

FIGURE 9.2. Partial Equilibrium Effect of an Export Subsidy.

At the free trade price of $P_X = \$3.50$, small Nation 2 produces 35X ($A'C'$), consumes 20X ($A'B'$), and exports 15X ($B'C'$). With a subsidy of \$0.50 on each unit of commodity X exported, P_X rises to \$4.00 for domestic producers and consumers. At $P_X = \$4$, Nation 2 produces 40X ($G'J'$), consumes 10X ($G'H'$), and exports 30X ($H'J'$). Domestic producers gain \$18.75 (area $a' + b' + c'$), and the government subsidy is \$15 ($b' + c' + d'$). The protection cost or deadweight loss of Nation 2 is \$3.75 (the sum of triangles $B'H'N' = b' = \$2.50$ and $C'J'M' = d' = \$1.25$).

Since domestic producers gain less than the sum of the loss of domestic consumers and the cost of the subsidy to Nation 2's taxpayers (i.e., since Nation 2 incurs a net loss equal to the protection cost or deadweight loss of \$3.75), the question is: Why would Nation 2 subsidize exports? The answer is that domestic producers may successfully lobby the government for the subsidy or Nation 2's government may want to promote industry X, if industry X is a desired high-technology industry (this will be discussed in Section 9.5). Note that foreign consumers gain because they receive 30X instead of 15X at $P_X = \$3.50$ with the subsidy. If Nation 2 were not a small nation, it would also face a decline in its terms of trade because of the need to reduce P_X in order to be able to export more of commodity X.

9.4 The Political Economy of Protectionism

In this section, we analyze the various arguments for protection. These range from clearly fallacious propositions to arguments that can stand up, with some qualification, to close economic scrutiny.

9.4A Fallacious and Questionable Arguments for Protection

One *fallacious* argument is that trade restrictions are needed to *protect domestic labor against cheap foreign labor*. This argument is fallacious because even if domestic wages are higher than wages abroad, domestic labor *costs* can still be lower if the productivity

of labor is sufficiently higher domestically than abroad. Even if this were not the case, mutually beneficial trade could still be based on comparative advantage, with the cheap-labor nation specializing in the production and exporting of labor-intensive commodities, and the expensive-labor nation specializing in the production and exporting of capital-intensive commodities (refer back to Section 2.4).

Another *fallacious* argument for protection is the *scientific tariff*. This is the tariff rate that would make the price of imports equal to domestic prices and (so the argument goes) allow domestic producers to meet foreign competition. However, this would eliminate international price differences and trade in all commodities subject to such “scientific” tariffs.

Two *questionable* arguments are that protection is needed (1) to reduce domestic unemployment and (2) to cure a deficit in the nation’s balance of payments (i.e., the excess of the nation’s expenditures abroad over its foreign earnings). Protection would reduce domestic unemployment and a balance-of-payments deficit by leading to the substitution of imports with domestic production. However, these are *beggar-thy-neighbor* arguments for protection because they come at the expense of other nations. Specifically, when protection is used to reduce domestic unemployment and the nation’s balance-of-payments deficit, it causes greater unemployment and worsened balance of payments abroad. As a result, other nations are likely to retaliate, and all nations lose in the end. Domestic unemployment and deficits in the nation’s balance of payments should be corrected with appropriate monetary, fiscal, and trade policies (discussed in Chapters 18 and 19) rather than with trade restrictions.

9.4B The Infant-Industry and Other Qualified Arguments for Protection

One argument for protection that stands up to close economic scrutiny (but must nevertheless be qualified) is the *infant-industry argument*. It holds that a nation may have a potential comparative advantage in a commodity, but because of lack of know-how and the initial small level of output, the industry will not be set up or, if already started, cannot compete successfully with more established foreign firms. *Temporary* trade protection is then justified to establish and protect the domestic industry during its “infancy” until it can meet foreign competition, achieve economies of scale, and reflect the nation’s long-run comparative advantage. At that time, protection is to be removed. However, for this argument to be valid, the return in the grown-up industry must be sufficiently high also to offset the higher prices paid by domestic consumers of the commodity during the infancy period.

