	8.4	Leather (611)	737,131	6.5	Petroleum oils and oils from bituminous minerals (334)	1,624,679	8.8
3	Fabrics, woven, or man-made textile materials (653)	81,031	8.1	Fabrics, woven, or man-made textile materials (653)	548,518	4.8	Hydrocarbons not specified elsewhere and certain derivatives (511)	882,848	4.8
4	Leather (611)	68,141	6.8	Polymers of ethylene, in primary forms (571)	511,158	4.5	Leather (611)	754,779	4.1
5	Flat-rolled products of iron or non-alloy steel (673)	49,927	5.0	Synthetic fibers suitable for spinning (266)	444,166	3.9	Telecommunications equipment, N.E.S (764)	637,862	3.5
6	Hydrocarbons not specified elsewhere and certain derivatives (511)	33,704	3.4	Flat-rolled products of iron or non-alloy steel (673)	389,378	3.4	Carboxylic acids and certain derivatives (513)	613,906	3.3
	Sum of top six ranks	422,157	42.1		3,368,841	29.6		6,287,097	34.1

Source: KITA various.

Note: Numbers in parentheses refer to the standard international trade classification (SITC) code.

Table A-4: Korea's Major Imports from China; 1991, 1996, and 2000

Rank	1991			1996			2000		
	Commodity	U.S. dollar amount, in thousands	% of total imports	Commodity	U.S. dollar amount, in thousands	% of total imports	Commodity	U.S. dollar amount, in thousands	% of total imports
1	Maize (not including sweet corn) unmilled (044)	435,176	12.6	Pig iron and various ferro-alloys (671)	505,645	5.9	Thermionic, cold cathode or photocathode valves, tubes (776)	776,438	6.1
2	Lime, cement, and fabricated construction materials (661)	404,229	11.7	Petroleum oils, oils obtained from bituminous minerals (333)	462,601	5.4	Coal, whether or not pulverized but not agglomerated (321)	698,113	5.5
3	Fabrics, woven, or man-made textile materials (653)	227,320	6.6	Fabrics, woven, or man-made textile materials (653)	422,785	5.0	Maize (not including sweet corn) unmilled (044)	659,816	5.2
4	Other textile fabrics, woven (654)	212,486	6.2	Coal, whether or not pulverized but not agglomerated (321)	398,697	4.7	Telecommunications equipment, N.E.S. (764)	435,797	3.4
5	Coal, whether or not pulverized but not agglomerated (321)	192,168	5.6	Ingots and other primary forms of iron or steel	286,166	3.4	Parts suitable for use with machines 751 and 752 (759)	427,953	3.3
6	Textile yarn (651)	133,236	3.9	Petroleum oils and oils from bituminous minerals (334)	276,974	3.2	Automatic data processing machines (752)	405,759	3.2
Sum of top six ranks		1,604,615	46.6		2,352,868	27.6		3,403,876	26.6

Source: KITTA various.

Note: Numbers in parentheses refer to the standard international trade classification (SITC) code.

Table B-1: U.S.-Korea Trade Issues before the WTO

Initiator	Consultations	Case no.	Subject	History
Korea	March 2002	DS 251	Definitive safeguard measures on imports of certain steel products	March 2002: United States announced definitive safeguard measures on several steel products. June 2002: WTO panel established after Korea and another seven countries challenged the U.S. measure at the WTO. Deliberations continue.
Korea	January 2001	DS 217	U.S. Continued Dumping & Subsidy Offset Act of 2000	October 2000: United States enacted the Continued Dumping and Subsidy Offset Act of 2000 (CDSOA). August 2001: WTO panel established at the request of nine WTO members, including Korea. September 2002: panel found CDSOA inconsistent with WTO Antidumping Agreement and the Subsidies and Countervailing Measures Agreement; recommended repealing CDSOA. January 2003: Appellate Body upheld the ruling, and the Dispute Settlement Body (DSB) adopted the panel and appellate reports. The United States said it would implement the DSB recommendations and rulings.
Korea	June 2000	DS 202	Definitive safeguard measures on imports of circular welded carbon quality pipe from Korea.	October 2000: After the failure of bilateral consultations, Korea requested that the DSB establish a panel. October 2001: WTO panel ruled U.S. action inconsistent with WTO Agreement on Safeguards, given the failure to establish a causal link between increased imports and serious, nontemporary injury to the domestic industry. February 2002: after the United States appealed the ruling, the Appellate Body upheld panel's previous findings; after WTO arbitration, the United States agreed to eliminate its safeguard measure by September 2002.
Korea	August 1999	DS 179	Antidumping measures on stainless steel plate in coils, stainless steel sheet, and strip from Korea	November 1999: WTO dispute settlement panel established. December 2000: panel objected to U.S. methodology of calculating the dumping margin but rejected Korea's demand that United States revoke the duties in question. The United States conformed to the panel's decision and adjusted the antidumping rate.
U.S.	February 1999	DS 163	Measures affecting government procurement	June 1999: WTO dispute settlement panel established. May 2000: panel found that Korean entities conducting procurement were not covered by Korea's obligations under the Agreement on Government Procurement and that the United States did not demonstrate that benefits were nullified or impaired by Korean measures. June 2000: DSB adopted the report.

