

Economic Integration in Northeast Asia

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Economic Integration in Northeast Asia

Until the 1990s, the three main countries of Northeast Asia—China, Japan, and South Korea—were distinguished from most other major trading nations by their nonparticipation in regional economic arrangements.¹ For much of the postwar period, China remained a large, underdeveloped, and relatively autarkic economy (Lardy 1994). In contrast, Japan and Korea became major exporting nations but relied primarily on the rules of the General Agreement on Tariffs and Trade (GATT), and later the World Trade Organization (WTO), to govern their trade relations with other countries. The multilateral system established a framework of rights and obligations that enabled both Japan and Korea to pursue export-led growth strategies in the 1970s and 1980s and rapidly expand trade with the United States (and to a lesser extent Europe). To be sure, both countries also increased trade and investment with their neighbors in East and Southeast Asia but at a slower pace than trade with the rest of the world.

¹ Throughout this paper, Northeast Asia refers to China, Japan, and South Korea (except where North Korea is specifically mentioned) and references to Korea mean the Republic of Korea unless otherwise noted.

Several political and economic obstacles constrained the deepening of economic cooperation among the countries of Northeast Asia. Most prominent were the political and ideological barriers that separated China from its neighbors, continuing military tensions between North and South Korea, and lingering anti-Japanese sentiment in both Korea and China from the occupation in the first half of the 20th century. The communist regime in China blocked most forms of cooperation with Western countries until it began to adopt economic reforms in the mid-1980s. Chinese support for the North Korean regime also heightened security concerns in the region and inhibited political contacts between the Northeast Asian countries. The threat of invasion from the north limited economic relations between North and South Korea throughout the postwar era, as have intermittent threats by the Chinese military to forcefully implement its reunification goals. These overt security threats have required large numbers of US troops to be stationed in South Korea and Japan as deterrents to renewed bouts of Chinese and North Korean militarism. In turn, this military dependency has encouraged Korea and Japan to develop stronger economic ties with the United States than with each other or with China. Finally, memories of the Japanese occupation continue to evoke concerns about Japanese control of domestic firms and generate opposition to trade and investment reforms that might allow Japanese firms to dominate national enterprises.

The sharp differences in the size and level of development of the Northeast Asian economies also influenced the intensity of economic cooperation in the region. China is big and poor; North Korea is small and poor, with autarkic policies to boot. In contrast, South Korea is small but rapidly developing, and Japan is a medium-sized country that has been an industrial power since the late 1970s.

Table 1 gives the tale of the tape. China is almost 100 times larger in land area than South Korea and 25 times larger than Japan. China's population is 10 times larger than Japan's and 25 times larger than Korea's, but its per capita income is more than 10 times smaller than that of the average Korean and 40 times smaller than that of the average Japanese. But size matters, so despite its low level of development, China's overall economy still is about \$1 trillion (or 2.5 times larger than Korea and 25 percent of the Japanese economy). The large gap between developed and underdeveloped in the region is documented in the United Nations' Human Development Index: both Japan and South Korea are classified as "high development countries" and are ranked 9th and 27th, respectively, among UN members. China has advanced rapidly in the UN ratings to achieve status as a "medium development country" ranked 87th among UN members (UNDP 2001). These large differences in size, income, and policy orientation do not preclude economic cooperation among regional neighbors, but they do complicate efforts that are already impeded by the political factors cited above.

Given the political and economic obstacles to economic cooperation, the growing interest in Northeast Asian regionalism is indeed noteworthy. But do the nascent policy overtures between the three countries reflect hard economic and political interests, tactical responses to initiatives of other major trading countries, or simply diplomatic flights of fancy? And is the projected scope of cooperation narrow or comprehensive? We cannot do justice in a short paper to the diverse and complex issues—ranging from infrastructure projects to free trade zones to monetary union--that could be included in regional economic initiatives. Instead, we will try to address a few basic questions: What is the current state of economic ties between China, Japan, and Korea? Why is there new

interest in Northeast Asian economic cooperation? And what are the implications of proposals to deepen Korea's economic cooperation with Northeast Asia and with the Asia Pacific? We conclude with some reflections on possible alternative policies.

What is the current state of economic cooperation in Northeast Asia?

At the outset, it is useful to spell out a few thoughts about the nature of economic cooperation. The subject implies different things to different people. Given recent interest and concern about regionalism, some people immediately equate cooperation with comprehensive initiatives between governments such as free trade agreements (FTAs), customs unions (CUs), and economic and monetary unions. To be sure, such accords usually represent the culmination of a series of arrangements that over time have integrated firms and workers across national borders. But economic cooperation usually builds from more modest initiatives and is initially propelled by growing trade and investment linkages between private sector firms. These economic interests push their governments to implement domestic reforms that facilitate commerce and to negotiate international agreements that help better manage trade and investment relations. Indeed, in many instances, trade negotiators play “catch up” to what already is transpiring in the marketplace.

Put another way, economic integration is multidimensional. It is based fundamentally on the interplay between firms in each country and their ability to trade with and invest in each other's market; it evolves through progressive stages of trade cooperation agreements among governments; and it is influenced by concurrent developments in bilateral, regional, and multilateral relations with other trading partners.

On the vertical plane, countries often develop framework agreements to deepen cooperation on bilateral trade and investment issues and to manage disputes that inevitably increase as the volume of commerce expands. Mutual recognition agreements that promote convergence on national regulatory policies and bilateral investment treaties frequently emerge from the closer economic contacts between partner governments. Such accords provide a solid foundation for moving to more comprehensive trade accords such as FTAs or CUs. On the horizontal plane, trade relations operate concurrently at the bilateral, regional, super-regional, and multilateral levels. WTO provisions (notably GATT Article 24, GATS Article 5, and the Enabling Clause) govern the granting of trade preferences under various preferential arrangements, and try to ensure (albeit only partially successfully) that bilateral and regional pacts complement the goals of the multilateral trading system (Lawrence 1996). Finally, intersecting both planes (that is, both deepening and broadening relations), private firms work together to integrate economies through cross-border trade and investment, sometimes abetted by government agencies that support those activities through (1) public infrastructure projects or (2) comprehensive development plans that link parts of their economies in sub-regional economic zones (SREZs)² or (3) broader regional integration initiatives.

With this background, we now turn to the current status of trade and investment relations in Northeast Asia. In the postwar era, ties between Japan, Korea, and China have been slowly evolving since the 1970s; each country in turn developed its economy and began to revive contacts with its neighbors. To bolster trade ties, Japan accorded Korea benefits under its generalized system of preferences starting in 1973 (Yamazawa 2001, 12). At that point, Japan accounted for about 40 percent of total Korean trade.

² For an early discussion of this form of economic cooperation, see Chia and Lee (1993).

However, Japan's share of Korean trade has declined markedly since then. By 1990, Japan accounted for less than 20 percent of Korean exports; in 1999 that share fell to 11 percent. Similarly, Japan's share of Korean imports fell to about 27 percent in 1990 and down to 20 percent in 1999. Much of this shift in trade shares represents growing trade ties between the United States and Korea and the revival of Korean-Chinese trade in the 1990s. The latter is notable since there was no direct trade between Korea and China until 1987; by 1999, however, China accounted for 9.5 percent of Korean exports and 7.4 percent of Korean imports (Choi and Schott 2001, table 2.3).

Table 2.1 provides data on intraregional trade in Northeast Asia over the past decade. Korean-Japanese trade has grown very slowly due in part to the weak performance of the Japanese economy throughout the 1990s. Two-way trade increased from \$29 billion in 1990 to \$48 billion in 1995 before contracting to about \$39 billion in 1999 due to the lingering effects of the Asian financial crisis. By contrast, each country's trade with China expanded rapidly from a narrow base. Japanese trade with China grew from \$18 billion to \$66 billion during this period; Korean trade with China increased from less than \$3 billion to almost \$23 billion. During this period, China's global trade volume more than tripled, Korea's almost doubled, and Japan's rose by about 40 percent. As a result, the share of intra-regional exports in total exports of the three countries increased modestly from 12.1 percent in 1990 to 16.8 percent in 1999. Interestingly, intra-regional exports in 1999 were only half as large as the combined exports from the three countries to the United States!

Table 2.2 shows a matrix of bilateral trade in merchandise goods for the three countries in Northeast Asia and the United States in the year 2000. While Japan exported

a little more than \$30 billion worth of goods to both Korea and China, its exports to the United States topped \$143 billion. Japan's imports are not nearly as concentrated. Japan's imports from Korea and China together are almost equal to the \$65 billion worth of goods imported from the United States.

