

Part I: Economics of a Free Trade Agreement

TRADE TRENDS: REGIONALIZATION VERSUS REGIONALISM

Regionalism, which we will define generally here to include any formal preferential trading arrangement between two or more countries, came late to Asia.¹ Before the turn of the 21st century, there were few regional trading agreements in existence. While successful Asian economies by and large exploited the international marketplace effectively, they did so in the context of the General Agreement on Tariffs and Trade (GATT)/World Trade Organization (WTO) framework (see Box 1.1 for an overview of the evolution of the multilateral system). However, regionalization, which we will define as a market-led process of increasing economic interaction, has been building up momentum in Asia for decades, spurred by unilateral liberalization, market-oriented reforms, and successful economic growth in Asia consistently above the global average (with the exception of the Asian Crisis years, 1997–1998). Hence, formal preferential trading arrangements in the region, particularly in the form of free trade areas (FTAs), are being developed as a means of enhancing regionalism (“the flag following trade”) rather than the other way around, as was true of such agreements as colonial preferences or even the early years of European economic integration. In most of Asia, regionalism is being used as part of the overall process of economic reform, to buttress the outward-oriented development strategies of the region’s economies.

¹ Unless specified otherwise, “Asia” throughout the reference book is taken to include the Asian Development Bank’s (ADB) 47 regional member countries (see list in <http://aric.adb.org/technotes.htm#countrygroupings>).

Box 1.1: A Brief History of Multilateral Governance under the World Trade Organization—From the GATT Rounds to Doha

The General Agreement on Tariffs and Trade (GATT) was signed in 1944, with the immediate objective of preventing future trade wars and the inconsistent commercial policies that had plagued international trade in the 1930s. It was originally intended to be a temporary body; the International Trade Organization (ITO) was supposed to replace it as a permanent body with international legal status, on a par with the other “Bretton Woods Institutions”—the International Monetary Fund and the World Bank. The ITO was never ratified; however, the GATT came into effect on 1 January 1948 as an ad hoc organization that would take a permanent, legal form only in 1994, with the creation of the World Trade Organization (WTO).

The GATT was designed to reduce international barriers to trade on a nondiscriminatory, or “most-favored nation” (MFN), basis. This would be achieved through concerted, multilateral negotiations called “rounds.” Since the creation of the GATT, there have been eight rounds, i.e.: Geneva, 1947–1948; Annecy, France, 1949; Torquay, England, 1950–1951; Geneva, 1956; the Dillon Round, 1960–1962; the Kennedy Round, 1963–1967; the Tokyo Round, 1973–1979; and the Uruguay Round, 1986–1993. The current WTO negotiations have been dubbed the Doha Development Agenda, to underscore the importance of developing countries in this series of talks. Earlier GATT rounds were successful in reducing tariffs on manufactured goods. The Uruguay Round began to address more complicated issues, from quantitative restrictions in sensitive areas like agriculture and textiles and clothing to trade-related areas such as investment measures and intellectual property protection. The Doha Development Agenda was initiated to go further down the road of “deep” integration. The process has been difficult, given the political sensitivity of many of the key areas being addressed. In fact, the 2003 Ministerial Meeting in Cancun, Mexico ended without any agreement.

The Hong Kong Ministerial Meeting in December 2005 was successful in keeping the Doha negotiations alive. The WTO members agreed to undertake liberalization negotiations generally under four pillars: Non-Agricultural Market Access (NAMA), Agriculture, Services, and Rules (including those pertaining to administrative actions, e.g., antidumping and countervailing duties, and regional trading agreements). The primacy of the “development dimension” of the talks was reemphasized. The leaders at the meeting set April 2006 as the deadline for the Doha package. However, no agreement has yet been forthcoming.

Source: Updated from ADB (2006).

As we will see throughout this reference book, regionalism has both positive and negative elements. After all, FTAs all have discriminatory features and, therefore, are “second best.” There are in fact no guarantees that a “free trade area” will be a movement in the direction of free trade, its name notwithstanding. It depends very much on the agreement. We will argue in this book that the current FTA movement in Asia is outward-oriented, and that the intentions of economies engaged in these agreements are pro-market and consistent with multilateral rules. However, to be certain that regionalism will support efficient regionalization and competitiveness, policy makers must understand the complicated nature of these agreements and learn to embrace the positive elements while minimizing the potentially negative ones. Part I was written with this in mind.

RISE OF FREE TRADE AGREEMENTS IN ASIA AND THE PACIFIC

The rapid spread of regionalism has become one of the most important recent developments in the global trade system. The proliferation of bilateral and plurilateral FTAs is fundamentally altering the world trade landscape. Trade between FTA partners now makes up nearly 40% of global trade, and new agreements increasingly address issues beyond trade.² Asia is a latecomer in the move toward FTAs compared with Europe, the Americas, and Africa, but has seen an unprecedented increase in total FTA activity since the 1990s. By Asian Development Bank (ADB) estimates, at least one Asian country³ is

² World Bank (2005). However, the amount of trade that is actually preferential is smaller because of the costs of compliance with free trade agreements (FTAs), particularly those associated with the rules-of-origin requirement.

³ Asia in the ADB FTA database refers to Asia and the Pacific.

involved in 204 FTAs in various stages of implementation: 95 concluded, 60 under official negotiation, and 49 being proposed (see Box 1.2 for information on ADB's FTA Database, which gives up-to-date information and analysis regarding emerging and existing FTAs). This is a dramatic increase from the fewer than 10 FTAs involving Asian countries in the early 1990s (see Figure 1.1).

The rise in the number of FTA initiatives in Asia is driven by a number of factors including: (i) a defensive response to the proliferation of trading blocs and FTAs in other major regions; (ii) uncertainty over progress in global trade talks under the WTO framework; (iii) the need to improve productivity in the face of the heightened competitive pressure from the economic emergence of the People's Republic of China (PRC) and India, in particular with respect to economies of scale through market integration; (iv) the perceived need for deeper integration with trading partners, due in part to the demonstration effect of successful regional integration accords elsewhere; and (v) the promotion of "beyond the border" structural reforms as part of a competitiveness strategy (e.g.,

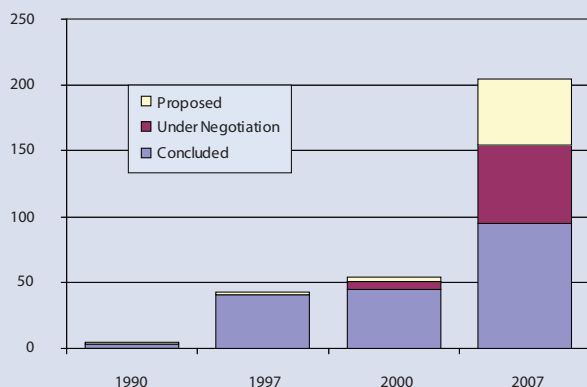
investment liberalization, promotion of domestic competition, harmonization of standards, and upgrading of technology development). The recent increase in FTAs has also been driven by the richest and largest economies in the region such as the PRC, Japan, Republic of Korea, Singapore, and, Thailand, suggesting a link between FTA growth and economic prosperity, although the exact causation still needs to be explored further.

Box 1.2: ADB's Free Trade Agreement Database

Launched in October 2006 by ADB and managed by its Office of Regional Economic Integration, the Free Trade Agreement (FTA) Database in the Asia Regional Information Center (ARIC) website (www.aric.adb.org) tracks FTAs of 47 regional members of ADB and provides three types of information: (i) FTA trends (statistical tables on the status and various categories of FTAs in Asia and the Pacific); (ii) available resources on each FTA (i.e., legal documents, official summary, studies and researches, news, opinions and editorials, FTA membership, and an external link to the UNESCAP database); and (iii) a comparative FTA toolkit—an innovative feature of the FTA database—which allows side-by-side comparison of around 80 chapters/provisions of more than 40 concluded FTAs. The list of FTAs on the ARIC website is based on official sources (joint statements, declarations, press releases, and government websites). The information about them is also from official sources, research sites, and online news items.

Source: ADB.

Figure 1.1: Number of Free Trade Agreements Involving Asia and the Pacific Countries, 1990–2007



Source: ADB FTA Database. Available: www.aric.adb.org

Figure 1.2: Number of Free Trade Agreements Involving Asia and the Pacific Subregions, 2007



Source: ADB FTA Database. Available: www.aric.adb.org

Among the Asian subregions, East Asia⁴ is the most active in forming FTAs: at least one East Asian economy is involved in any of 112 FTAs, almost twice the number of FTAs involving Central or South Asian countries (see Figure 1.2).⁵ The Pacific is the least involved in FTA formation among the four Asian subregions. Given the rise in the market-based regionalization of East Asian economies over the past 20 years, that is, the increase in the regional shares of trade and investment due to market-driven activity, the deepening of regional economic interdependence is the most fundamental rationale behind the recent economic regionalism in East Asia—an example of the “flag following trade.” Since the Asian Crisis of 1997–1998, East Asian economies have embarked on various initiatives under the general rubric of economic regionalism in trade/investment and money/finance. The crisis prompted the subregion’s economies to realize the importance of economic cooperation and to make efforts to institutionalize such interdependence.⁶

An important feature of the rise in the number of FTAs in Asia is the growing number of overlapping agreements and the so-called Asian “noodle bowl,”⁷ that has emerged from the proliferation of bilateral and plurilateral FTAs in the region. Each FTA can be quite different in coverage, depth of liberalization, and the specific regulations that make the accord function (e.g., rules of origin). According to ADB estimates, Asian countries are involved in 156 bilateral and 48 plurilateral FTAs in various stages of implementation. Many of these agreements—especially the new ones,

are with countries outside the region (see Table 1.1). The fact that many FTAs extend beyond the Asian region itself underscores the importance of external markets particularly for the export of final products. The formation of cross-regional agreements is driven by several factors including energy security, access to minerals and other natural resources, and efforts by countries to “lock in” reforms by making them part of a formal trade treaty with a major developed country or region.⁸

Table 1.1: Types of Free Trade Agreements (FTAs) Involving Asia and the Pacific Countries, 2007

Regional Coverage	Bilateral FTAs	Plurilateral FTAs	Total FTAs
Within Asia-Pacific	73	25	98
Outside Asia-Pacific	83	23	106
Total FTAs	156	48	204

Source: ADB FTA Database. Available: www.aric.adb.org

Around half of the established FTAs involving at least one Asian country have not been notified to the WTO. A large portion of the WTO-notified FTAs involve East Asian economies, indicating significant adherence in East Asia to WTO rules and procedures for FTAs. However, many of the provisions of recent agreements formed by East Asian economies extend beyond the WTO regulatory framework (“WTO-plus agreements”) to include provisions related to a host of “deep” issues such as trade facilitation, investment, government procurement, competition, intellectual property, and environment and labor rules. Such provisions are often included in FTAs between developed and developing countries, no doubt reflecting the emphasis that developed economies give to these issues.