The infant-industry argument for protection is correct but requires several important qualifications which, together, take away most of its significance. First of all, it is clear that such an argument is more justified for developing nations (where capital markets may not function properly) than for industrial nations. Second, it may be difficult to identify which industry or potential industry qualifies for this treatment, and experience has shown that protection, once given, is difficult to remove. Third, and most important, what trade protection (say, in the form of an import tariff) can do, an equivalent production *subsidy* to the infant industry can do better. The reason is that a purely *domestic distortion* such as this should be overcome with a *purely domestic policy* (such as a direct production subsidy to the infant industry) rather than with a trade policy that also distorts relative prices and domestic consumption. A production subsidy is also a more direct form of aid and is easier to remove than an import tariff. One practical difficulty is that a subsidy

requires revenues, rather than generating them as, for example, an import tariff does. But the principle remains.

The same general principle also holds for every other type of domestic distortion. For example, if an industry generates an *external economy* (i.e., a benefit to society at large, say, by training workers who then leave to work in other industries), there is likely to be underinvestment in the industry (because the industry does not receive the full benefit from its investments). One way to encourage the industry and confer greater external economies on society would be to restrict imports. This stimulates the industry, but it also increases the price of the product to domestic consumers. A better policy would be to provide a direct subsidy to the industry. This would stimulate the industry without the consumption distortion and loss to consumers that result from trade restrictions. Similarly, a direct tax would also be better than a tariff to discourage activities (such as automobile travel) that give rise to *external diseconomies* (pollution) because the tax does not distort relative prices and consumption. The general principle that the best way to correct a *domestic* distortion is with *domestic* policies rather than with trade policies is shown graphically in Section A9.3 of the appendix.

Trade restrictions may be advocated to protect domestic industries important for national defense. But even in this case, direct production subsidies are generally better than tariff protection. Some tariffs can be regarded as “bargaining tariffs” that are to be used to induce other nations to agree to a mutual reduction in tariffs. Here, political scientists may be more qualified to judge how effective they are in achieving their intended purpose. The closest we come to a truly valid economic argument for protection is the *optimum tariff* discussed in Section 8.6. That is, if a nation is large enough to affect its terms of trade, the nation can exploit its market power and improve its terms of trade and welfare with an optimum tariff. However, other nations are likely to retaliate so that in the end of nations lose. Be that as it may, *Broda, Limao, and Weinstein* (2009) provide evidence that countries set higher tariffs on goods with lower export supply elasticities than on goods with higher supply elasticities.

9.4c Who Gets Protected?

By increasing the commodity price, trade protection benefits producers and harms consumers (and usually the nation as a whole). However, since producers are few and stand to gain a great deal from protection, they have a strong incentive to lobby the government to adopt protectionist measures. On the other hand, since the losses are diffused among many consumers, each of whom loses very little from the protection, they are not likely to effectively organize to resist protectionist measures. Thus, there is a bias in favor of protectionism. An example is provided by the U.S. sugar quota (see Case Study 9-1).

In recent years, economists have developed several theories regarding which groups and industries get protected, and some of these theories have been empirically confirmed. In industrial countries, protection is more likely to be provided to labor-intensive industries employing unskilled, low-wage workers who would have great difficulty in finding alternative employment if they lost their present jobs. Some empirical support has also been found for the *pressure-group* or *interest-group* theory (see Hilmann, 1989; Grosman and Helpman, 1994), which postulates that industries that are highly organized (such as the automobile

industry) receive more trade protection than less organized industries. An industry is more likely to be organized if it is composed of only a few firms. Also, industries that produce consumer products generally are able to obtain more protection than industries producing intermediate products used as inputs by other industries because the former industries can exercise *countervailing power* and block protection (since that would increase the price of their inputs).

Furthermore, more protection seems to go to geographically decentralized industries that employ a large number of workers than to industries that operate in only some regions and employ relatively few workers. The large number of workers has strong voting power to elect government officials who support protection for the industry. Decentralization ensures that elected officials from many regions support the trade protection. Another theory suggests that trade policies are biased in favor of maintaining the *status quo*. That is, it is more likely for an industry to be protected now if it was protected in the past. Governments also seem reluctant to adopt trade policies that result in large changes in the distribution of income, regardless of who gains and who loses. Finally, protection seems to be more easily obtained by those industries that compete with products from developing countries because these countries have less economic and political power than industrial countries to successfully resist trade restrictions against their exports.

Some of the above theories are overlapping and some are conflicting, and they have been only partially confirmed empirically. The most highly protected industry in the United States today is the textiles and apparel industry. Case Study 9-6 provides an estimate of the benefit to the world economy from complete trade liberalization.