Korea exports about as much to Northeast Asia as it does to the United States. Korea exported a little more than \$18 billion worth of goods to Japan and more than \$19 billion to China. Korea exports to Japan only about 60 percent of what it imports from Japan. Korea imports slightly more from Japan than it does from the United States and relatively little from China. In fact, Korea's trade surplus with China mostly offsets its trade deficit in goods with Japan.

China exported about \$55 billion worth of goods to Northeast Asia in 2000 and about \$65 billion to the United States. On the import side, the situation is reversed with China importing three times as much from Northeast Asia as it does from the United States.

Like trade, investment also helps link the economies of Northeast Asia loosely together. China is the focus of most foreign direct investment (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 US FDI in Korea (Yamazawa 2001)³. 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 Japan and Korea hold

³ UNCTAD has recently created an Inward FDI Index which is the ratio of inward FDI flows over a three year period to the expected amount of FDI flows given the country's GDP, workforce, and exports. Between 1988 and 1990, aside from Hong Kong, each of the countries in Northeast Asia had an Inward FDI Index of less than one. Mainland China's score was 0.8, Korea's 0.4, and Japan's 0.0. Ten years later, the three economies were still below average in terms of FDI openness but each improved its score by one or two tenths (See UNCTAD 2001).

multi-billion dollar stakes in the Chinese economy. As shown in table 3, China accounts for about 30 percent of FDI in Northeast and Southeast Asia and has attracted significant funds away from the ASEAN region since the onset of the Asian financial crisis in 1997. Together, China and Hong Kong host almost 70 percent of FDI in the region.

Often, cross-border investment provides a buffer against trade disputes. In Northeast Asia, however, FDI is one-sided and arguably investors have much less influence over Chinese trade policy than foreign investors in the United States or European markets, for example. As evidence, witness the recent trade dispute in which China retaliated against import restrictions imposed by Japan (under safeguards provisions) on Chinese agricultural exports.⁴ Similarly, Korea frequently has used antidumping measures to protect its industries against shipments from its neighbors in Northeast Asia; as of September 2001, Korea had six antidumping orders in effect against Chinese exports and five against Japanese exports (Korean Trade Commission 2001). To be sure, trade disputes are to be expected and to increase along with the growth in intra-regional trade. For example, the United States engages in more trade disputes with Canada, its leading trading partner, than with any other country. But if the base of regional trade is narrow, then the growth of trade disputes may signal political resistance to integration rather than the deepening of economic ties.

Why are countries interested in strengthening their regional economic cooperation?

Several developments underpin the growing interest of China, Japan, and Korea in strengthening their bilateral and regional economic ties. The subject has attracted

⁴ The Japanese measures were not subject to WTO rules since China was not yet a WTO member. After it accedes to the WTO, Chinese countermeasures to the Japanese safeguards could well be inconsistent with WTO provisions.

considerable attention since the startling proposal by Chinese President Jiang Zemin in late 2000 that the ASEAN plus 3 countries conduct a study of a potential free trade agreement in the region. But a number of factors over the past decade have contributed to the rebirth of regionalism in Northeast Asia.

First, economic ties began to deepen a decade ago through common participation in the Asia Pacific Economic Cooperation (APEC) forum and through the more informal evolution of sub-regional economic zones (SREZs). APEC has been the only forum where all the major economic players in the region actually meet and work together on common or coordinated economic initiatives and is one of the most valuable vehicles for integrating China into the broader regional economy.⁵ However, APEC's momentum has been flagging since the Osaka Summit in 1995; some members believe that new bilateral and regional FTAs could catalyze efforts to implement APEC's long-run free trade commitments.

Second, regionalism in Northeast Asia has become more interesting and valuable as a result of the awakening of the Chinese economy and its incremental insertion into the global trading system. As a result of extensive domestic economic reforms (implemented unevenly, to be sure, in different regions of the country), and after 15 years of negotiations, China will soon accede to the WTO and undertake extensive obligations to liberalize its trade barriers and reform its regulatory policies. Indeed, China has committed to open its market to a far greater extent than several major developing countries that already are WTO members.⁶ The road to that goal is likely to be riddled

⁵ In that regard, it is noteworthy that China joined its APEC partners in undertaking commitments at the Bogor Summit in November 1994 to achieve free trade and investment in the region by 2020.

⁶ For example, China's commitments in bilateral agreements with WTO members exceed the liberalization undertaken by India in most goods and services sectors. See Rosen (1999).

with potholes, but Chinese policy seems at least determined to move in the direction of freer trade. Engagement with neighbors in Northeast Asia, the wider APEC region, and the WTO will influence the scope and pace of prospective policy reforms.

Third, Japan and Korea have shown increasing interest in regionalism because of concerns about potential breakdowns, or at least stagnation, in the multilateral trading system. Several factors have influenced this policy reorientation, including the fractious debate since the first WTO ministerial in Singapore in December 1996 over the inclusion of “new” issues such as labor, environment, investment, and competition policy on the WTO agenda, and the scope of prospective reforms in “old” areas such as agriculture. On the new issues, WTO members differ widely on the importance of these issues for the trading system, on the scope of initiatives that should be undertaken in the WTO, and on the desirability and extent of cooperation between the WTO and other international organizations that have expertise in these areas. On the old issues, both Japan and Korea recognize that their own reluctance to liberalize farm trade barriers could dampen prospects for a successful conclusion of WTO negotiations and thus weaken the multilateral system. Policy differences over both old and new issues have generated large fissures among developed countries and between developed and developing countries.

Fourth, the Asian financial crisis demonstrated the existing linkages between economies in the region and each country’s vulnerability to economic problems that beset their neighbors. The story of the contagion in financial markets in 1997-98 is well documented and prompted proposals for new regional schemes to help forestall or better manage future crises (see, for example, Haggard 2000). Nevertheless, Japan’s prolonged stagnation has complicated the task of export-led recovery throughout East Asia and

underscored the opportunities and risks involved in regional economic integration. On balance, however, each country in the region has recognized its stake in the economic health and political stability of its neighbors. "Help thy neighbor, help thyself" has thus become an important guideline for intra-Asian economic relations.

Last, but not least, both countries seem to be infected with a case of "me, too" regionalism; most other countries seem to be engaged in regional arrangements, so Japan and Korea want to be part of the game, too. Since the Asian financial crisis, Japan has discussed potential FTAs with Korea and Mexico and has formally launched FTA negotiations with Singapore that are expected to produce an agreement by the end of this year. For its part, Korea has talked about FTAs with Japan, Singapore and New Zealand, and is already negotiating with Chile (Choi and Schott 2001). None of the current or prospective deals involves significant amounts of trade, with the exception of a Korea-Japan FTA (discussed further in the next section). But each study and negotiation provides important practice for bigger and broader agreements that may come down the road.

In fact, the growth of regionalism in the world economy is both more and less than it seems. Trade officials in the United States and in Northeast Asia bemoan the fact that they participate in few if any of the 152 regional trade agreements that have been notified to the WTO. But, as shown in table 4.1, a large majority of those pacts have emerged from longstanding efforts to integrate Europe and, more recently, the Central and Eastern European economies of the former Soviet bloc. In fact, 107 of the 152 notifications (70 percent) involve pacts between members of the European Union, the European Free Trade Association, or Eastern European countries. In addition, 19 pacts

have been notified under the WTO's "enabling clause" which applies only to intra-developing country arrangements. So apart from European integration and the development-related associations in Africa, Asia, and Latin America, regionalism to date has been relatively restrained.

However, the WTO notifications do not capture the more significant trend in regional trading arrangements of the past decade, namely the growth of so-called "super-regional" arrangements. As contrasted with neighborhood deals, these transoceanic trade initiatives link trading partners in different continents and bridge wide divides in the size and level of development of the participating countries. Examples include APEC (including the series of bilateral FTAs between APEC members that could evolve into broader regional pacts), the Free Trade Area of the Americas, and the evolving (albeit incrementally) transatlantic free trade area between the European Union and countries in Latin America (see Schott and Oegg 2001). These super-regional initiatives complement the WTO but could substitute for multilateral trade pacts if the WTO process falters. They reduce the risk of the trading system devolving into three regional trading blocs, but increase the need for countries to work together with their neighbors so that they can better take advantage of the opportunities presented by super-regional and multilateral trade accords.

A subset of the concerns about "me, too" regionalism relate to the NAFTA. Since the conclusion of negotiations on the Canada-US FTA in late 1987, and the subsequent expansion of the free trade regime to Mexico in 1993, both Japan and Korea have at times considered the possibility of acceding to NAFTA or negotiating a NAFTA-like

bilateral FTA with the United States (see Schott 1989). For a variety of reasons, such proposals were not considered politically viable on either side of the Pacific.⁷

Instead, interest has shifted to emulating the US example and trying to enhance the global competitiveness of local industries by pursuing regional integration arrangements. The strategy is straightforward: reduce barriers to trade with neighbors, allowing countries to produce and trade across a broader regional market. In so doing, their firms can lower costs and increase productivity by reaping the gains of economies of scale in production and intraindustry specialization.