⁴ Unless specified otherwise, “East Asia” in this reference book refers to the 10 Association of Southeast Asian Nations (ASEAN) countries plus the People’s Republic of China (PRC); Hong Kong, China; the Republic of Korea; Mongolia; Taipei, China; and Japan.

⁵ See Kawai and Wignaraja (2007).

⁶ See Kawai (2005).

⁷ The terms “noodle bowl” and “spaghetti bowl” are used interchangeably throughout this book.

⁸ See ADB (2006).

Box 1.3: GATT 1994, Article XXIV

Free trade agreements (FTAs) represent a departure from the General Agreement on Tariffs and Trade (GATT)/ World Trade Organization (WTO) guiding principle of nondiscriminatory trade, i.e., most-favored nation (MFN) treatment, among signatories. Article XXIV of GATT 1994 and the Uruguay Round “Understanding on the Interpretation of Article XXIV of the General Agreement on Tariffs and Trade” provide the rules governing free trade in goods. Article V of the General Agreement on Trade in Services (GATS) gives the corresponding rules for free trade in services.

Article XXIV recognizes the desirability of increasing trade through voluntary agreements between two or more members, but it also cautions countries that such an agreement should be to facilitate trade among the members and not raise barriers to trade with non-partner countries. This provision clearly restricts the common external tariffs imposed by the members of a customs union. However, the preferential margin created by a free trade area in effect raises barriers to trade with non-partner countries, resulting in trade diversion, i.e., the substitution of partner imports for lower-cost imports from non-partners. Some economists have suggested that countries forming free trade areas should be required to reduce MFN tariff rates to offset this tendency.

As defined in Article XXIV, a free trade area is a group of two or more countries (“customs territories”) in which *duties and other regulations of commerce* are eliminated on *substantially all the trade* between them *in products originating* in the member countries. Article XXIV distinguishes between a free trade area, where trade barriers have been removed, and an agreement that will eventually lead to the formation of a free trade area. However, key concepts in this definition are left undefined. How much trade is “substantially all trade”? Should the amount of trade covered be measured in value terms or according to the percentage of product categories included? Other than tariffs, which “regulations of commerce,” e.g., trade barriers, must also be eliminated? Exactly which goods are considered to have originated in the member countries? Here the agreement must spell out rules of origin for any good produced in the area but incorporating intermediates imported from non-members. Finally, how long a period is permissible between the signing of an agreement to form an FTA and the elimination of barriers on substantially all trade? Almost all FTAs are phased in over time, often allowing more than 10 years for some tariffs to be eliminated.

The 1994 “Understanding on the Interpretation of Article XXIV” was intended to reduce the ambiguity concerning the coverage and timing of free trade agreements. It begins by recognizing the importance

of comprehensive coverage, i.e., the contribution to the expansion of world trade is “increased if the elimination of duties and other restrictive regulations of commerce extends to all trade, and diminished if any major sector of trade is excluded.” Free trade areas that exempt significant areas, such as agricultural trade or a major manufacturing sector via highly restrictive rules of origin, appear to violate this coverage guideline. With respect to the time allowed for a new agreement to be phased in, the Understanding specifies that the “reasonable length of time” of Article XXIV “should exceed 10 years only in exceptional cases” and that “where... parties to an interim agreement believe that 10 years would be insufficient they shall provide a full explanation to the Council for Trade in Goods of the need for a longer period.”

However, the Tokyo Round agreements, signed in 1979, contained more lenient rules on preferential trading accords between developing countries. These include the “Decision on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries,” known as the Enabling Clause. Under its terms, developing countries are subject to less scrutiny in complying with Article XXIV. Thus, developing countries can potentially agree to reduce but not eliminate tariffs and other trade barriers or be more selective in sectoral coverage. In practice, however, no FTAs among GATT or WTO members, whether developed or developing, have been challenged successfully by other members. This laissez-faire attitude could change in the future, given the increasing concern among WTO members about the effects of proliferating FTAs and their implications for progress in multilateral trade liberalization. The Doha Development Agenda includes negotiations aimed at “clarifying and improving disciplines and procedures under the existing WTO provisions applying to regional trade agreements.” As an initial result of the effort, a “transparency mechanism” announced in 2006 provides for early announcement and notification to the WTO of any new FTA, with an eye to prompt review of its compliance with WTO rules. But whether prompt notification can affect the provisions of new FTAs remains to be determined. By mid-2006, when the transparency mechanism was announced, the process of assessing the consistency of FTAs with WTO rules had already created a growing backlog of cases awaiting evaluation.

Regardless of WTO scrutiny, countries planning to negotiate a free trade agreement should be aware of the potentially adverse economic and political effects, both on themselves and on their excluded trading partners, of arrangements that cover some but not all goods, specify an unduly long phase-in period, or divert trade from lower-cost sources.

This burgeoning number of agreements in the region has raised concern in the light of its potential to add greatly to the complexity of international trade and to the administrative costs of trade. The web of differing trade arrangements can tangle administrative procedures—e.g., customs procedures, technical standards, rules of origin—and thereby raise the cost for both enterprises and governments. To mitigate such adverse effects, some have called for the creation of a region-wide FTA with harmonized rules of origin among other business-friendly provisions. In this regard, the Association of Southeast Asian Nations (ASEAN) could form a natural hub for East Asia and for Asia in general.⁹

Given their complicated and inherently discriminatory nature, many of these subregional and regional initiatives would be more efficiently handled at the global level. After all, Article XXIV of the GATT/WTO was intended to be an exception to the MFN rule (see Box 1.3). But what happens when the exception becomes the rule? We address this and related issues in the rest of this section.

WHY ENTER INTO A FREE TRADE AGREEMENT?—POLITICAL AND ECONOMIC GOALS

As noted above, the major surge in FTAs is fundamentally changing the international commercial landscape, with Asian economies being an important part of this process. This trend did not develop by accident. In this section, we consider some of the general economic and political goals behind the formation of FTAs.

To begin with, we should stress that, while economics may be an important motivation in setting up an FTA, political

circumstances generally dominate. In fact, while one can list a number of accords with a dubious economic rationale but strong political motivations, no major accord made good economic sense but was politically untenable. Hence, while this book emphasizes the economics of regional trading arrangements, the important political dimensions of each agreement should also be respected.

Gains from Trade

The “gains from trade” argument, first developed by the famous British economist David Ricardo, has been used to promote the need for trade liberalization over the past two centuries. In short, as a country specializes in the products that it produces most efficiently, compared with other countries, and then trades the goods in surplus, it is able to improve its standard of living. On the supply side, efficient structural adjustment takes place: the country uses its resources in the most productive way. On the demand side, firms are able to source the most cost-effective inputs and consumers are able to purchase imports at the lowest price. When all countries specialize in their “comparative advantage” products, the entire world is better off and global prosperity is maximized.

As Nobel Laureate Paul Samuelson has noted, the principle of comparative advantage might be the only proposition in the social sciences that is both true and nontrivial. It is also counterintuitive to many. For example, in the debates over the North American Free Trade Agreement (NAFTA) between Canada, Mexico, and the United States (US), opponents of the agreement in Mexico argued that there was no way Mexico could compete with a technological superpower like the US, and in the US those that opposed NAFTA insisted that the US could not compete with Mexicans, whose wages were only

⁹ See Kuroda (2007).

a fraction of those at home. Riccardo demonstrated more than a century earlier that both were wrong. With free trade, the US and Mexico would produce the products in which they had inherent comparative advantage, and both would benefit. In a hospital, a medical doctor can perform all the roles of a nurse and much more specialized tasks. But there still is a role for the nurse, who can specialize in more routine, less specialized activities, leaving the doctor to specialize in more advanced tasks. In accepting this division of labor, each will prosper and the hospital will be more efficient.

This does not mean that the doctor and the nurse will be paid equally. The former will be more productive in the area requiring a high degree of expertise than the latter and, hence, will receive a higher salary. Likewise, countries with higher productivity will have a higher standard of living than lower-productivity countries. In addition, under a regime of free trade, countries do not decide what they will produce. Economics, rather than politics, dictates comparative advantage. But as the Hungarian economist Bela Balassa has noted, comparative advantage is man-made; policy matters. Japan, for instance, began after World War II as one of the world's most labor-abundant countries, and exported low-cost, labor-intensive products for decades. But its evolution over time, driven by forward-looking government policy, allowed it to shift its comparative advantage into high-tech, capital-intensive exports. Many other Asian countries are also moving up the development ladder.

Further, as economies evolve over time from low-skilled production, of agricultural and labor-intensive goods for example, into more sophisticated products, their comparative advantage tends to merge. Economic integration changes from inter-industry trade (say, oil for computer chips) to intra-

industry trade (say, automobiles for automobiles). Recent trends in East Asia underscore this process. At first, trade was inter-industry—and, hence, there was not much of it. But particularly since the Asian Crisis, East Asian countries have been engaging much more in intra-industry trade, a process that is responsible in part for the rising intra-regional trade share and greater economic symmetry (Rana 2006). In fact, most of the world's trade takes place between developed countries (with the same economic characteristics) and is of the intra-industry variety.