(continued)

Initiator	Consultations	Case no.	Subject	History
U.S.	February 1999	DS 161	Measures affecting imports of fresh, chilled, and frozen beef	<p>May 1999: panel established. The United States accused Korea of entry and distribution barriers for beef caused by restrictive domestic regulation, excessive support for domestic farmers, and high tariffs.</p> <p>July 2000: panel concluded that Korea's import regime discriminates against imports from the United States and other foreign suppliers because of Korea's requirement that foreign beef be sold in separate retail stores and imposition of other restrictions. Panel also found that Korea subsidized the domestic cattle industry in 1997 and 1998 at levels inconsistent with WTO provisions.</p> <p>December 2000: Appellate Body rejected the panel's conclusion about subsidies in 1997 and 1998.</p> <p>September 2001: Korea complied with the WTO DSB rulings.</p>
Korea	August 1997	DS 99	Antidumping duty on DRAMS of 1 megabyte or above originating from Korea	<p>May 1993: United States imposed antidumping duties on Korean DRAMS of 1 megabyte and above. In 1995, the U.S. Department of Commerce found that Korea had not dumped its DRAM exports during the intervening three years, but the U.S. government refused to eliminate the antidumping measures.</p> <p>January 1998: WTO dispute settlement panel established.</p> <p>January 1999: panel ruled that U.S. antidumping measures were no longer justified and recommended their withdrawal.</p> <p>November 1999: United States agreed to make necessary changes, and sanctions were finally eliminated in October 2000 under the sunset review clause.</p>
Korea	July 1997	DS 89	Imposition of antidumping duties on imports of color television receivers from Korea	<p>September 1998: after U.S. authorities revoked antidumping duties, Korea withdrew its complaint.</p>
U. S.	May 1997	DS 84	Taxes on alcoholic beverages	<p>October 1997: panel established.</p> <p>September 1998: panel found Korean measure to be violation of GATT rules.</p> <p>February 1999: Appellate Body upheld the ruling.</p> <p>January 2000: Korea stated that it had brought its tax regulation into compliance with the panel ruling.</p>
U. S.	May 1996	DS 41	Measures concerning inspection of agricultural products	<p>May 1996: United States solicited consultations concerning requirements of Korea for the importation of agricultural products "including, but not limited to, testing, inspection, incubation, sorting, fumigation, and product specifications, including all amendments, revisions, and new measures adopted" since the last request for consultations in April 1995. Consultations resulted in changes of procedures, but problems remain (USTR 1998).</p>

(continued)

Initiator	Consultations	Case no.	Subject	History
U. S.	May 1995	DS 5	Measures concerning the shelf life of products to the dispute.	July 1995: both parties came to a mutually acceptable solution
U. S.	April 1995	DS 3	Measures concerning the testing and inspection of agricultural products	April 1995: United States requested consultations concerning Korean testing and inspection procedures for imported agricultural products. Consultations resulted in changes of procedures, but problems remained.

Sources: WTO 2003; USTR 1998; USTR 1999; USTR 2000; USTR 2001; USTR 2002^a.

Note: Table prepared in March 2003 by Andrei Zlate.

About the Author

Claude E. Barfield is a Resident Scholar at the American Enterprise Institute for Public Policy Research, where he is Director of Science and Technology Policy Studies and Coordinator of Trade Policy Studies. His professional experience includes positions with the President's Commission for a National Agenda for the Eighties (1979–1981) and as a consultant to the Office of the U.S. Trade Representative (1982–1985), and on the faculties of the University of Munich and Yale University. His publications include *Free Trade, Sovereignty, Democracy* and other books, as well as a number of articles and other shorter publications. Dr. Barfield earned a Ph.D. in history from Northwestern University.

This informative and insightful book examines trade and other economic issues relevant to the U.S.-Korea relationship from the perspective of an expert with years of experience in international and regional trade policy. — *Kim Kihwan, Chairman of the Seoul Financial Forum*

This book shows first how Korea was transformed from a poverty-stricken backwater in 1950 to one of the world's leading economies today. Its trade problems with the US are one result, and nobody is more familiar with that territory than Claude Barfield. He closes with a sobering treatment of "economic regionalism—Asia's newest fad—and shows why that's a wrong road to follow. — *Bernard K. Gordon, Professor Emeritus of Political Science, University of New Hampshire*

KOREA ECONOMIC INSTITUTE
1201 F Street, NW, Suite 910
Washington, DC 20004

Telephone (202) 464-1982 • Facsimile (202) 464-1987 • www.keia.org