This approach is working in North America. Is it viable in Northeast Asia? Table 4.2 illustrates three important differences between the two regions. First, the prospective partners already had strong trade linkages in North America prior to the onset of FTA negotiations; in Northeast Asia, as noted above, intraregional trade has been modest and represented only 17 percent of total exports of the three countries in 1999 and in 2000. Second, the North American economies, particularly the United States and Canada, were host to substantial direct investment from neighboring firms. The United States and Canada accounted for about two-thirds of FDI in Mexico. In contrast, Japan and Korea have been relatively closed to FDI from all countries, but both have significant investments in China. As of 2000, China was host to almost \$350 billion of FDI and has attracted close to 42 percent of all FDI inflows into Southeast and Northeast Asia since 1995 (see table 3). Third, North American economic ties were abetted by long and porous land borders, which have supported large cross-border flows of goods and people. The

⁷ However, proposals by both businessmen and legislators in Korea and the United States suggest that a Korea-US FTA might be feasible if both sides gave weight to the political benefits of the accord and were able to manage reforms in sensitive sectors like agriculture, textiles, and automobiles (Choi and Schott 2001).

countries of Northeast Asia, by contrast, do not have land borders (except with North Korea) and have maintained tight border controls to regulate the flow of goods and people. In short, the geography and underlying openness of the North American economies is more conducive to economic integration than that prevailing in Northeast Asia.

Gravity models generally confirm that geography matters: per Helliwell (2000), domestic trade (i.e., trade within countries) is more intensive than international trade (adjusting for distance and income), and countries that share land borders trade more intensively than discontinuous countries. Frankel and Rose (2000) found that trade intensities between any pair of countries decline by about 10 percent for each 10 percent increase in distance between their economic centers (holding other factors constant). Even though there are no common land borders in Northeast Asia, the economic centers of the three countries are relatively close together. Thus, these countries should still be able to substantially increase trade by eliminating trade barriers and promoting the convergence of their regulatory policies.

Sohn and Yoon (2001) estimate a gravity model for Korea's trade that is similar but less complex than the model used by Frankel and Rose. In 1995, Korea's actual trade with Japan was only 67 percent of the predicted trade for these two countries given their economic characteristics. For Korea and China, the actual total was 86 percent of the predicted total. Thus, the authors conclude that Korea trades too little with its neighbors in Northeast Asia, and the existence of trade barriers is one potential explanation for the differential.

In sum, there are a number of reasons why the countries of Northeast Asia may want to pursue regional integration initiatives. Some stem from pragmatic interest in strengthening their economic ties in order to promote a climate of peace and prosperity in the region. Others reflect concerns about the need to keep pace with the spread of regional arrangements around the world. For better or worse, regional pacts do affect nonmember countries—by promoting growth and creating new trade opportunities or by creating trade preferences that discriminate against third country suppliers and cause trade diversion. Prospective regional partners need to assess the external implications of their arrangements as they weigh the benefits of closer integration. The next section looks more closely at that issue from the US perspective.

What are the potential implications of Northeast Asian regionalism for the United States?

The external implications of Northeast Asian regionalism depend importantly on the type of cooperation undertaken by China, Japan, and Korea. To the extent that regional initiatives promote economic growth, they can provide benefits that reach beyond the borders of the partner countries. To the extent that the integration arrangements involve discrimination against nonmember countries (even if the pacts are consistent with WTO obligations), they may adversely affect the trade and investment interests in other countries outside the region. In particular, if economic cooperation in Northeast Asia results in preferential trading agreements, the United States—as the main trading partner and major investor in each country—could suffer trade and welfare losses.

So, too, could smaller countries in Southeast Asia, though we defer analysis of their story for another paper.

Table 5.1 reports US merchandise trade with Northeast Asia during the past decade. Overall, Northeast Asia accounts for more than 20 percent of total US trade (and 25 percent of US imports). US trade with Japan is almost twice as large as US trade with China and three times as large as trade with Korea. US export growth to the region has been stagnant since 1995, while US imports have increased by almost 50 percent.⁸ The United States has run a merchandise trade deficit with each of the three countries in Northeast Asia every year in the 1990s with the exception of a small surplus with Korea in 1996 and 1997. In 2000, the US deficit with Northeast Asia was \$196 billion, or almost half of the global US trade deficit of \$425 billion. Obviously, if a Northeast Asian FTA discriminated against US exports to the region, it could exacerbate the already large US trade deficit and precipitate protectionist pressures in the US Congress.

Table 5.2 shows trade by product between the United States and Northeast Asian countries in 1999. This disaggregated perspective gives a clearer picture about the nature of the US merchandise trade deficits with Northeast Asian countries. The United States actually has a trade surplus in agricultural products and mining products but a substantial deficit in manufactured products with all three countries. This table by itself does not give any indication as to which products would be adversely affected by preferential FTAs in Northeast Asia, but many of the categories in this table include (to varying extents) the products in table A.1 in the Appendix where we report the specific US exports that could be diverted from Northeast Asian markets.

⁸ Data for 1995 is particularly noteworthy, since that is the reference year in the econometric simulations of Northeast Asian FTAs that follow.

However, considering only merchandise trade is insufficient because trade in services is an important part of the US economy. Table 5.3 shows the growth in services trade between the United States and Northeast Asia in a format that is comparable to table 5.1 for merchandise goods. Overall, Northeast Asia represents about 15 percent of total US services trade. Japan accounts for the bulk of this trade, with which the United States maintains a large, but declining, surplus. China and Korea have significant barriers to FDI in services, which likely have constrained the growth of US services exports (Findlay and Warren 1999). While FTA members often implement their services regulatory reforms on a nondiscriminatory basis, table 5.3 gives some indication that US services exports could also be affected by discriminatory preferences under a Northeast Asian FTA.⁹

In contrast to trade, the share of US FDI that goes to Northeast Asia is small. Table 5.4 shows the growth in US FDI in Northeast Asia in the 1990s, based on figures from the Bureau of Economic Analysis. As of 1999, the stock of US FDI in Japan was worth on a historical-cost basis about \$48 billion, and US investment in Korea and China totaled \$8.7 billion and \$7.8 billion respectively.¹⁰ Unlike US merchandise exports, US FDI in the region has grown markedly since 1995.

The implication thus far in this section has been that the United States could be adversely affected by discriminatory trade arrangements in Northeast Asia. In the next

⁹ Services are included in the following econometric estimates of the effects of FTAs in Northeast Asia, though estimating service trade is fraught with uncertainty.

¹⁰ The US outward FDI position appears to be more than 100 percent of the total inward FDI position reported by Japanese sources in Table 3. According to Maiko Wada (2001) of the Bank of Japan, this discrepancy is explained by two factors. First, the US definition includes investors who directly or indirectly own 10 percent of the voting power in a Japanese operation, while the Japanese definition includes only investors who directly control 10 percent of the voting power. Second, the US definition includes the capital reserve, while the Japanese definition does not. We believe in this context that the US definition is more appropriate for evaluating the US interest in the region.

section, we review two important studies that estimate the potential effects of FTAs in Northeast Asia.

The Effects of Northeast Asian FTAs

Two potential preferential FTAs have been vetted in Northeast Asia: a bilateral Korea-Japan FTA and a trilateral China-Japan-Korea FTA. Both have attracted considerable interest from some domestic groups, and vocal criticism from others, that anticipate they will be "winners" or "losers" from more open competition in the region. Korea has stated that a formal trade agreement with China is not feasible in the near future but a bilateral agreement with Japan is a possibility. Nevertheless, we will analyze both potential agreements in this section and briefly discuss some other arrangements in the next section.

What would be the impact of these two pacts on the United States? Two recent studies, by Yamazawa (2001) and Scollay and Gilbert (2001), have estimated the potential effect of FTAs in Northeast Asia on welfare, trade, and productivity.¹¹ Both studies use a computable general equilibrium (CGE) model to analyze the proposed agreement. The focus of the Yamazawa study is a Korea-Japan FTA; Scollay and Gilbert provide estimates for a number of FTA combinations in the Asia-Pacific region, including a Korea-Japan FTA and a Korea-Japan-China FTA.