This leads us to the distinction between “horizontal” and “vertical” specializations in production. Horizontal specialization relates to production according to comparative advantage in the traditional sense discussed above; vertical specialization focuses on the many parts and processes that make up the production of a final good, i.e., the “value chain.” While efficient division of labor will always dictate specialization in what the country does best relative to other countries in the global trading system, multinational corporations (MNCs) have transformed radically how they organize productive processes and source inputs. For example, while in the 1950s and 1960s an MNC might have produced an entire automobile in the Philippines for sale in the local and international markets, today that same MNC would have operations in the Philippines that would be part of a global production process, in which the MNC would exploit the comparative advantages of each country in its network to produce the automobile most efficiently. This value chain would see labor-abundant countries producing labor-intensive components, capital-intensive countries producing capital-intensive components, high-skill-intensive countries producing high-skill-intensive components, and so on. The

production of automobiles and electronics is increasingly characterized by this sort of value-chain process in the modern economy. The rising importance—and, often, dominance—of electronics in the exports of most East Asian economies testifies to the importance of the vertical division of labor that is being created by these value chains, a process that in turn is driving economic integration and globalization more generally. It is still driven by comparative advantage; however, in addition to having comparative advantage in particular *products*, economies have comparative advantages in *processes and components* that are part of a vertical division of production.

Further, this process allows developing countries to tap more easily into global production chains. In the past, the production of an entire automobile in the Philippines would have required a demanding set of national economic prerequisites such as available inputs and skill sets that could have been discouraging to the MNC. Perhaps the Philippines would have been bypassed in favor of a more developed country with these attributes already in place. However, within the context of the vertical division of labor discussed above, the Philippines would only have to have comparative advantage in a subset of these skills to participate in the production chain. Hence, these value chains hold important advantages for less-developed countries, which can now tap into globalization far earlier than in the past.

In sum, the “gains from trade” argument, based on the principle of comparative advantage, explains the inherent logic of international free trade as the “first best” policy option, i.e., one that should lead to greater welfare for all countries. Comparative advantage is also a dynamic process, suggesting that, while

trade increases efficiency and prosperity, government policy at the national level plays a key role in determining to what degree each will be successful.

But what is the difference between *free trade* and *FTAs*? Unlike multilateral liberalization under the GATT/WTO, FTAs tend to be controversial in economic and policy circles for a variety of reasons, most of which are linked to the fact that preferential trading arrangements, such as FTAs and customs unions, are by their very nature discriminatory. We explain the economics of FTAs in the rest of this section, and focus on political-economy-related issues in the next section.

Static effects

The “static effects” of FTAs generally refer to the effect on price changes induced by preferential tariff (and nontariff) liberalization. Free trade areas remove discrimination between partner countries and domestic firms, and, hence, home and country prices of tradable goods—that is, exports, imports, and import-competing products—tend to be equalized as barriers to trade are reduced. Relatively inefficient domestic production therefore contracts (“trade creation”) in favor of production in partner countries. This is essentially the same efficiency-enhancing effect as in Ricardo’s model. However, FTAs create a new form of discrimination, that is, between the exports of partner and non-partner countries. Partner-country exports will displace more efficient non-partner exports in the home market if the degree of preferential access is sufficient (“trade diversion”). Trade diversion implies a less efficient international division of labor, and, since the home country will lose tariff revenues and will pay a higher price for its imports, the importing country loses. Thus, the net (static) effects of an FTA will depend on the degree of trade

creation compared with trade diversion (“allocative efficiency”). Note that trade liberalization under the WTO should not involve any trade diversion, as MFN treatment implies nondiscrimination between sources of imports. This is why it is “first best” option. On the other hand, since FTAs discriminate in favor of partner countries, regionalism is the “second best” and, therefore, does not *guarantee* a more efficient division of labor in the grouping.

In comparing the economics of nondiscriminatory trade liberalization, such as that taking place under the auspices of the WTO on the basis of MFN treatment, on the one hand, and discriminatory trade liberalization in the context of an FTA, on the other, we should keep in mind the qualitative differences between accords. First of all, while trade diversion does exist in the context of an FTA, it is also true that FTAs tend to be more comprehensive in the coverage of goods (and services). In fact, Article XXIV of the GATT/WTO, which dictates minimal requirements for FTAs, insists on the coverage of substantially all goods. But no such requirement exists under the GATT/WTO. Countries include as many sectors as they deem fit through negotiations. This has led to a good deal of piecemeal liberalization under the GATT/WTO, leaving protection on some agricultural and labor-intensive products practically untouched after successive multilateral rounds. The exclusion of individual products can be problematic on efficiency grounds, particularly when it involves products that are used as inputs in the productive network. For example, duty-free inputs on steel will cause exaggerated protection of value added (the “effective rate of protection”) in the automotive sector. The exclusion of tariffs on imported lumber will do the same in the furniture industry if the latter is excluded from liberalization. Free trade

areas, on the other hand, are generally far more comprehensive in the treatment of sectors across the board. Thus, while FTAs lead to potential trade diversion because of discrimination between *countries*, the existing multilateral regime suffers from negative efficiency effects because of discrimination between *products*.

Second, regionalism holds another advantage over multilateralism in that it allows like-minded countries to address far more issues and in a shorter period of time. By choosing one or several partners with similar policy goals, countries are able to make more progress in deep integration than they could in the extremely diverse WTO context. The recent interest in regionalism on the part of OECD countries that have traditionally shunned it (the US, Japan, the Republic of Korea, Australia and New Zealand, and so on) derives from their desire to address these many issues and their understanding that they cannot resolve them in the context of the WTO, or at least not in the short or medium run. A successful conclusion to the Doha Development Agenda would, perhaps, give momentum to regionalism, but this is not certain. The incentives for entering into new bilateral and plurilateral accords, as well as for deepening existing ones, would remain.

Dynamic effects

Economists tend to focus on the static effects of economic integration. Price changes in FTAs drive the theoretical and empirical FTA literature mainly because they are easier to conceptualize and estimate than other effects of regionalism (see Box 1.4). However, the static effects of FTAs tend to be less important from the point of view of sheer economic impact and the implications of regionalism for economic development.

Box 1.4: Computable General Equilibrium Models and Free Trade Agreements

Computable general equilibrium (CGE) models are often used by the World Bank, the World Trade Organization (WTO), and ADB, among others, to estimate the welfare effects of free trade agreements (FTAs) and other trading agreements. These models evolved from the earliest models of the economy that showed inter-industry links. While earlier models could capture only very simple general-equilibrium relationships, more recent models are able to incorporate market mechanisms and policy instruments that work through price incentives.

The earliest global trade model was the Michigan Model of World Production and Trade, which was designed to gauge the employment impact of the Tokyo Round. This model, with its set of equations extended to include the features of the New Trade Theory (imperfect competition, increasing returns to scale, and product differentiation), was also used in analyzing the effects of the US-Canada FTA. The extended Michigan Model was later applied to country groups selected from the original 34-country Michigan Model.

The MIRAGE model, another imperfect competition model, developed by the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) in Paris, describes imperfect competition in an oligopolistic "Cournot" framework, which accounts for horizontal product differentiation linked to varieties and geographic origin. The modeling is done in a sequential dynamic setup, where the number of firms in each sector is progressively adjusted, and installed capital is assumed to be immobile even across sectors. Compared with other CGE models, MIRAGE explicitly describes foreign direct investment and trade barriers, on the basis of a unique database for tariff barriers (MacMap), and introduces vertical product differentiation.

Source: ADB (2006); World Bank (2004); Plummer and Wignaraja (2006)

The Global Trade Analysis Project (GTAP) model, constructed in 1992, is the applied general-equilibrium model in wide use. The standard GTAP model assumes perfect competition and constant returns to scale, while some extensions of the model assume imperfect competition. The dynamic model (GTAP-Dyn) extends the standard model to incorporate dynamic behavior. It includes all the special features of the standard model such as sophisticated consumer demands and inter-sectoral factor mobility, as well as new treatment of investment behavior and additional accounting relations to keep track of foreign ownership of capital. Backed by an international consortium of agencies and universities, GTAP created a consistent global data set for use in analyzing international economic policy issues and has become the basis for all global CGE models.

The LINKAGE model, developed by the World Bank, is a recursive dynamic applied general-equilibrium model with neoclassic features. It comes with an aggregation facility, which is used to aggregate the extensive GTAP database into a tractable data set for simulation. An extension of the LINKAGE model, the General Equilibrium Model for Asian Trade (GEMAT), is an applied general-equilibrium model of the global economy with a focus on Asia and is primarily used by ADB. It incorporates firm heterogeneity in production and fixed trading costs in modeling production and trade, thereby better capturing the extensive margin in international trade growth and trade-induced productivity enhancement.

The appendix to Part I gives a more explicit example of the theoretical foundations of a CGE and includes an actual application to various FTA scenarios. The exercise demonstrates how the results of these models should, and should not, be used by policy makers in negotiations.

After all, price changes induce one-time effects, and are called "static" for that reason. On the other hand, "dynamic effects" refer to the medium- and long-term implications of regional integration and, as such, tend to be more significant. Dynamic effects are also more pervasive, affecting almost all areas that relate to an economy's competitiveness. From articulated policy statements and the

direction of FTA formation in Asia, we find that the economic policy goals of FTAs in the region focus on these dynamic effects, rather than mere price changes. Below, we consider some of the most important dynamic effects in the context of FTAs—economies of scale, technology transfer and foreign direct investment (FDI), and structural policy change and reform.