■ CASE STUDY 9-6 Benefits to the World Economy from Complete Trade Liberalization

Table 9.4 shows the economic benefit of complete trade liberalization on high-income countries, developing countries, and the world as a whole, coming from liberalizing trade in agriculture, textiles, and other manufactured goods; in billions of dollars, as dollars per person, and as percentages of GDPs. All benefits are cumulative to the year 2015. Thus, the first line of the table shows that the total cumulative benefit from complete liberalization in trade in agriculture would be \$126 billion for high-income countries and \$56 billion for developing countries, for an overall total of \$182 billion for the world as a whole by the year 2015. Complete liberalization of trade in textiles and other manufactured goods would provide smaller benefits.

The first column of the table shows that high-income countries would receive a total benefit of \$197 billion from the complete liberalization of trade in all sectors (this comes to \$194.63 dollars per capita) or 0.60 percent of high-income countries' GDPs, while developing countries would receive a total benefit of \$90 billion (\$17.59 per person) or 0.80 percent of developing countries' GDPs. For the world as a whole, the total benefit would be \$287 billion (\$46.84 per capita) or 0.70 percent of world GDP. Thus, half of the total gains would come from agriculture and two-thirds of the total dollar gains would go to high-income countries (but developing countries would gain more as a percentage of their GDPs).

(continued)

■ CASE STUDY 9-6 Continued

■ TABLE 9.4. Benefits to the World Economy from Complete Trade Liberalization

Liberalizing Sector	High-Income Countries	Developing Countries	World
Total amounts, billions of dollars			
Agriculture	126	56	182
Textiles	14	24	38
Other	57	10	67
Total	197	90	287
Per capita, dollars per person			
Agriculture	124.48	10.95	29.70
Textiles	13.83	4.69	6.20
Other	56.31	1.95	10.93
Total	194.63	17.59	46.84
Percentage of GDP			
Agriculture	0.38	0.50	0.44
Textiles	0.04	0.21	0.09
Other	0.17	0.09	0.16
Total	0.60	0.80	0.70

Source: K. Anderson and W. Martin, ed., *Agricultural Reform and the Doha Development Agenda* (Washington, D.C.: World Bank, 2006), Ch. 12.

9.5 Strategic Trade and Industrial Policies

In this section we examine strategic and industrial policies, first in general (Section 9.5A) and then by utilizing game theory (Section 9.5B). In Section 9.5C we discuss the U.S. response to foreign industrial targeting and strategic trade policies.

9.5A Strategic Trade Policy

Strategic trade policy is a relatively recent development advanced in favor of an activist trade policy and protectionism. According to this argument, a nation can create a comparative advantage (through temporary trade protection, subsidies, tax benefits, and cooperative government–industry programs) in such fields as semi-conductors, computers, telecommunications, and other industries that are deemed crucial to future growth in the nation. These high-technology industries are subject to high risks, require large-scale production to achieve economies of scale, and give rise to extensive external economies when successful. Strategic trade policy suggests that by encouraging such industries, the nation can reap the large external economies that result from them and enhance its future growth prospects. This is similar to the infant-industry argument in developing nations, except that it is advanced for industrial nations to acquire a comparative advantage in crucial high-technology industries. Most nations do some of this. Indeed, some economists would go so far as to say that a great deal of the postwar industrial and technological success of Japan was due to its strategic industrial and trade policies.

Examples of strategic trade and [industrial policy](#) are found in the steel industry in the 1950s, in semiconductors in the 1970s and 1980s in Japan, in the development of the Concorde (the supersonic aircraft) in the 1970s, and the Airbus from the 1970s in Europe. Semiconductors in Japan are usually given as the textbook case of successful strategic trade and industrial policy. The market for semiconductors (such as computer chips, which are used in many new products) was dominated by the United States in the 1970s. Starting in the mid-1970s, Japan's powerful Ministry of Trade and Industry (MITI) targeted the development of this industry by financing research and development, granting tax advantages for investments in the industry, and fostering government–industry cooperation, while protecting the domestic market from foreign (especially U.S.) competition.