Scollay and Gilbert estimate the effect of a Korea-Japan FTA that includes liberalization of the agricultural sectors using a "static" CGE model. Static, in this context, means that the model accounts for the short run effects of the trade liberalization

¹¹ The Korea Institute for International Economic Policy (2000) also published an analysis of a Japan-Korea FTA as part of a joint study with a Japanese delegation led by Yamazawa. The two sets of numbers are similar so we focus on Yamazawa's figures as published in a journal article.

and all the initial ripple effects throughout the economies but does not account for any effects of long run increases in productivity due to the trade liberalization. Table 6.1 shows the predicted effects of this simulation on welfare, exports, imports, and factor productivity for Japan, Korea, China, the United States, Southeast Asian countries, and countries in various other regions. The most striking results of this simulation are that Korea's welfare would be reduced, its global exports and imports would increase, but its bilateral trade balance with Japan would deteriorate. Some Korean industries and farmers oppose a prospective Japan-Korea 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. Unlike Korea, Japan would not become significantly more productive in the short run as a result of a bilateral FTA. Korean productivity does not change for most factors but does increase by 9 percent in the case of land usage. Overall, these *static* estimates do not indicate that there is a great deal of benefit to a bilateral FTA between Japan and Korea.

A bilateral agreement, on the other hand, would have adverse effects on China, the United States, and Southeast Asia as a result of trade diversion. The US losses would be relatively small, just a hundredth of a percent drop in real GDP. Because the base of US global imports was much larger than the base of US exports in 1995, the proportional reductions in US trade as a result of this bilateral FTA would actually improve the global US trade balance slightly.

Yamazawa's static estimates of a Japan-Korea FTA are roughly consistent with those of Scollay and Gilbert. Yamazawa does not report estimates of welfare or

productivity effects, but his estimates on trade effects have the same sign as Scollay and Gilbert's estimates. However, the magnitudes of Scollay and Gilbert's estimates are consistently higher than Yamazawa's predictions by a substantial margin.

Yamazawa's static trade estimates range from a zero to three percent increase for total imports and exports for both Korea and Japan.¹² In contrast, Yamazawa's dynamic CGE model, which attempts to go beyond a static model by estimating the effects on trade of long run increases in productivity, predicts that total exports for Korea and Japan would increase by more than 30 percent while imports would not increase in Korea's case and would decrease by almost six percent in the case of Japan! Even though Korea and Japan's exports would increase substantially, total world exports and imports would only rise by 0.71 percent. Obviously, some countries (i.e. the United States and Southeast Asia) would have to reduce their trade substantially. To be sure, Yamazawa's dynamic estimates of trade liberalization seem a little high and should be interpreted with caution.¹³

Scollay and Gilbert also consider a bilateral FTA between Korea and Japan that excludes agricultural products. Excluding agriculture could run afoul of Korea and Japan's WTO obligations because regional trade agreements are permitted under the WTO only if (among other conditions) they include "substantially all trade." Given the intense political opposition to liberalization of agriculture in both Japan and Korea, it is

¹² Yamazawa observes in a footnote that the database used for the CGE analysis lacked complete coverage of several non-tariff barriers between Japan and Korea. The resulting estimates (especially the static estimates) will be conservative because they only account for partial liberalization.

¹³ As a reference case, Yamazawa also provides estimates of how trade would be affected if productivity were to increase hypothetically without trade liberalization on the part of Japan and Korea. These estimates are very similar to the dynamic estimates of trade liberalization, so one could conclude that the magnitude of Yamazawa's dynamic estimates is driven primarily by his assumptions about productivity rather than the interaction of a productivity increase in concert with bilateral trade liberalization.

conceivable that a bilateral FTA would seek to exclude important segments of bilateral farm trade (as in the European Union-Mexico FTA, the proposed Japan-Singapore FTA and, to a lesser extent, the Canada-US FTA). However, Scollay and Gilbert's economic predictions for a bilateral FTA that excludes agriculture are very similar to their predictions for a full bilateral FTA. In short, Korea would still lose (but by slightly less) and Japan would gain a little more in welfare but not gain as much in trade. China, the United States, and the Southeast Asian countries would still lose in both welfare and trade but by slightly less than they would if agriculture were included in the FTA.

Given that China would be adversely affected by a bilateral agreement between Korea and Japan, China may want to join the agreement and make it trilateral, although getting Japanese and Korean support for a trilateral trade pact is another question. Scollay and Gilbert provide estimates of the effects of a trilateral FTA. Note, however, that their model uses 1995 as a reference year, so it does not take into account the substantial unilateral liberalization undertaken by China in the past few years or reforms China will implement pursuant to its WTO accession agreements. It is difficult to assess the extent to which the marginal effects of a regional trade agreement would be different if the unilateral liberalization of China were taken into account; however, both the positive and negative effects of the regional trade agreement would be less extreme.¹⁴

The effects of a trilateral free trade agreement (including agriculture) in Northeast Asia are summarized in Table 6.2. In general, Scollay and Gilbert's estimates of the effects of trilateral liberalization are larger than their estimates for bilateral liberalization between Japan and Korea. Korea gains in terms of welfare from a trilateral arrangement,

¹⁴ The justification for this theory is simple. If unilateral liberalization precedes (or occurs simultaneously with) regional liberalization, then the unique effect of regional liberalization is diminished.

whereas it lost welfare under the bilateral liberalization scenarios. Also, Korea would trade more under a trilateral regime than a bilateral one. Japan also improves in welfare and trade from trilateral liberalization and gains much more than it would from bilateral liberalization. China gains substantially from being included in the regional arrangement, although it is starting from a lower base and the above caveats about Chinese unilateral liberalization need to be kept in mind. Also, the productivity in the three Northeast Asian countries generally improves under trilateral liberalization. In China, these gains are fairly dramatic. These predicted gains in factor productivity would support the theory that dynamic estimates, if they were available, would be substantially larger than these static estimates.

A trilateral FTA would divert more US trade than a bilateral agreement between Japan and Korea, but the aggregate effects would still be small. Again, although US welfare, exports, and imports would diminish slightly, the aggregate trade balance would improve marginally. Even if the aggregate trade balance improved, the trilateral FTA also could provoke concerns about how particular US industries would be affected as well as potential trade diversion against US allies in Southeast Asia. The biggest losers in terms of reduced welfare would be Singapore, Taiwan, and Malaysia. Overall, the world would gain in welfare, exports, and imports if a trilateral agreement were reached although the benefits would be concentrated in Northeast Asia. For countries outside of Northeast Asia, welfare, exports, and imports would decrease, although not by enough to offset the gains captured by the Northeast Asian countries. This result stands in contrast to the bilateral scenarios where the "bottom line" was negligible.

Alternative Free Trade Agreements

Rather than making a definitive recommendation on which FTAs Korea should pursue, this paper will simply offer a few comparisons between the two FTAs discussed in the previous section and some other FTAs that have been proposed. Table 7.1 illustrates the economic effects on Korea of ten different scenarios.¹⁵

The predicted effects of the first three scenarios are the same as those presented in table 6.1 and 6.2. Although Korea's aggregate trade would increase under all three scenarios, its welfare would increase only if China were included in a trilateral agreement. Also, if agriculture were to be excluded from a bilateral FTA with Japan, all of the effects would be diminished. These estimates are static; however, Korea could reap significant productivity gains if the FTA includes China and/or agriculture.

The next two scenarios predict the effect of a bilateral FTA between Korea and the United States. These figures should be interpreted with caution because some of the assumptions used to generate the CGE models differ from those used in the other seven scenarios. With this caveat in mind, of the ten proposals, Korea would gain the most in terms of welfare from a bilateral FTA that included agriculture. However, including agriculture would be very sensitive politically because Korean farmers would be adversely affected by imports from the United States. The increases in trade would be substantial but not as substantial as those that could be accrued from other FTAs.

The next four FTAs are "ASEAN plus" scenarios that involve the ASEAN Free Trade Area (AFTA) plus Korea and some combination of Japan, China, Australia and New Zealand (the CER countries). In the most recent ASEAN summit, China proposed

¹⁵ For effects on other countries of these alternate FTAs, see Scollay and Gilbert as well as Choi and Schott. In general, the effects on third parties are similar to those reported in the previous section.

that a China-ASEAN FTA be completed within ten years and discussions to include Japan and Korea will be held at the 2002 ASEAN summit, although neither Japan nor Korea has expressed much interest in such a deal. Korea would gain in all four scenarios but would gain much more if China were included. Without China, the welfare gains are minor although the increase in trade would be substantial. China's inclusion would nearly double the gains in trade and would increase the welfare improvements by a factor of five. These results are consistent with those predicted from Northeast Asian FTAs where Korea would gain by including China in a FTA with Japan.

Finally, if all the members of APEC (Korea included) were to eliminate their trade barriers on an MFN basis (so called "open regionalism"), Korea's outlook would improve. Its welfare would improve considerably, although by less than it would under other scenarios, and the gains in trade are second only to those under an "ASEAN plus 5" FTA. As Choi and Schott illustrate in more detail, a good portion of the benefits to Korea of signing an FTA with the United States can be attributed to the trade diversion that would result if Korea were to gain preferential access to the US market. Progress along the APEC track would overcome this problem; consequently, Korea would not gain as much in terms of welfare. Thus, APEC liberalization is certainly a good option for Korea to pursue, provided of course that the other countries in the Asia Pacific also liberalize their trade.