Economies of Scale. If a firm's average costs fall when its output expands, it will be able to sell at more competitive prices as its market grows. This type of production function would be characterized by "economies of scale," of which the degree depends on the product type. Economies of scale exist in the production of many agricultural, natural-resource-intensive, and manufacturing sectors, as well as services. This effect is intuitive to both business people and consumers, who are used to paying less for larger purchases.

The importance of economies of scale in the context of FTAs is also intuitive. By creating a larger market for firms operating in partner countries, an FTA will allow producers to take advantage of a larger customer base and, hence, produce at a lower average cost on all sales. Firms will even be able to lower prices for existing customers—the "cost-reduction effect" (Corden 1972). As a result, they will become more competitive not only at home but also in foreign markets.

It is clear that exploiting economies of scale is an important motivation for regional integration. Resource pooling and market sharing have been explicit goals of ASEAN essentially since its foundation. ASEAN has deepened economic integration considerably over time and is now creating an ASEAN Economic Community, in part to compete with the PRC and Indian markets, which otherwise would have an important competitive advantage in economic scale. Deep integration in the European Union (EU) has been pushed by the need to compete with the US for the same reasons.

Technology Transfer and Foreign Direct Investment. The link between FDI and technology transfer has been firmly established. It is one of the primary reasons why Asian countries seek to

attract FDI inflows, through unilateral and concerted trade liberalization and other means. Bilateral and regional FTA formation attracts such long-term, risk-sharing investment flows by creating a more integrated marketplace within which MNCs can enjoy a regional division of labor with low transaction costs and exploit product-level economies of scale.

Greater FDI flows can have important salutary effects on the economy by bringing in long-term foreign capital and foreign exchange, providing ready-made international customers through the foreign firms' global networks, stimulating local competition, and putting pressure on government bodies to embrace "best practices" vis-à-vis investment measures and regulations. But perhaps the most important benefit from FDI, at least for developing Asia, is technology transfer.

The investment effect on trade creation and trade diversion is also worth noting. An MNC that believes an FTA between India and ASEAN will lead to greater economic dynamism in Asia will be compelled to invest more in India. Since the resulting investments would be consistent with India's dynamic comparative advantage, this is known as "investment creation," i.e., India (and the rest of the world) experiences a more efficient distribution of global investment. However, suppose that the MNC decides to invest in India not because of a perceived increase in dynamism in that country but because it will now have preferential access to the ASEAN market. In other words, although investing in, say, Bangladesh might have been more cost-effective, the MNC diverts investment to India because of this regional accord. The motivation would be the same as in "tariff hopping" FDI. This effect is known as "investment diversion." India may be pleased that it can draw in more FDI,

but Bangladesh will certainly suffer. Moreover, the investment in India could very well go into sectors in which India is not internationally competitive but merely competitive relative to ASEAN, producing negative efficiency effects even there.

While conceptually clear, investment creation and diversion is difficult to estimate. We observe a change in FDI flows empirically but are unable to trace directly the motivation for the investment—MNCs obviously do not announce their management strategies. However, we would expect investment creation to follow trade creation, and investment diversion to follow trade diversion. To demonstrate this, let us return to our India-ASEAN example and, further, let us focus on electronics. If tariffs on electronic products in ASEAN were equal to zero—they are indeed very low in the main ASEAN markets—there would be no incentive for investment diversion, as the MNC even with its newly gained preferential access would have no real benefit from investing in India; all countries would have tariff-free access. Hence, if it still speeded up its investments in India, we would attribute this to investment creation. On the other hand, if the electronics markets in ASEAN were highly protected, the potential for investment diversion would be great, as would be the potential for trade diversion.

Using an FTA to attract FDI from *third countries*, as well as partner countries, is often a key motivation for such an accord. This is certainly the case in ASEAN, whose free trade agreement (the AFTA) is thought of more as an investment agreement than as a trade agreement. In other words, the goal of AFTA is to reduce transaction costs to MNCs wishing to use ASEAN as an integrated production platform to exploit vertical division of labor. Note, however, that the

goal of ASEAN (and other economies in Asia) is mainly to bring in third-country MNCs, that is, to attract greater FDI inflows from OECD countries. Developed countries are by far the most important global investors. In 1995–2005, intra-ASEAN FDI was only 14% of total FDI inflows, and almost half of that share was Singaporean investment in Thailand and Malaysia alone. Thus, it makes sense for FTAs to focus on non-partner countries as well as partner countries. Multinational corporations in developed countries also have the advantage of having the most sophisticated technologies, and their global reach can pave the way to ready-made export markets.

In fact, ASEAN has always placed emphasis, implicit or otherwise, on attracting non-partner FDI. The ASEAN Investment Area (AIA), which was founded in 1998 and will be an important pillar in building the ASEAN Economic Community, explicitly charts a path for the national treatment of partner- and non-partner country investors, albeit within different time frames—2010 for investors from partner countries and 2020 for those from non-partners.

Structural Policy Change and Reform in “New Age” Free Trade Agreements. Modern FTAs, particularly those with OECD countries as partners, go well behind the traditional focus on tariffs to include other border and behind-the-border measures. These measures now receive far greater attention in negotiations and tend to be more important to the modernization and competitiveness of economic systems, in part because of the success of the GATT/WTO in bringing down tariffs and rendering them less significant. Examples of these behind-the-border areas are: complex measures specific to the service sectors; laws related to corporate and public governance; the national

treatment of partner-country investors; competition policy, including the reform of state-owned enterprises; and other “sensitive sectors” with important links to the rest of the economy. The inclusion of these nontraditional areas underscores how far FTAs have gone beyond mere commercial policy to include microeconomic policies that used to be considered the exclusive domain of national economic policy.

Policy harmonization issues are especially pertinent in this regard. Although the most significant effects of the Single Market program of the EU are held to be in many of the behind-the-border areas mentioned above, perhaps one of the most important areas of cooperation can be classified under the rubric of “harmonization issues,” such as mutual recognition of product testing and professional certification, standards conformance, and customs and transit. Adopting universal harmonization standards would maximize gains in all of these areas. Doing so worldwide is, however, much more difficult, and that is why the GATT/WTO has made such little progress in these areas. On the other hand, like-minded countries in an FTA are able to address these nontraditional areas that improve the business environment by reducing costs, leveling the playing field for foreign investors, and pushing policy reforms toward best practices.

One final point pertains to the limits of harmonization. In many ways, “harmonization” implies creating a level playing field. However, the playing field must be in good shape, that is, the region should adopt not only compatible policies (harmonization) but also best practices. Otherwise, harmonization may only reduce diversity in a region while doing little to improve the business environment, which, after all, should be the overriding goal.

Competitiveness Incentives. As is the case with trade liberalization generally, greater exposure to international competition has important salutary effects on a partner country in an FTA. Increased exposure to competition from partner-country producers not only leads to trade creation, and, therefore, greater structural efficiency, but also increases the potential profits for competitive, or potentially competitive, firms. An important incentive to invest in more efficient productive processes and technology is thus created. In other words, the FTA enables the firms to adapt new technologies from abroad by increasing the potential for success in using those technologies to break into partner-country markets.

Political Economy of Protection

The areas covered by regional trading arrangements constitute a subset—though an increasingly large one, as mentioned above—of overall macroeconomic and microeconomic policies. Moreover, all existing and emerging trade accords in Asia are FTAs, rather than customs unions, meaning that the economic policies of member countries continue to be independent.¹⁰ Thus, the question of how FTAs will affect the policy stance of acceding countries will be crucial to the ultimate success of the accord. For example, in the NAFTA debates discussed above, almost all American economists supported the agreement not out of any conviction that regionalism was the best way to go—a majority saw regionalism as a threat to the integrity of the multilateral system, in which they strongly believed—but rather because they felt it was the best way to lock in the progressive economy-wide reforms that Mexico had set in motion

¹⁰ The one exception might be the ASEAN Economic Community initiative, which may ultimately have to create a customs union to reach its goal of a common market.

in the process leading up to NAFTA. In addition, accession to ASEAN has facilitated economic reform in the transitional ASEAN economies that joined in the 1990s, well beyond what was needed to meet the exigencies of ASEAN-based agreements. In this section, we consider some aspects of the complicated interaction between FTAs and policy-making.

Dynamic policy considerations

A government can try to protect its domestic market from foreign competition by levying tariffs on imported goods or erecting nontariff barriers such as quotas of various kinds, discriminatory sanitary requirements, or even administrative action (e.g., antidumping and countervailing duties).¹¹ While tariffs, along with internal tax sources such as income, corporate, and value-added taxes, generate tax revenue for importing countries, such a tax at the border can itself be used as a policy variable to influence the economy's industrial structure. Hence, tariff formation can be, and usually is, affected by various factors other than tax revenue maximization. After all, if revenue maximization were indeed the goal of a tariff regime, the country should favor an across-the-board tariff that does not discriminate across commodities when setting up its commercial policy regime. Such an approach would imply far less efficiency costs than a tariff structure that differs across commodities.¹² The fact that homogeneous tariffs are rarely in evidence implies that countries tend to use their tariff structure as a form of industrial

policy. This aspect of endogenous tariff formation has been explored through political, rather than purely economic, models. In general, this approach focuses on the domestic government's *political* objective of maximizing national welfare as determined from its own point of view, rather than from the economy's perspective. In line with this, the government's objective function consists of three major variables, i.e., domestic firms' profit, aggregate consumer surplus, and tariff revenue, which can be represented in the simple objective welfare function $W(\pi_i, C, \tau)$. It should be noted that this "national welfare" function differs from what a neoclassical economy connotes.

In the political-support approach to trade-barrier formation, the government trades off political backing from consumers against higher industry profits because higher protection for domestic industry will inevitably lead to higher sale prices of goods (and, hence, will be opposed by consumers). If the government gives greater weight to consumers' surplus than to the domestic firms' profit, the effective tariff rate will be lower, and vice versa. The local firms will lobby their government for higher protection for their industries. If the tariff revenue collected is to be redistributed among domestic actors, an altruistic government would choose a tariff to maximize aggregate support from its constituents. The altruistic government endeavors to maximize social welfare under the political incentive to gain public confidence in order to win elections or carry favors from various constituents.