A final decision on any FTA must take domestic and international political considerations into account, as well as economic ones. For example, Korea may experience "FTA fatigue" (as has happened in the United States) if it pursues agreements with other countries in the Asia Pacific, particularly if Korea puts its protection of

agriculture on the table. In the international arena, Korea must consider the consequences of its choices on other countries in the Asia Pacific. Invariably, each FTA (except APEC) will involve some trade diversion against the excluded countries in the region, so Korea should consider the aggregate economic effects in addition to the bilateral ones and should consider whether an FTA with one trade partner will alienate another trade partner. Thus, if Korea is forced to choose among free trade agreements, then it must carefully weigh the costs and benefits of each proposal and determine which approach balances political and economic interests effectively.

Final Thoughts

It is hard to be against economic cooperation. The countries of Northeast Asia will clearly benefit from working more closely together to promote economic development in the region. Economic initiatives will also produce dividends in terms of better political relations among the former adversaries and current competitors for global trade and investment. However, countries need to weigh the benefits derived from closer ties with the costs that could be incurred if the regional arrangements discriminate against other important trading partners. Judging from the modest trade and welfare gains from a Northeast Asian FTA, the three countries should be especially careful to design future initiatives so that they complement existing commitments undertaken in the broader APEC context and support new multilateral trade reforms in the WTO.

Second, it is easy to be against economic cooperation if you are a farmer in Japan or Korea, or if you are a manufacturer that faces intense competition from suppliers in the other FTA countries once a free trade regime is established. We have not dwelled at

length on the political resistance to reform (including FTAs) in Japan, Korea, and China, but groups are active in each country that would want to exempt or delay liberalization of barriers that protect their economic livelihood. Considering the interests of these groups, Korean officials have already downplayed the prospects for many of the free trade deals discussed in this paper.

Third, if Northeast Asian countries want to pursue FTAs, is a Northeast Asian FTA the most desirable goal? Questions that go beyond the scope of this paper still need to be asked: Does Japan want to integrate with China or instead deepen its trade ties with Korea, Mexico, and perhaps even the United States? Does Korea want a Northeast Asian FTA rather than a Korea-US FTA or a Korea-Japan FTA? Does China want to integrate with its more developed neighbors rather than countries in Southeast Asia (including Taiwan) that provide important investment funds and managerial expertise for Chinese industry? Indeed, despite its proposal for an FTA with ASEAN, does China really want to engage in deeper integration in the region during the next decade as it implements the extensive obligations undertaken in its accession to the WTO?

Fourth, each of the countries of Northeast Asia has important trade and investment ties with the United States. Economic cooperation in the region could serve US interests if it promoted economic and political reforms and thus contributed to stronger and more sustainable growth. However, FTAs in the region would discriminate against US firms and divert trade to regional suppliers. How much would such trade diversion cost US firms? In the aggregate, the lost sales would represent a very small share of US GDP; but for the particular firms, and the workers and communities affected by production cutbacks, the aggregate numbers could mask significant costs. Such effects

could spur emulation (e.g., bilateral or regional FTAs with the United States) or compensation/retaliation claims by the United States against the partner countries. Similar arguments apply to trade relations with other East Asian countries that could suffer trade and investment diversion.

In sum, given the cross-cutting economic and political consequences of potential trade accords in Northeast Asia, we caution against bold new free trade initiatives and are skeptical that they will come to fruition in the near future. Instead, we recommend a “bottom up” approach to regional economic integration, starting first with the acceleration of domestic economic reforms. Governments need to build domestic coalitions that will support the implementation of important but politically unpopular regulatory reforms, especially in the financial sector. Such actions would provide a stronger foundation for growth in the region, and thus more fertile ground for intra-regional trade and investment. Second, governments should then work together to harmonize customs procedures and reduce regulatory barriers to trade and investment in their countries. Such cooperation would be particularly useful in spurring infrastructure projects that can contribute to the physical integration of the region. With such reforms, economic interactions among firms in Northeast Asia would flourish without the preferences and subsidies afforded by discriminatory trade pacts.

Appendix: Effect on US Industries

In the text, we have illustrated the aggregate economic effects of Korean FTAs on the United States and In this appendix, we now attempt to determine which US products would be most affected by these proposed free trade agreements. One purpose of this exercise is to identify where political opposition to FTAs that may discriminate against the United States may occur.

First, it is necessary to gauge the overall similarity between US exports to Northeast Asia and intra-Northeast Asian exports. Finger and Kreinin (1979) propose a simple approach to measuring export similarity between two countries. For a particular importing country ("host market"), we initially calculate the shares of a product for two exporting countries in their total exports to the host market and then identify the smaller share as the "export similarity" (ES). For example, if 10 percent of US exports to Korea are cars and 5 percent of Japan's exports to Korea are cars, then the ES between the US and Japan for exports of cars to Korea would be five percent. In Finger and Kreinin's words, we are asking "What proportion of *a*'s exports is 'matched' by exports of *b* in the same product category?" The "export similarity index" (ESI) is an aggregate measure of export similarity between two exporting countries to a host market that is calculated by aggregating the ES for all exported products to the host market by the two exporting countries. The ESI will fall between zero and one with one representing perfect export similarity. Using 1998 data from the OECD, disaggregated by three digit Standard Industrialized Trade Classification (SITC) codes for each of the three host markets in Northeast Asia, we calculated the ESI between the United States and the other two

exporting countries in Northeast Asia. The results are shown in table A.1 at the top of each section.

These ESIs are fairly high, especially between the United States and Japan. The results are predictable given that the United States and Japan are highly industrialized countries and produce similar products. Korea and China are less advanced economically than Japan so one would expect that their export similarity to US exports is somewhat lower, although they are still high.

The ESI is a proxy for how substitutable US exports are. The fact that the United States has high export similarity with each of the countries in Northeast Asia supports the contention made in the previous section that Northeast Asian FTAs risk trade diversion from the United States. Since the export distributions of potential FTA member countries in Northeast Asia are similar to the US export mix, US firms could suffer as Northeast Asian trade barriers against US products remain in place while trade barriers against FTA partner countries fall. However, if there were little export similarity between the United States, Japan, Korea, and China in the Northeast Asian markets, then the reduction of intra-Northeast Asian trade barriers would have little effect on US exports because there would be less potential to substitute Northeast Asian exports for US exports.

In order to determine which products are likely to be affected by trade diversion, we multiplied the ES for each product by the amount of US exports to the host country and noted the top ten products. This measure reflects both the similarity and the stake the United States has in exports to a host country in Northeast Asia. The top ten products, the ES, and the US exports in 1999 are listed in the first three columns for each host market and Northeast Asian competitor in table A.1. Although the individual export similarities

appear small, there are over 300 products under consideration, so the export similarity of each of the top ten products is much greater than the mean export similarity. The overall ESI between the two exporting countries in a host market is shown in parentheses at the top of each section. Recalling that the ESI is the sum of the ES for *all* products, one can see that a substantial portion of the ESI comes from the sum of the ES on these lists of ten products.

Table A.1 also lists the Revealed Comparative Advantages (RCA) in the global market for each exporting country and product. Going back to the theories of Ricardo, the RCA is intended to reflect which countries are more efficient at producing a particular product. The RCA in the global market is calculated by dividing a country's global export share in the particular product by the country's global export share for all products combined. For example, if the United States provides 15 percent of worldwide car exports and provides 15 percent of total worldwide exports, then the US RCA for cars would be one. A value of one indicates that the product is exported at the normal rate for that country. An RCA value that is greater than one indicates that the country has a comparative advantage in that product, assuming that there are no market distortions. This assumption may be dubious in some products, such as steel, where there are a variety of distortions in the global market.

Unfortunately, data on intra-Northeast Asian trade barriers is not readily available at the three-digit level of desegregation, so it is difficult to assess how severe the trade diversion against the United States might be. But looking at the RCA scores allows us to identify a few scenarios. First, if the RCAs between the United States and the competing country are similar, then both are fairly evenly matched for that product. Thus, a

preferential trade agreement in Northeast Asia would make the US product less competitive in the region. Second, if the United States is already at a competitive disadvantage in a product, which is indicated by the United States having a much lower RCA than the competitor for a product, then the United States might be excluded from the market by a preferential trade agreement. On the other hand, if the United States currently does not have a competitive advantage in the global market for a product but still exports a significant amount of the product to a country in Northeast Asia, then it is likely that there is some unique market dynamic that explains the current state of trade and may continue to exist after a preferential trade agreement in Northeast Asia is reached. Finally, if the United States already has a large comparative advantage in a product, a preferential trade agreement in Northeast Asia might erode US exports at the margin but probably not substantially, unless the intra-Northeast Asian trade barriers for that product are very significant.