These policy considerations of the importing country government, in turn, have strategic implications for the exporting sector. Faced with the importing government's welfare maximization problem, exporting firms behave strategically to maximize profit under given constraints. An exporting firm not only competes against the local firms in the market of the host country, but also

¹¹ This does not mean that all sanitary requirements and administrative actions are protectionist. However, they have been used as "hidden" protectionist vehicles.

¹² The argument for an optimum tariff rate suggests that tariff rates should be set according to relative elasticity between the demand for and supply of the imported good to maximize terms-of-trade gains. Given the compliance costs and potential rent-seeking behavior, however, a uniform tariff can have great advantages over a complex one.

engages in strategic behavior in responding to trade barriers in the country to which the firm will be exporting (i.e., the destination country). This dynamic aspect of strategic behavior is most evident in firms' comportment under administrative protection regimes of the importing country. Even in the context of rapid globalization and with many FTAs that have emerged as important policy vehicles, administrative protection measures, such as antidumping and countervailing duties, have become the most important trade barriers in industrialized (and some developing) countries. The rationale and effects of these protective measures, as well as exporting firms' strategic behavior in facing the domestic government's threat of protection, must be explored in a political economy context. Although it is not yet proven whether this kind of strategic interaction exists in the real world, much research reveals that this political-economy context can explain a large portion of trade barrier formation. This approach is certainly more realistic than the logical neoclassic approach, which would suggest that all countries should adopt free trade, with the exception of "infant industries," strategic trade policy, and the (theoretical) optimal tariff argument.¹³

¹³ The infant-industry argument suggests that temporary, short-term protection should be used to protect a certain industry in the case of a financial bottleneck in developing countries. While there are examples of successful infant-industry protection, often the argument is used merely as an excuse for traditional protection: most infant industries never grow up. Strategic trade policy refers to protection geared to encourage economies of scale in an industry by creating a captive domestic market (and, with lower average costs, enhance competitiveness in global markets) or to the protection of one (comparative-disadvantage) sector that is a necessary input to a comparative-advantage sector. This argument, too, is problematic; while the former argument would lead to retaliation, the latter has very weak theoretical foundations. Finally, while it would be logical for them to do so in theory, countries do not apply tariffs according to an "optimal criterion," that is, they do not apply tariffs to improve terms of trade by forcing down import prices. Besides, the criterion would not apply even theoretically to small and developing countries: as they cannot influence their respective terms of trade (they are price takers), the optimal tariff would always be zero.

These dynamic policy considerations in the formation of trade barriers suggest the possibility of suboptimal trade policy implementation. While freer trade is better for the economic welfare of both the exporting and the importing countries, policy considerations in the domestic market will inevitably lead the government to suboptimal policy decisions for protection. For example, antidumping protection is technically triggered when the sale price of an exported commodity is lower than its price in the country of origin, and this price differential causes material injury to the domestic industry of the importing country through unfair competition. However, with the emergence of many interest groups in the industrial sector, the governments become more vulnerable to external pressures from industry interests to say that dumping has occurred. After all, most businesspeople would define dumping as merely selling at a price that is lower than their domestic price. Furthermore, given the difficulty of forming organized consumer-interest groups, the balance of influence will tilt toward more heightened protection regimes at the cost of consumers' welfare and efficient allocation of global resources.

Implications of rent seeking

Except in the presence of market failure (e.g., where there exist externalities or imperfect competition), a standard result of economic theory is that government intervention in markets tends to lead to a less efficient outcome. Tariffs and, certainly, nontariff barriers are no different. As discussed above, a tariff distorts consumption patterns and the structure of production, thereby damaging the static welfare of the country. Tariff barriers raise revenue for the government, but other sources of revenue, such as value-added taxes and direct taxes

(e.g., income taxes), tend to be less distortionary. Nontariff barriers are even worse; they have the same negative effects on consumers and the productive structure but often do not produce any revenue at all for the government.

Still, there are strong political reasons for applying tariffs. In addition to the process described above in terms of dynamic policy considerations, support for protection is usually justified to the public in order to protect national security, jobs, the environment, even a way of life. After all, the economic case for free trade is so strong that it has essentially created a consensus in mainstream economics, a field where there is very little consensus in other areas. However, except for a few small states, no country completely embraces free trade. The political economy of protectionism, therefore, is obviously extremely important.

As long as there is protection, there will be an incentive for rent seeking.¹⁴ Without hard-and-fast rules based on economics (e.g., free trade or uniform tariffs), comparative-disadvantage industries will always have a strong incentive to lobby government officials. This type of rent seeking is very costly to the economy.

The economic case for FTAs is actually strengthened in the context of rent seeking if the agreement is comprehensive. Trade creation will reduce the lobbying strength of the most inefficient domestic firms and, hence, their capacity to rent-seek. Moreover, if tariff revenues are being used inefficiently or, worse, are being diverted to the pockets of customs officials, the creation of an FTA, which obviously reduces tariff

revenue from intra-regional trade, will have less of a fiscal impact. However, firms may try to include protection in the agreement itself to perpetuate protection and rents. Complicated rules of origin are a case in point.

Political and strategic considerations

Most existing preferential trading arrangements were either created as economic arrangements in support of political goals or at least consistent with the diplomatic strategy of the founding countries. Economic cooperation in these arrangements is seen as an important vehicle for the pursuit of political goals (which, in themselves, have important economic ramifications). The EU has been effective in using preferential trading arrangements as diplomatic tools over the past 40 years, in part out of necessity. Commercial policy was (and still is) the only truly unified policy at the regional level (Messerlin 2001).

To the extent that these regional accords add to the political stability of the region, they do service to economic development in general and to the goal of policy reform in particular, even if the arrangements have weak substance to them. This, of course, is an important part of the early success story of ASEAN. Although most ASEAN countries had only recently achieved independence and were struggling to create nation-states (complete with many territorial disputes), the arrangement established an important dialogue process that prevented overt hostilities between these countries. To say that the (intentionally) weak economic cooperation initiatives in ASEAN had nothing to do with the subsequent dynamic growth in the region is to seriously understate its role.

However, there is also danger in letting political goals dictate economic agreements. If the overriding goal

¹⁴ The term rent seeking was first used by American economist Ann Krueger for a theory developed by economist Gordon Tullock. Tullock's theory addressed the active creation of monopolies, with the aim of achieving supernormal profits or market control, in competitive conditions. See A. O. Krueger, "The Political Economy of the Rent-Seeking Society," *American Economic Review*, vol. LXIV (1974), 291–303.

is political, then the parties forming an agreement will tend to make it as restrictive as possible. This will mean that they will include sectors that will be trade-diverting and avoid liberalizing sectors that will be trade-creating, guaranteeing that the FTA will be inefficient. A “positive list” approach to trade liberalization, in which countries specifically offer the commodities that they would be willing to include in a package—as opposed to a “negative list” approach, in which all commodities are included apart from those that are explicitly excluded—is especially vulnerable to this problem. ASEAN’s original Preferential Trade Agreement (PTA) and the South Asian Association for Regional Cooperation’s South Asian Preferential Trade Area (SAPTA) used the “positive list” approach, and accomplished very little, if anything, in stimulating trade.

Moreover, in the more political accords, countries signing an agreement will list increasing intra-regional trade and investment as the main goal. But such an objective is political rather than economic. If the FTA reduces transaction costs and increases efficiency in the region, it will be successful. But this does not necessarily mean that it will increase intra-regional trade and investment. For example, if the accord brings in a great deal of FDI from outside the region, this would serve to improve the competitiveness of the member countries and, hence, would mean that the FTA is a success. But it could very well be that the production fragmentation associated with this FDI as part of a global production chain could also reduce intra-regional trade—and certainly, given the fact that the FDI came from outside the region, intra-regional FDI will fall. The important thing is that the economies have become more competitive, trade and investment has increased, and welfare has improved. The nationality of trade and investment flows

is not particularly pertinent, at least from an economic perspective.

As is the case with multilateral liberalization, FTA negotiations produce a complicated matrix of political interaction. First, certain producers’ interests will be pitted against those of consumer groups. Since free trade tends to favor producers that rely heavily on imported inputs, they will generally back FTAs (as well as the WTO) but, given the potential for trade diversion, special producer interests will attempt to reduce the scope and coverage of the agreement. Sectoral conflict will also take place: manufacturing industries, for example, that have dealt with many rounds of global trade liberalization may well favor a given FTA, as they expect to benefit from trade creation, that is, expansion into partner-country markets. However, sensitive manufactures will resist. Also, agriculture, which has been mainly excluded from GATT/WTO rounds, tends to be the most complicated sector of all because it is often the most protected. The OECD, for example, spends \$300 billion per year protecting its agricultural producers, which constitute less than 5% of its workforce. Protection is easiest to sell to the public in this sector because of the need for a certain level of agricultural production for national security reasons, health issues, and the “multifunctionality” of agriculture (a term much favored by the French that suggests the need to protect agriculture not only for the reasons just cited but also because of its positive effects on protecting and beautifying the countryside).

There will also be conflicts due to firm size. Large firms, which produce with economies of scale, are often in favor of FTAs as the greater efficiencies from a larger market in an FTA will have a “cost reduction” effect (Corden 1972). Small and medium-sized producers, on the other hand, will tend to oppose preferential trade agreements as they anticipate being

vulnerable to partner competition. An FTA that opens up the retail-food sector, for example, will lead to a proliferation of supermarkets and a contraction in the number of “mom and pop” stores. Even immigration groups will have a role: trade can serve as a substitute for factor flows, and so anti-immigration groups tend to support FTAs (provided they do not liberalize labor flows). This was the case with NAFTA, which was generally supported by anti-immigration groups in the US.