The top ten products at risk of trade diversion are very similar across countries. Telecommunications equipment and cathode valves etc. are number one or number two on all the lists and various electrical and office machinery and their components are also mainstays. Most of the products across all the top ten lists comprise machinery and transport equipment and manufactured products (SITC 700-899). Meat and fish exports to Japan also are potentially adversely affected.

The largest source of potential trade diversion comes from Japan in the Korean and Chinese markets (reflected by the higher ESI scores). For all but one of the products, both the United States and Japan have a comparative advantage in the global market – though Japan's RCA score generally is larger. Thus, a preferential trade agreement would

likely give Japan an advantage at the expense of the United States, particularly in cathode valves etc. (SITC 776) that accounted for \$5.5 billion or 20 percent of US exports to Korea in 1998.

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Table 1. Northeast Asia: Basic Indicators

	Land Area (thousand sq. km)	Population 1999 (million)	GDP 1999 (\$ billion) ^a	Per Capita Income (\$) ^a	1999 HDI Score ^b	Rank
Korea	99	47	398	8,490	0.875	27 th
Japan	378	127	4,054	32,030	0.928	9 th
China	9598	1,254	980	780	0.718	87 th

^a World Bank Atlas Method

^b Human Development Index (max. score = 1.0)

Source: World Bank, 2001 World Development Indicators, April 2001; UNDP 2001.

Table 2.1 Northeast Asia: Intra-regional Trade (\$ billions)

	1990	1995	1999
Intra-regional 2-Way Trade:			
Korea – Japan	29.2	48.2	38.8
Japan – China	18.1	58.0	66.1
China – Korea	2.8	16.5	22.6
Total, NE Asia	50.1	112.7	127.5
Total Exports			
Korea	65.0	125.1	144.7
Japan	287.6	443.1	419.4
China	62.1	148.8	195.1
Total, NE Asia	414.7	717.0	759.2
Total Trade:			
Korea	134.8	260.2	264.5
Japan	523.0	779.0	730.7
China	115.4	280.9	360.9
Intra-regional Trade/ Total Exports	12.1%	15.7%	16.8%

Sources: WTO, *International Trade Statistics*, various issues; GATT, *International Trade* 90-91; Choi and Schott 2001, table 2.3.

Table 2.2: Merchandise Exports, 2000

(Million dollars and percent of world)

		<i>Importer</i>				
		<i>Japan</i>	<i>Korea</i>	<i>China</i>	<i>US</i>	<i>World</i>
Exporter	Japan		30,423	30,859	143,880	477,874
			6.4%	6.4%	30.1%	100%
	Korea	18,377		19,544	37,192	165,420
		11.1%		11.8%	22.5%	100%
	China	43,620	11,094		64,918	275,779
		15.8%	4.0%		23.5%	100%
	U. S.	64,538	27,338	15,964		771,991
		8.4%	3.5%	2.1%		100%

Note: Export figures are f.o.b.

Source: IMF *Direction of Trade Statistics CD-ROM*, August 2001

Table 3. FDI Inflows: 1995-2000 (\$ billion)

	1995	1996	1997	1998	1999	2000	Stock: 2000
World Total	331.1	384.9	477.9	692.5	1075.0	1270.7	6314.3
Japan	0.0	0.2	3.2	3.3	12.7	8.2	54.3
China	35.9	40.2	44.2	43.8	40.4	40.7	346.7
Korea	1.8	2.3	2.8	5.4	10.6	10.2	42.3
Hong Kong	6.2	10.5	11.4	14.8	24.6	64.5	469.8
Taiwan	1.6	1.9	2.2	0.2	2.9	4.9	27.9
ASEAN-10	25.2	30.9	32.5	18.3	14.7	13.9	262.8
Total, North-East and East Asia	70.7	86.0	96.3	85.8	105.9	142.4	1203.8
China as percentage of Total, North-East and East Asia	50%	47%	46%	51%	38%	29%	29%
ASEAN-10 as percentage of Total, North-East and East Asia	36%	36%	34%	21%	14%	10%	22%

Note: ASEAN-10 Stock 2000 figure does not include Brunei Darussalam

Source: UNCTAD, *World Investment Report 2001*.

Table 4.1 Regional Trade Agreements (as of March 2001)

	Total	Notified to WTO under :		
		GATT Article 24	GATS Article 5	Enabling Clause
Total	152	121	12	19
Intra- EC	7	5	2	--
EC + Association	37	30	7	--
EFTA + Association	17	17	--	--
Eastern Europe	41	41	--	--
Of which:				
CEFTA	4	4		
Baltic States	9	9		
Czech + Slovak	11	11		
Slovenia	6	6		
Other E. Europe	11	11		
Faroe Islands	5	5	--	--
Georgia	5	5		
Kyrgyzstan	7	7	--	--
Canada (Chile + Israel)	3	2	1	--
CER (including SPARTECA)	3	1	1	1
USA (Israel + NAFTA)	3	2	1	--
Intra-LDC	20	3	--	17
Other	5	4		1

Note: Agreements that include both services and goods are counted twice.

Source: WTO (2001b)

Table 4.2 NAFTA v. Northeast Asia

NAFTA	Northeast Asia
* 3 countries: US, Canada, Mexico	* 3 countries: China, Japan, Korea
* Strong trade linkages pre-pact	* Modest trade linkages
* Extensive cross-investment	* Limited investment in Japan, Korea; significant FDI in China
* Long + porous land borders	* Tights border controls – no land borders (excl. North Korea)

Table 5.1. U.S. Merchandise Trade with Northeast Asia

Exports

COUNTRY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
China	4,807	6,287	7,470	8,767	9,287	11,748	11,978	12,805	14,258	13,118	16,253
Japan	48,585	48,147	47,764	47,949	53,481	64,298	67,536	65,673	57,888	57,484	65,254
Korea	14,399	15,518	14,630	14,776	18,028	25,413	26,583	25,067	16,538	22,954	27,902
World	392,976	421,854	447,471	464,858	512,416	583,031	622,827	687,598	680,474	692,821	780,419

Imports

COUNTRY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
China	17,436	21,685	29,196	36,021	44,009	51,012	56,908	68,376	77,962	90,896	110,898
Japan	95,613	97,110	101,503	112,729	124,471	129,169	120,380	126,025	126,763	136,636	152,092
Korea	20,471	18,753	18,291	18,675	21,283	25,641	23,949	24,341	25,387	33,273	42,222
World	528,893	520,544	563,259	615,728	702,702	785,223	790,470	862,426	907,647	1,017,435	1,205,339

Balance

COUNTRY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
China	-12,628	-15,399	-21,726	-27,254	-34,722	-39,264	-44,930	-55,571	-63,704	-77,778	-94,645
Japan	-47,028	-48,964	-53,739	-64,780	-70,990	-64,871	-52,844	-60,352	-68,875	-79,152	-86,838
Korea	-6,072	-3,235	-3,661	-3,899	-3,255	-228	2,634	726	-8,849	-10,319	-14,320
World	-135,917	-98,690	-115,788	-150,869	-190,286	-202,193	-167,643	-174,828	-227,173	-324,615	-424,920

Note: Figures for China do not include Taiwan, Hong Kong or Macao. Figures are in millions of current dollars. Export figures are f.o.b. Import figures are c.i.f.