In FTA negotiations, therefore, governments have to negotiate not only with their partners but also with a complex web of domestic interests. Compromises will have to be made across groups within a country and across countries in the FTA. Sometimes structural change in the FTA can be facilitated through a compensation mechanism (e.g., the Trade Adjustment Assistance program in the US): since the country is better off with trade creation, it makes good economic sense to compensate the losers. However, constructing efficient, well-targeted compensation mechanisms can be complicated, and certain interests will still oppose liberalization. This complicated mix of considerations underscores the critical importance of establishing channels of communication with different groups domestically before and during negotiations, as well as putting in place an astute, diverse negotiating team. These topics are dealt with in depth later in the book.

ECONOMICS OF CONSOLIDATION/ HARMONIZATION

Does regionalism support unilateral or multilateral reform goals, or does the discrimination inherent in a trade bloc lead to a “second best” outcome at best,

or an inward-looking one at worst? This is the essence of the “building blocs” versus “stumbling blocs” debate. The literature would suggest that several possible negative policy consequences (i.e., inherent “stumbling bloc” tendencies) could emerge from an FTA, while other tendencies would be consistent with multilateral goals and market-friendly domestic liberalization. We review the general arguments for each side below.¹⁵

Stumbling Blocs

Maximizing terms-of-trade gains

Regional integration increases the size of an economic zone and, hence, increases market power. The potential benefits of exploiting such an advantage by imposing an “optimal tariff” (i.e., maximizing the difference between the terms-of-trade gains from a tariff regime against its costs in terms of efficiency) are familiar from the international trade literature. Moreover, FTAs and customs unions, because of the trade-diversion effect, improve the terms of trade of the region relative to the rest of the world. The larger the grouping, the larger the potential improvement in the terms of trade.

In reality, the first effect is probably not particularly relevant, as even customs unions do not impose tariff regimes according to optimum tariff rules.¹⁶ Moreover, in the case of both customs unions and FTAs, changes in the external tariff regime cannot on average be more protective than the pre-integration

¹⁵ See Frankel (1997), on which some of these topics are based.

¹⁶ Nor are they at the country level, as noted earlier. While the optimum tariff argument is one of the three classic economic arguments in favor of protection (the others being the infant-industry argument and strategic trade policy), it is well recognized as a theoretical argument. Tariffs are generally implemented for political and political-economy-related reasons, not as a means of trying to extract terms-of-trade gains.

status quo, according to Article XXIV of the GATT/WTO. There can still be negative sectoral effects as some areas may see their tariffs rise, but in this case other GATT/WTO members can sue for compensation.

With respect to the terms-of-trade effect, since trade diversion undeniably results from preferential trading arrangements, it is certainly a concern. But trade diversion is a one-time price effect and, hence, static. In fact, as discussed above, it is *the* static cost of preferential trading accords.

Special interests manipulating the contents and scope of the agreement

This concern obviously also manifests itself in domestic policy formation. This is especially a problem in the context of accords between developed and developing countries, in which the former obviously have the upper hand, as special interests tend to be far better organized and funded. Article XXIV of the GATT/WTO is not particularly strict in regulating FTAs, and with special-interest groups free to rent-seek, the outcomes could be less efficient. Of course, this could also have a positive effect: for example, special-interest groups in developed countries no doubt push for better protection of intellectual property rights (IPR), competition policy, treatment of FDI, and better trade and investment facilitation, but these could also have important positive effects on efficiency and policy-making in developing countries.

Waste of scarce negotiating resources

Particularly (but not exclusively) in the case of developing countries, the scarcity of well-trained and well-experienced experts in trade negotiations implies an opportunity cost of less resources being devoted to multilateral negotiations

if all the talent is engaged in regional deals. Critics of regionalism suggest that such a capacity constraint can only be detrimental to multilateral liberalization, and even policy reform at the national level. For example, after Viet Nam joined ASEAN in 1995, it worked not only to enter into AFTA but also to implement a number of other accords, including an extensive bilateral trade agreement (BTA) with the US in 2001. On top of that, it was working on “ASEAN+3” initiatives. Given its human-capital capacity constraints, this could very well have delayed its drive to join the WTO, which was realized only at the end of 2006.

Or perhaps not. A counterargument would be that Viet Nam was able to ready its economy for the WTO through the outward-oriented policies of ASEAN, and the BTA itself was essentially a means of preparing Viet Nam for WTO entry, including legal and administrative reforms that would in any event be necessary. The agreement is replete with references to WTO protocols and WTO-consistent reforms, from service liberalization to “TRIPS-plus.” These negotiations have also sharpened the expertise of Vietnamese negotiating authorities.

Building Blocs

Locked-in policy change

Regional integration can be seen as a blueprint for market-friendly reform and increased competitiveness in the international marketplace. Without ASEAN (and eventually the BTA), one can easily argue that Viet Nam would not have made as much progress (and its joining the WTO would no doubt have been further delayed). This effect also applies to industrialized regions. When Greece (1981) and Spain and Portugal (1985) joined the EU, they

were essentially “newly industrialized economies,” each having undergone political instability/transition only a few years before. They each made significant strides in modernizing their policies and economies as a result of EU accession, and today have significantly closed the gap with advanced industrial economies.

Improved negotiating power for smaller units

Traditionally, the possibility of small countries joining together and working as one cohesive unit in trade negotiations has always been considered an important advantage of regionalism. This would apply both to smaller countries as well as to larger units. Free trade areas are less effective in this regard relative to customs unions, as the former do not include a common external tariff and, hence, divergences in interests will persist and will make cooperation more difficult. However, a well-developed system of forming joint positions even in an FTA can ensure that the whole will be greater than the sum of its parts.

A dynamic weeding process as a first step toward free trade

It could very well be that the process of structural adjustment unleashed by a regional trading arrangement through trade creation could, in effect, facilitate multilateral accords. As the weakest (and, therefore, more resistant to any international competition) are weeded out, through an FTA or other means, the stock of opposition to trade falls in importance, thereby making multilateral initiatives easier.

Perhaps a heuristic example will illustrate the point. Suppose that the trade policies of a country (let us call it “home”) are determined by domestic firms, and “home” trades with two other countries—“partner” (i.e., the country that will

eventually form an FTA with “home”) and “rest of the world.” Furthermore, assume that, in autarky, there are six industries, with the linear cost structures of the firms in the home country being such that two are globally competitive (in goods A and B), two are competitive only regionally (in goods C and D, in a potential FTA with “partner”), and two will never be competitive with trade (in goods E and F). Now, assume that the “home” government puts to a vote whether or not the country should move to free trade. Firms producing A and B will vote yes, as they will benefit from a larger market, but the other four firms will vote against it, as free trade will put them out of business. We remain in an autarkic equilibrium. But suppose now that the home country votes on whether or not it should have an FTA with “partner.” The firms producing goods A, B, C, and D will vote in favor, and those producing E and F, against. The FTA will pass. Eventually, competition from the partner country will force out the production of goods E and F in the home country (trade creation), and there will be no trade diversion (as we began in autarky). The remaining firms in the home country will, therefore, eventually produce only A, B, C, and D. Next, assume that the home country votes once again on whether or not it should have free trade. The votes will now be two in favor (A and B) and two against (C and D); assuming that consumers have even a little say would be sufficient to usher in free trade, because of the FTA “stepping stone” process.

Competitive liberalization to attract international capital, as well as a positive “threat”

Regional integration can be used as a means of rendering the component economies more efficient, competitive, and market-friendly. While a grouping

may or may not adopt global “best practices” in regulatory, legal, and other issues, it can reduce the stock of divergences across countries, thereby making it easier to integrate globally. By reducing transaction costs across countries, an FTA can enhance its attractiveness to MNCs. As an FTA “deepens,” and policy externalities thus become increasingly important, the incentive to internalize them through monitoring, information sharing, closer cooperation, etc., increases. Because trade and financial links are becoming increasingly important and recognized, countries within an FTA soon find it useful—or even necessary—to further financial and macroeconomic cooperation. It may also be true that regional agreements can be used as implicit and explicit “threats,” particularly since FTAs seem to have a tendency to grow over time.

In sum, both the “stumbling bloc” and “building bloc” arguments have *theoretical* merit. But in practice, the inclination of the regional accord tends to be extremely important. Clearly, if the group is being formed to enhance inward-looking development strategies or to isolate the region from global competition, this initial policy direction would set in motion many of the problems discussed above. In fact, this approach led to the downfall of many regional trading agreements in the past, especially in Latin America (e.g., the Latin American Free Trade Area). Yet, if outward-looking economies were to form a regional grouping, regionalism is likely to promote the goals of domestic policy reform and multilateral liberalization. These factors, among others, are responsible:

- (i) It is unlikely that a country wishing to promote outward-looking policies, including extensive unilateral liberalization

and active participation in the WTO, would contradict this stance in favor of a regionally closed system.

- (ii) Reductions in trade barriers within a preferential trading arrangement make it more attractive for a country to reduce external barriers, in effect “MFN-izing” regional concessions, because the most important cost of regionalism, as noted above, is trade diversion and lower external barriers will reduce the associated costs.
- (iii) “Weeding out” least-competitive industries, and making the political economy of trade liberalization more favorable over time, seems to have been important empirically.¹⁷
- (iv) The membership of FTAs and other cooperative accords tends to expand and to become more diverse over time, thereby reducing regional sources of support for protectionism in a particular country and industry, as well as reducing the overall potential for trade diversion. This has been true for the EU, NAFTA, AFTA, the South American Common Market (Mercosur), and other agreements.

Inconsistencies between Agreements: “Spaghetti Bowl” Effect

The boom in the number of separately negotiated FTAs has often been blamed for the “spaghetti bowl” or “Asian noodle bowl” effect in the region. As mentioned earlier, these FTAs can be quite different from one another in coverage, depth of liberalization, and the specific regulations that make the accord function (e.g., the

¹⁷ “Anecdotally” would perhaps be more accurate, as the empirical literature on this subject is not well developed.

“rules of origin” discussed below). Their inherent inconsistencies and (sometimes) contradictions could be a real problem in the global marketplace. A strong advantage of the WTO framework is that it generally, but not totally, avoids this problem.

Complicated “rules of origin” (ROOs) in FTAs are often cited as the most obvious example of the “spaghetti bowl” problem. Later in this reference we discuss ROOs at length. Suffice it to note here that they are necessary in FTAs to avoid “trade deflection.” An example would best illustrate the point. Suppose that India and Malaysia were to form an FTA. Further, assume that tariffs on television sets are high in India but are low in Malaysia. Once the agreement is in place, Japanese exporters, for instance, will have an incentive to “deflect” their exports from India to Malaysia, where they will pay a low tariff, and then reexport the television sets to India from Malaysia to take advantage of duty-free access. This will lower the tariff costs for the Japanese exporter. To avoid this possibility, any India-Malaysia FTA should include ROOs for products that seek to take advantage of the FTA.

The problem is that ROOs can be used as a protectionist technique, with high ROOs being used as a way of protecting domestic interests. Each FTA tends to be unique and can choose its own ROO regime—Article XXIV is completely silent on the issue—but many of them tend to be extremely complicated, especially when the FTA includes an OECD country. NAFTA, for example, is a liberal FTA by most measures, but its ROO regime is infamous: the ROO for automobiles, for example, is 62.5% and for certain textiles, 100%.

Moreover, the diversity of these ROO regimes is problematic. A country with many FTAs could end up having different ROOs for trade in a certain product for each FTA, potentially creating confusion

but also influencing the input-sourcing decisions of the firm in a way that could hamper efficiency. Thailand, for example, has FTAs with both Australia and New Zealand. And even though Australia and New Zealand themselves form one of the most advanced FTAs in the world (the Closer Economic Relations agreement), the set of ROOs for Thailand’s FTA with each is different. Hence, a Thai producer that exports to both Australia and New Zealand may need to have a different production strategy for exports to each market. That would be costly in a number of ways to the Thai producer, which could lose scale economies, among others.

Exactly how costly these different ROO regimes are to any given country is unclear. Some economists estimate the compliance costs at 3–5% of the value of exports, but others suggest that the cost is lower. And governments can reduce the associated costs by providing information to exporting firms and importers. The Singapore Government, for example, puts out an interactive CD-ROM that provides details to Singaporean firms regarding the ROOs for any product and any FTA involving Singapore.

What is clear is that the “spaghetti bowl” effect—in terms of ROOs or other aspects of FTAs that tend to be inconsistent between countries—does have at least some economic cost. Greater harmonization of policies in these agreements, in ways that would be more consistent with economic efficiency (“best practices”), would obviously be advantageous, particularly as the number of FTAs in the region continues to grow. We consider a set of best practices in the next section.

Enhancing Consistency in Agreements: Best Practices

One way to avoid inconsistency associated with the “spaghetti bowl”

effect would be to have rules that govern FTAs. Article XXIV does have some general rules, but they are extremely general and have proven very difficult to tighten. At the Doha Development Agenda negotiations, for example, the problem of the growing number of FTAs was evident, but, even with a successful outcome, any improvement in FTA rules is likely to relate only to greater transparency. It would be useful to define a set of rules that would minimize the negative effects of FTAs and maximize the positive effects. This is especially important in the light of the FTA movement in Asia, where policies, rather than being inward-looking, are directed more toward efficiency goals. We might call such rules “best practices” of FTAs. Below are 10 major areas that might be considered in this regard:¹⁸

(i) **Product coverage: Goods.**

Comprehensive coverage is best, to be included within a reasonable period of time (defined as 10 years by the GATT/WTO). Article XXIV of the GATT/WTO stipulates that, in an FTA or customs agreement, product coverage should include “substantially all goods.” But the exclusion of individual products can be problematic on efficiency grounds, particularly when it involves products that are used as inputs in the production chain. Thus, to the greatest extent possible, the FTA should include all goods. Some will no doubt be excluded either temporarily or permanently, but such exemptions should be as few as possible and should take into account the important effects that they might have on the effective rate

of protection, as well as on trade diversion.

- (ii) **Product coverage: Services.** *Again, comprehensive coverage and a reasonable time period for implementation are best from an economic perspective, and transparency is important in some areas.* Services present some special and important challenges. Certain services are fairly easy to liberalize, e.g., in terms of allowing for the movement of professional persons, tourist-related services, and even high-tech/knowledge-based services. Others are extremely difficult. Educational services tend to be highly protected. Financial services are often the most difficult to include in any liberalization package. Still, the gains from trade in services are no less than those from trade in goods, and yet there has been far greater attention to the latter in multilateral agreements and most FTAs.
- (iii) **Rules of origin.** *Rules of origin should be as low as possible as well as symmetrical.* As noted above, abuses of ROOs in FTAs are problematic. Stringent rules could have important trade-diversion and investment-diversion effects, with a potentially high cost to non-partners and greater inefficiencies in partner countries. To avoid this, generous and consistent ROOs are of the essence.
- (iv) **Customs procedures.** *To the greatest extent possible, customs procedures should follow global best practices and GATT/WTO-consistent protocols.* Customs and related procedures are at the heart of “trade facilitation,” a key priority in the Doha Development Agenda. They are obviously closely related to ROOs, as one of the key challenges of customs

¹⁸ These best practices were developed by ADB; see Plummer (forthcoming 2007) for details.

officials is to clear countries of origin of imports. Regional trading agreements can be used as instruments to modernize customs laws, regulations, administrative guidelines, and procedures.

- (v) **Intellectual property protection.** *IPR guidelines should be nondiscriminatory and consistent with TRIPS, TRIPS Plus, and related international conventions.*

As will be noted later in this reference book, the protection of IPR is one of the most sensitive issues in negotiating FTAs. Developed countries, having a strong comparative advantage in IPR-intensive products, want to make sure that IPR is taken seriously both *de facto* and *de jure*. Developing countries often criticize the IPR stance of developed countries as being too severe and too favorable to innovators, e.g., granting patent monopolies for an exaggerated length of time, or being too insensitive in areas such as pharmaceuticals. On the other hand, it may be that stronger, more serious IPR protection can actually be positive for the development of a country's own innovative and artistic sectors, besides promoting more FDI and technology transfer.

- (vi) **Foreign direct investment.** *Investment-related provisions should embrace national treatment and nondiscrimination, shun performance requirements, have a highly inclusive negative list, and provide the usual protection to foreign investors.* In particular, national treatment is critical in this regard, as it has important implications for creating a competitive environment and a “level playing field.”

- (vii) **Antidumping procedures.**

Antidumping procedures and dispute resolution need to be transparent and fair, and the process needs to be well specified and effective. Antidumping and countervailing duties, also known as “administrative actions,” were discussed briefly above. They may or may not be stipulated directly in an agreement; sometimes, the references may be exclusively directed to the WTO dispute resolution. Antidumping clauses in an FTA might be used to tighten antidumping evaluation procedures, promote transparency, and expedite processes. But it is also important that dispute settlement procedures are clearly identified and respected. Otherwise, confusion can follow.

- (viii) **Government procurement.**

Government procurement should be as open and nondiscriminatory, and procedures as clear and open, as possible. The size of the state sector varies across the region and internationally, but in most countries government procurement is a significant sector. There is a WTO Agreement on Government Procurement, but not all WTO member countries are signatories.¹⁹ Moreover, the rules on market access in this agreement are relatively limited. The chapters on government procurement in the “deeper” FTAs tend to go much further. “Best practices” would require that the arrangement produce a transparent, open, and nondiscriminatory regime that grants national treatment as much as possible to partner countries,

¹⁹ In this sense this World Trade Organization (WTO) agreement is sometimes referred to as a voluntary or plurilateral agreement.

with an excluded (negative) list as short as feasible and the threshold-bid level as low as practical.

- (ix) **Competition.** *Policies related to competition should create a “level playing field” for both locals and partners, and they should not put non-partner competition at a disadvantage.* Many countries in Asia do not have a competition policy per se. But trade and investment liberalization is affected by industrial organization at the domestic level, and this becomes an especially important area in countries having active state-owned enterprises. Hence, it follows that “deep” FTAs should have basic rules and procedures designed to prevent anticompetitive behavior from state-owned enterprises, quasi-state firms, privately owned domestic monopolies/oligopolies, and the like, that would give them a competitive edge over foreign competition.
- (x) **Technical barriers to trade.** *These should be kept to a minimum and harmonized in a nondiscriminatory way, with clear and transparent mechanisms for determining standards.* The WTO Agreement on Technical Barriers to Trade (TBT) attempts to “ensure that technical negotiations and standards, as well as testing and certification procedures, do not create unnecessary obstacles to trade.” TBT takes on particular significance at the global level, as many of its aspects, including harmonization of standards, “mutual recognition,” definition of legitimate means of protecting animal and plant life and the environment, should have global rules of conduct. International

standards, however, are bound to be general; FTAs, as they involve only a few or several countries, can potentially achieve far deeper means of integration and progress in this area. What would be critical for efficiency and outward orientation, therefore, would be TBT clauses based on international standards, having high levels of transparency, embracing best practices, and eschewing discrimination against outsiders as much as possible.

In sum, by adopting best practices, FTAs can generate significant gains in economic efficiency, well beyond the effects of traditional FTAs and, arguably, beyond what any realistic multilateral approach could possibly hope to generate.