These factors plus differences in sources account for minor differences between this table and Tables 2.2 and 5.2

Source: U.S. International Trade Commission 2001

Table 5.2. U.S. Trade in Merchandise Goods by Country and Product

Product	World		Japan		China		Korea	
	exports	imports	exports	imports	exports	imports	exports	imports
Agricultural products	65.94	66.14	13.99	0.69	1.27	1.36	3.62	0.32
<i>Food</i>	51.97	48.64	11.72	0.48	0.77	0.98	2.38	0.18
<i>Raw materials</i>	13.97	17.5	2.27	0.21	0.5	0.38	1.24	0.14
Mining products	22.01	102.33	1.86	0.9	0.58	0.84	1.29	0.45
<i>Ores and other minerals</i>	5.17	5.53	0.53	0.04	0.32	0.19	0.52	0.01
<i>Fuels</i>	9.93	79.27	0.76	0.35	0.12	0.28	0.55	0.31
<i>Non-ferrous metals</i>	6.91	17.53	0.57	0.5	0.14	0.37	0.22	0.13
Manufactures	575.33	842.84	40.03	129.23	11.06	84.63	19.39	28.81
<i>Iron and steel</i>	5.45	16.36	0.12	1.77	0.07	0.41	0.1	0.97
<i>Chemicals</i>	71.98	64.07	5.79	6.76	2.09	1.8	2.5	0.72
<i>Other semi-manufactures</i>	40.29	74.84	2.02	5.46	0.6	6.72	0.96	1.56
<i>Machinery and transport equipment</i>	369.3	489.19	24.12	101.65	7.15	27.74	13.82	20.18
<i>Power generating machinery</i>	19.99	16.96	1.19	1.45	0.46	0.37	0.48	0.39
<i>Other non-electrical machinery</i>	62.57	61.59	3.08	13.6	1.33	2.33	2.26	1.28
<i>Office and telecom. Equipment</i>	125.66	176.84	10.47	33.13	2.23	17.12	9.1	12.54
<i>Electrical machinery</i>	37.27	48.39	2.05	7.28	0.55	6.67	0.92	1.27
<i>Automotive products</i>	62.92	155.72	2.12	39.99	0.22	0.43	0.3	3.83
<i>Other transport equipment</i>	60.89	29.69	5.21	6.2	2.37	0.82	0.76	0.87
<i>Textiles</i>	9.51	14.3	0.23	0.59	0.09	1.69	0.16	0.94
<i>Clothing</i>	8.27	58.78	0.45	0.1	0.01	7.74	0.02	2.25
<i>Other consumer goods</i>	70.52	125.29	7.3	12.9	1.05	38.54	1.82	2.2
Total merchandise	692.78	1059.22	57.48	134.87	13.12	87.78	24.94	29.6

Note: Dollar figures are in billions of dollars of trade in 1999.

Source: WTO *International Trade Statistics* (2001)

Table 5.3. U.S. Trade in Services with Northeast Asia**Exports**

Country	1992	1993	1994	1995	1996	1997	1998	1999
China	1,568	1,919	2,049	2,531	3,164	3,579	3,966	3,932
Japan	25,554	26,794	28,952	33,240	33,535	34,249	29,887	30,498
Korea	3,375	3,638	4,599	5,693	7,435	7,082	4,770	5,339
World	163,688	171,588	187,357	203,768	222,633	239,444	244,099	254,665

Imports

Country	1992	1993	1994	1995	1996	1997	1998	1999
China	1,044	1,303	1,459	1,674	1,936	2,205	2,279	2,666
Japan	10,607	11,785	12,584	13,463	12,907	14,053	13,522	15,692
Korea	2,041	2,343	2,796	3,581	4,124	4,530	4,157	4,458
World	100,379	107,940	119,101	128,781	137,102	152,042	167,607	174,825

Balance

Country	1992	1993	1994	1995	1996	1997	1998	1999
China	524	616	590	857	1,228	1,374	1,687	1,266
Japan	14,947	15,009	16,368	19,777	20,628	20,196	16,365	14,806
Korea	1,334	1,295	1,803	2,112	3,311	2,552	613	881
World	63,309	63,648	68,256	74,987	85,531	87,402	76,492	79,840

Notes: Figures for China do not include Taiwan, Hong Kong or Macao. Figures are in millions of current dollars.

Source: U.S. Bureau of Economic Analysis 2001a

Table 5.4. U.S. FDI Position in Northeast Asia

Country	1992	1993	1994	1995	1996	1997	1998	1999
China	563	916	2,557	2,765	3,848	5,150	6,481	7,766
Japan	26,591	31,095	34,117	37,309	34,578	33,854	35,633	47,786
Korea	2,912	3,427	4,334	5,557	6,508	6,467	7,395	8,749
World	502,063	564,283	612,893	699,015	795,195	871,316	1,014,012	1,132,622

Note: Figures for China do not include Taiwan, Hong Kong or Macao. Figures are in millions of current dollars and are on a historical cost basis.

Source: U.S. Bureau of Economic Analysis 2001b

Table 6.1 Predicted Effects of a Japan-Korea Free Trade Agreement Using a Static CGE Model

Country/Group	Change as % GDP	% Change from Base Year		Change in Factor Incomes (Base Year = 1.00)				
		Welfare	Exports	Imports	Land	Skilled Labor	Unskilled Labor	Capital
	Japan	0.01	2.06	2.47	0.99	1.00	1.01	1.00
South Korea	-0.28	8.21	8.12	1.09	1.01	1.01	1.01	1.00
Total FTA Members	-0.01	3.44	3.93	NA	NA	NA	NA	NA
China	-0.05	-0.20	-0.22	1.00	1.00	1.00	1.00	1.00
United States	-0.01	-0.25	-0.23	1.00	1.00	1.00	1.00	1.00
Total world	-0.01	0.30	0.30	NA	NA	NA	NA	NA
Taiwan	-0.05	-0.17	-0.22	0.99	1.00	1.00	1.00	0.99
Indonesia	-0.01	-0.03	-0.04	1.00	1.00	1.00	1.00	1.00
Malaysia	-0.07	-0.06	-0.07	1.00	1.00	1.00	1.00	1.00
Philippines	-0.05	-0.11	-0.09	1.00	0.99	1.00	0.99	1.00
Thailand	-0.03	-0.01	-0.01	1.00	1.00	1.00	1.00	1.00
Vietnam	-0.05	-0.08	-0.08	1.01	1.00	1.00	1.00	1.00
Singapore	-0.07	-0.14	-0.15	1.01	1.00	1.00	1.00	1.00
Australia	-0.02	-0.20	-0.19	1.00	1.00	1.00	1.00	1.00
New Zealand	-0.06	-0.21	-0.23	0.99	1.00	1.00	1.00	1.01
Canada	0.00	0.06	0.08	1.00	1.00	1.00	1.00	0.99
Mexico	0.00	0.06	0.07	1.00	1.00	1.00	1.00	1.00
Chile	-0.02	-0.13	-0.15	1.00	1.00	1.00	1.00	1.00
Argentina	-0.01	-0.06	-0.06	1.00	1.00	1.00	1.00	1.00
Brazil	0.00	-0.07	-0.05	1.00	1.00	1.00	1.00	1.00
Other South America	0.00	-0.02	-0.02	1.00	1.00	1.00	1.00	1.00
CACM/Caricom	0.00	-0.04	-0.04	1.00	1.00	1.00	1.00	1.00
EU	-0.01	-0.03	-0.04	1.00	1.00	1.00	1.00	1.00
Rest of World	-0.01	-0.04	-0.04	1.00	1.00	1.00	1.00	1.00
Total APEC	-0.01	0.72	0.75	NA	NA	NA	NA	NA
Total APEC Non-FTA Members	-0.01	-0.15	-0.16	NA	NA	NA	NA	NA
Total all Non-FTA Members	-0.01	-0.08	-0.08	NA	NA	NA	NA	NA

Notes: Change in welfare (increase in real GDP / initial real GDP) is on "equivalent variation basis". Export values are f.o.b. Import values are c.i.f. Base year is 1995.

Source: Scollay and Gilbert (2001) Chapter 3.

Table 6.2. Predicted Effects of a Japan-Korea-China FTA Using a Static CGE Model

Country/Group	Change as % GDP	% Change from Base Year		Change in Factor Incomes (Base Year = 1.00)				
		Welfare	Exports	Imports	Land	Skilled Labor	Unskilled Labor	Capital
	Japan	0.25	10.29	12.19	0.97	1.02	1.03	1.01
South Korea	0.80	19.49	19.42	1.09	1.04	1.05	1.04	0.96
China	2.09	44.36	48.55	1.24	1.05	1.07	1.05	0.96
Total Members of FTA	0.50	22.18	24.94	NA	NA	NA	NA	NA
United States	-0.02	-0.35	-0.34	1.00	1.01	1.00	1.00	1.01
Total world	0.09	3.26	3.25	NA	NA	NA	NA	NA
Taiwan	-0.84	-3.08	-3.84	0.97	0.98	0.98	0.98	1.03
Indonesia	-0.15	-0.72	-0.82	1.00	0.99	1.00	1.00	1.02
Malaysia	-0.70	-0.70	-0.80	1.01	0.99	0.99	0.99	1.03
Philippines	-0.35	-1.09	-0.97	1.00	0.99	1.00	0.99	1.01
Thailand	-0.21	-0.14	-0.16	1.01	1.00	1.00	1.00	1.02
Vietnam	-0.54	-0.90	-0.88	1.00	0.99	0.99	1.00	1.02
Singapore	-0.87	-1.81	-1.88	1.03	1.00	0.99	0.99	1.01
Australia	-0.05	-0.43	-0.42	0.97	1.00	1.01	1.00	1.01
New Zealand	-0.12	-0.51	-0.59	0.94	1.00	1.00	1.00	1.03
Canada	0.05	0.56	0.64	1.00	1.01	1.01	1.01	1.00
Mexico	0.02	0.47	0.59	0.99	1.01	1.00	1.00	1.00
Chile	0.03	0.22	0.20	0.97	1.00	1.00	1.00	1.01
Argentina	-0.50	-3.95	-4.25	0.85	0.99	0.98	1.99	1.05
Brazil	-0.02	-0.15	-0.15	0.99	1.00	1.00	1.00	1.03
Other South America	-0.01	-0.02	-0.03	0.99	1.00	1.00	1.00	1.01
CACM/Caricom	-0.17	-0.41	-0.38	0.98	1.00	1.00	1.00	1.00
EU	0.02	-0.03	-0.05	0.94	1.00	1.00	1.00	1.01
Rest of World	-0.05	-0.22	-0.24	0.99	1.00	1.00	1.00	1.01
Total APEC	0.16	7.36	7.67	NA	NA	NA	NA	NA
Total APEC Non-FTA Members	-0.06	-0.57	-0.59	NA	NA	NA	NA	NA
Total all Non-FTA Members	-0.03	-0.28	-0.30	NA	NA	NA	NA	NA

Notes: Change in welfare (increase in real GDP / initial real GDP) is on "equivalent variation basis". Export values are f.o.b. Import values are c.i.f. Base year is 1995.

Source: Scollay and Gilbert (2001) Chapter 3.

Table 7.1. Effects of Various FTAs on Korea

	<i>Output Effects</i>			<i>Productivity Effects</i>				
	Welfare	Exports	Imports	Land	Skilled Labor	Unskilled Labor	Capital	Natural Resources
Korean Free Trade Agreement								
With Japan	-0.28	8.21	8.12	1.09	1.01	1.01	1.01	1.00
With Japan (excluding agriculture)	-0.15	6.24	6.16	0.99	1.01	1.01	1.01	0.98
With Japan and China	0.80	19.49	19.42	1.09	1.04	1.05	1.04	0.96
With U.S.	2.41	7.22	8.60	0.77	1.04	1.04	1.00	1.02
With U.S. (excluding agriculture)	1.09	3.63	4.03	1.02	1.02	1.02	1.00	0.99
With AFTA and Japan	0.18	12.07	11.96	1.05	1.02	1.02	1.02	0.98
With AFTA, Japan, and China	1.18	22.96	22.85	1.05	1.05	1.06	1.05	0.95
With AFTA, CER, and Japan	0.19	12.94	12.83	1.02	1.02	1.02	1.02	0.98
With AFTA, CER, Japan, and China	1.20	23.66	23.54	1.02	1.05	1.06	1.06	0.95
APEC MFN Basis	1.08	23.40	23.15	0.98	1.04	1.04	1.04	0.87

Key: AFTA = ASEAN Free Trade Area, CER = Australia and New Zealand Closer Economic Relations

Notes: Welfare effects are on equivalent variation basis (increase in real GDP / initial real GDP). Export and import effects are percentage increases. Productivity effects are relative to a base of 1.00.

Base year is 1995. "With U.S. scenarios" assume a flexible current account and are otherwise not perfectly to the other scenarios due to different modeling assumptions.

Sources: Scollay and Gilbert (2001) Chapter 3. Choi and Schott (2001) for "With U.S. scenarios".

Table A.1. U.S. Products at Risk of Trade Diversion from Northeast Asian Free Trade Agreements

Japanese Host Market

United States vs. Korea (ESI=0.39)						United States vs. China (ESI=0.35)					
SITC	Description	ES	US X	US RCA	ROK RCA	SITC	Description	ES	US X	US RCA	PRC RCA
764	Telecommunications equipment	0.020	2,560	1.23	3.80	752	Automatic data processing machines	0.017	2,330	1.13	1.39
752	Automatic data processing machines	0.012	2,330	1.13	1.24	776	Cathode valves and tubes, semiconductors, circuits	0.011	3,270	1.40	0.39
012	Meat other than beef	0.017	9,760	1.29	0.59	759	Office machine parts	0.015	2,040	1.46	1.02
034	Fish	0.012	6,920	0.61	1.43	012	Meat other than beef	0.014	9,760	1.29	1.03
898	Music equipment	0.012	6,940	1.60	1.31	034	Fish and crustaceans	0.012	6,920	0.61	1.71
784	Motor vehicle parts	0.005	1,310	1.76	4.20	874	Measuring instruments	0.003	2,040	2.22	0.49
874	Measuring instruments	0.003	2,040	2.22	4.35	894	Carriages, toys, games, sporting goods	0.010	5,530	0.90	8.39
759	Office machine parts	0.003	2,040	1.46	0.27	784	Motor vehicle parts	0.004	1,310	1.76	0.13
894	Carriages, toys, games, sporting goods	0.010	5,530	0.90	4.18	778	Electrical machinery	0.009	520	1.06	1.36
778	Electrical machinery	0.009	5,160	1.06	7.32	222	Oil seeds and oleaginous fruits	0.004	890	3.22	0.62

Korean Host Market

United States vs. Japan (ESI=0.57)						United States vs. China (ESI=0.47)					
SITC	Description	ES	US X	US RCA	JPN RCA	SITC	Description	ES	US X	US RCA	PRC RCA
776	Cathode valves and tubes, semiconductors, circuits	0.165	5,497	1.40	2.21	776	Cathode valves and tubes, semiconductors, circuits	0.048	5,497	1.40	0.39
764	Telecommunication equipment	0.030	672	1.23	1.30	764	Telecommunications equipment	0.031	672	1.23	1.35
874	Measuring instruments	0.280	675	2.22	1.49	044	Maize	0.026	531	4.08	1.74
728	Misc. machinery	0.022	459	1.32	2.08	778	Electrical machinery	0.011	231	1.06	1.36
598	Misc. chemical products	0.021	422	1.53	1.34	752	Automatic data processing machines	0.008	338	1.13	1.39
752	Automatic data processing machines	0.011	338	1.13	1.46	598	Misc. chemical products	0.006	421	1.53	0.46
282	Iron and steel	0.014	277	1.06	1.08	772	Electrical circuit parts	0.010	204	1.13	0.94
778	Electrical machinery	0.011	232	1.06	2.51	874	Measuring instruments	0.002	675	2.22	0.49
772	Electrical circuits	0.010	204	1.13	1.94	522	Inorganic chemicals	0.008	168	1.13	2.41
743	Pumps, gas compressors, and fans	0.008	229	1.41	1.51	759	Parts for office machines	0.008	157	1.46	1.02

Table A.1 U.S. Products at Risk of Trade Diversion from Northeast Asian Free Trade Agreements

Chinese Host Market

United States vs. Japan (ESI=0.52)					United States vs. Korea (ESI=0.38)						
SITC	Description	ES	US X	US RCA	JPN RCA	SITC	Description	ES	US X	US RCA	ROK RCA
764	Telecommunications equipment	0.053	1,041	1.23	1.30	776	Cathode valves and tubes, semiconductors, circuits	0.050	852	1.40	6.45
776	Cathode valves and tubes, semiconductors, circuits	0.050	852	1.40	2.21	764	Telecommunications equipment	0.024	1,041	1.23	3.80
728	Misc. machinery	0.034	576	1.32	2.08	641	Paper	0.032	546	0.80	0.88
874	Measuring instruments	0.013	647	2.22	1.49	728	Misc. machinery	0.015	576	1.32	0.70
752	Automatic data processing machines	0.011	598	1.13	1.46	759	Office machine parts	0.008	339	1.46	0.27
759	Parts for office machines	0.020	339	1.46	2.03	772	Electrical circuit parts	0.010	247	1.13	5.67
641	Paper	0.012	546	0.80	3.01	611	Leather	0.012	199	0.54	4.00
772	Electrical circuit parts	0.015	247	1.13	1.94	598	Misc. chemical products	0.007	317	1.53	0.52
778	Electrical machinery	0.013	225	1.06	2.51	778	Electrical machinery	0.010	225	1.06	7.32
711	Vapour generating boilers	0.008	323	1.34	3.19	874	Measuring instruments	0.003	647	2.22	4.35

Key: SITC=Harmonized Schedule Classification; Description=Product description; ES=Export Similarity for the product; US X=U.S. exports (in millions of dollars in 1998); ()RCA= Revealed Comparative Advantage in the global market; US=United States; ROK=Korea; PRC=China; JPN=Japan

Notes: Products are selected by selecting the top ten products based on ES * US X. For the Korean and Chinese markets only, U.S. Exports include cost, insurance, and freight.

Sources: OECD (2000) for export values; U.S. International Trade Commission (2000) for U.S. exports to Japan; International Trade Centre (2001) for data used to calculate Revealed Comparative Advantages