SUMMARY

Trade policy is complicated. While economic theory strongly supports free trade and outward-oriented trade agreements, trade policy is decidedly in the political realm and, hence, economic arguments constitute only one—albeit essential—dimension of trade negotiations. Still, it is important that negotiators are aware of the economic benefits of liberalization and the economic costs to an economy of inward-looking policies. Rarely is the most efficient outcome forthcoming from any multilateral, regional, or bilateral negotiation. The trick is to maximize the efficient aspects of any given accord and minimize any potential negative implications.

This assessment of the costs and benefits of trade liberalization, at the global and bilateral/regional levels, was the main objective of Part I, which also considered

political determinants of trade policy. Moreover, given that Asian economies have explicitly expressed their desire for FTAs to be outward-looking rather than inward-looking, we considered rules of

thumb that would be useful in creating such arrangements (or, perhaps, merging them in the future). In Parts II and III, we focus specifically on component parts of FTAs and practical issues.

Appendix to Part I: Application of a Computable General Equilibrium Model to FTAs

Trade models have become increasingly useful tools for analyzing the economic impact of trade agreements in recent years. Advances in theory, analytical techniques, and data processing power of computers have enabled analysts to assess the impact of trade agreements in quantitative terms and compare the effects under different scenarios. For instance, an estimate of the impact of the Doha Round shows global gains of \$68.6 billion to \$155.2 billion by 2025 (ADB 2006). Another estimate shows that full liberalization of merchandise trade would result in a \$291 billion to \$518 billion increase in world income by 2015 (World Bank 2004). Meanwhile, bilateral free trade agreements (FTAs) like the Japan-Singapore Economic Partnership Agreement have been estimated to increase the income of Japan by \$6.9 billion and that of Singapore by \$0.4 billion (Hertel et al. 2001). Given the wide range of estimates and possible impact on developing member countries, it is important to gain a basic understanding of the simulation models being used and their strengths and weaknesses.

As noted in Box 1.4 above, the most common trade model is the global computable general equilibrium (CGE) model. The CGE model is based on the concept of a general equilibrium, where supply equals demand in each market in the economy. The chart below presents an overview of the elements of a typical CGE model and shows the links between markets. To achieve market equilibrium, prices are assumed to adjust until demand for factors of production equals available endowments, consumers

have chosen the desired basket of goods given their incomes, and firms have chosen production levels that maximize their profits. Because an FTA introduces a set of policy changes in an economy, CGE models simulate an economy where markets have adjusted and a new equilibrium has been reached. The effect of an FTA can be estimated by comparing incomes under the old equilibrium with those under the new equilibrium.

The attraction of a CGE model is that it arrives at a numerically exact answer (in the form of a change in income) while ensuring theoretically consistent results. A CGE model identifies the sources of income gains or losses from further opening up to trade and shows how these gains or losses are distributed across countries or regions. Hence, CGE simulations can be used in FTA negotiations to highlight, for example, the sectoral and production effects of some of the FTA provisions that could hurt vulnerable groups in an economy. This would give a good idea of how the government should target any assistance designed to facilitate restructuring and compensate the losers. Multiple simulations can also be undertaken to work out alternative scenarios that might turn national income losses from an FTA into gains. Because of the multiplicity of links in an economy, a simple diagram may not show all the effects of an FTA, whereas CGE and other computer-based models allow systematic tracking of all the interactions.

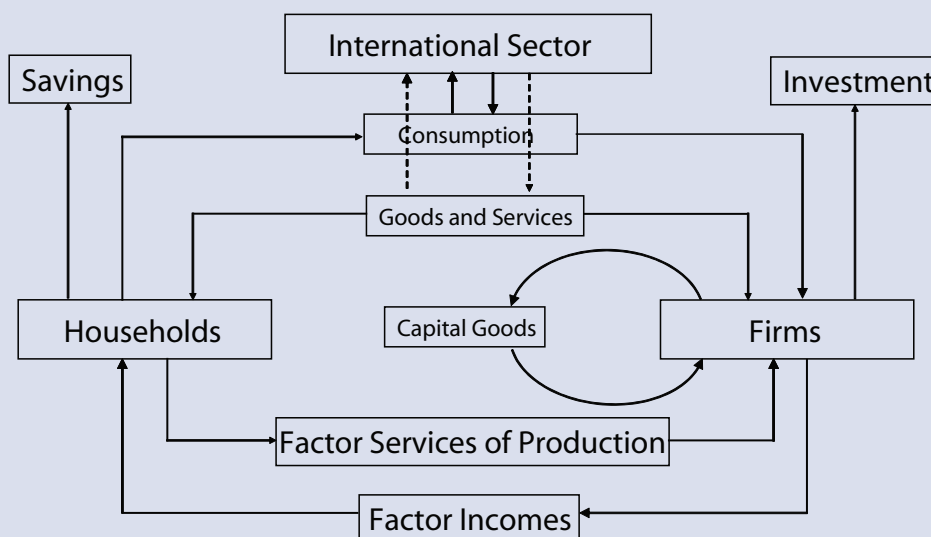
The CGE models used in empirical studies vary somewhat in their underlying economic structure, behavior of agents,

and focus. Box 1.4 presents different types of CGE models and their uses. With a CGE model, simulation exercises can be conducted to evaluate the welfare gains under different FTA scenarios. The primary focus of such policy scenarios is the removal of price distortions against imports that arise from trade barriers and other sources. An example of such an approach might best illustrate the point. A CGE model was used to evaluate gains from the following Asian FTA scenarios:

- (i) *Fragmented scenario*: a continuation of the current wave of bilateralism, where the region is fragmented by several bilateral or small regional FTAs;
- (ii) *ASEAN+3 FTA scenario*: free trade among Association of Southeast Asian Nations (ASEAN) countries, the PRC (including Hong Kong, China), Japan, and the Republic of Korea;
- (iii) *Asia Pacific Economic Cooperation (APEC) FTA scenario*: free trade among APEC members; and
- (iv) *Global trade liberalization scenario*: complete abolition of import tariffs and export subsidies.

The economic impact of these FTA scenarios was estimated with the use of ADB's General Equilibrium Model for Asian Trade (GEMAT) (see Box 1.4 above). The results for gross domestic product (GDP) and welfare with equivalent variation for the four policy scenarios are given in the table below. Expectedly, a fragmented reality of multiple bilateral and regional FTAs is the least attractive for all regions and countries. Among others, this scenario may give rise to the famous Asian “noodle bowl” effect, which refers to the higher transaction cost from multiple ROOs and standards in the growing number of FTAs in East Asia.

Elements of a CGE Model: The Circular Flow in an Open Economy



CGE = computable general equilibrium.
Source: Plummer and Wignaraja (2006); Kawai and Wignaraja (2007)

Impact of Four FTA Scenarios, Change in Real Income (Equivalent Variation)				
Region/ Country	Fragmented Scenario	ASEAN+3FTA Scenario	APEC FTA Scenario	Global Free Trade Scenario
	In \$ million (2001 prices)			
Northeast Asia	(1,219)	21,724	56,734	72,944
ASEAN	8,869	10,375	8,341	11,319
Rest of Asia	(101)	(425)	(1,560)	4,288
US	(1,371)	(2,362)	12,035	22,884
Europe	(1,021)	(904)	(3,047)	25,325
Rest of the World	(555)	(464)	280	14,861
World	4,401	27,546	74,689	153,718
In % of GDP				
Northeast Asia	(0.02)	0.37	0.96	1.23
ASEAN	1.72	2.02	1.62	2.20
Rest of Asia	(0.01)	(0.06)	(0.22)	0.61
US	(0.01)	(0.02)	0.12	0.24
Europe	(0.01)	(0.01)	(0.04)	0.30
Rest of the World	(0.01)	(0.01)	0.01	0.34
World	0.01	0.09	0.25	0.51

APEC = Asia Pacific Economic Cooperation, ASEAN = Association of Southeast Asian Nations, FTA = free-trade agreement, GDP = gross domestic product, US = United States of America. Source: ADB staff simulations.

Under the ASEAN+3 scenario, the welfare of members increases, with Northeast Asian GDP increasing by 0.37% and ASEAN GDP by 2.02%, while nonmembers (the rest of Asia, US, Europe, and the rest of the world) incur modest losses. An APEC FTA brings gains to Northeast Asia and the US but less gains to ASEAN than under a fragmented scenario. The rest of Asia and Europe, which would be excluded from an APEC FTA, also lose relative to the first scenario. Global free trade is the most attractive but unrealistic scenario since even the Doha Development Agenda process, which does not aspire to global free trade, has been beset by uncertainties regarding the timing and depth of multilateral agreements needed to reduce trade barriers (see Plummer and Wignaraja [2006] for an analysis of the impact of the different scenarios on East Asian economies).

While trade models like the CGE model are useful in quantifying the impact of FTAs, the drawbacks include their reliance on the quality of information fed into the model and on the assumptions used in simulations. Data may not always be of high quality and could be missing, links between markets in the economy may not always be accurately specified, and different scenarios and model specifications can mean different results. Moreover, existing CGE modeling frameworks do not include many aspects of trade agreements—barriers to services, competition policies, investment rules, and other nontariff measures (e.g., sanitary and phytosanitary standards and technical barriers to trade), which are likely to afford more protection for domestic industries than tariffs. Accordingly, the impact of these issues is not reflected in the simulation results.

CGE models are best used in conjunction with other empirical tools— notably analysis of the complex structure of FTAs, econometric methods, country or case studies, and policy analysis. For example, Gilbert et al. (2004) used both the CGE model and a gravity model to analyze regional trade agreements in Asia. A gravity model seeks to explain the pattern of bilateral trade and its evolution over time in terms of certain fundamental variables. While a CGE model can show the effect of an FTA

in the future, a gravity model shows the historical pattern of trade. The findings from a CGE model could also be supported by country or case studies to highlight the possible microeconomic impact of FTAs not accounted for by the models. Nonetheless, the results of CGE simulations are useful in giving a sense of the order of magnitude that a change in policy can mean for economic welfare. Hence, CGE models are complements, not substitutes, for a thorough policy analysis of FTAs.