These policies are credited for Japan's success in nearly wresting control of the semiconductor market from the United States in the mid-1980s. Most economists remain skeptical, however, and attribute Japan's stunning performance in this field primarily to other forces, such as greater educational emphasis on science and mathematics, higher rates of investment, and a willingness to take a long-run view of investments rather than stressing quarterly profits, as in the United States. In steel, the other targeted industry in Japan, the rate of return was lower than the average return for all Japanese industries during the postwar period. In Europe, the Concorde was a technological feat but a commercial disaster, and Airbus Industrie would not have survived without continued heavy government subsidies.

While strategic trade policy can theoretically improve the market outcome in oligopolistic markets subject to extensive external economies and increase the nation's growth and welfare, even the originators and popularizers of this theory recognize the serious difficulties in carrying it out. First, it is extremely difficult to pick winners (i.e., choose the industries that will provide large external economies in the future) and devise appropriate policies to successfully nurture them. Second, since most leading nations undertake strategic trade policies at the same time, their efforts are largely neutralized, so that the potential benefits to each may be small. Third, when a country does achieve substantial success with strategic trade policy, this comes at the expense of other countries (i.e., it is a beggar-thy-neighbor policy) and so other countries are likely to retaliate. Faced with all these practical difficulties, even supporters of strategic trade policy grudgingly acknowledge that *free trade is still the best policy, after all*. That is, free trade may be suboptimal in theory, but it is optimal in practice.

9.5B Strategic Trade and Industrial Policies with Game Theory

We can use [game theory](#) to examine strategic trade and industrial policy. We can best show this by an example. Suppose that both Boeing and Airbus are deciding whether to produce a new aircraft. Suppose also that because of the huge cost of developing the new aircraft,

■ **TABLE 9.5.** Two-Firm Competition and Strategic Trade Policy

		Airbus	
		Produce	Don't Produce
Boeing	Produce	−10,−10	100,0
	Don't produce	0,100	0,0

a single producer would have to have the entire world market for itself to earn a profit, say, of \$100 million. If both producers produce the aircraft, each loses \$10 million. This information is shown in Table 9.5. The case where both firms produce the aircraft and each incurs a loss of \$10 million is shown in the first row and first column (the top left-hand corner) of Table 9.5. If only Boeing produces the aircraft, Boeing makes a profit of \$100 million, while Airbus makes a zero profit (the first row and second column, or top right-hand corner of the table). On the other hand, if Boeing does not produce the aircraft while Airbus does, Boeing makes zero profit while Airbus makes a profit of \$100 million (the second row and first column, or bottom left-hand corner of the table). Finally, if neither firm produces the aircraft, each makes a zero profit (the second row and the second column, or bottom right-hand corner of the table).

Suppose that for whatever reason Boeing enters the market first and earns a profit of \$100 million. Airbus is now locked out of the market because it could not earn a profit. This is the case shown in the first row and second column (the top right-hand corner) of the table. If Airbus entered the market, both firms would incur a loss (and we would have the case shown in the first row and first column, or top left-hand corner of the table). Suppose that now European governments give a subsidy of \$15 million per year to Airbus. Then Airbus will produce the aircraft even though Boeing is already producing the aircraft because with the \$15 million subsidy Airbus would turn a loss of \$10 million into a profit of \$5 million. Without a subsidy, however, Boeing will then go from making a profit of \$100 million (without Airbus in the market) to incurring a loss of \$10 million afterwards. (We are still in the first row and first column, or top left-hand corner of the table, but with the Airbus entry changed from -10 without the subsidy to $+5$ with the subsidy.) Because of its unsubsidized loss, Boeing will then stop producing the aircraft, thus eventually leaving the entire market to Airbus, which will then make a profit of \$100 million without any further subsidy (the second row and first column, or bottom left-hand corner of the table).

The U.S. government could, of course, retaliate with a subsidy of its own to keep Boeing producing the aircraft. Except in cases of national defense, however, the U.S. government has been much less disposed to grant subsidies to firms than are European governments. While the real world is much more complex than this, we can see how a nation could overcome a market disadvantage and acquire a strategic comparative advantage in a high-tech field by using an industrial and strategic trade policy. In fact, in 2000 Airbus decided to build its super-jumbo A380 capable of transporting 550 passengers to be ready by 2006 at a development cost of over \$10 billion, and thus compete head-on with the Boeing 747 (which has been in service since 1969 and can carry up to 475 passengers).

Boeing greeted Airbus's decision to build its A380 by announcing in 2001 plans to build the new Boeing 787 Dreamliner jet that can transport, nonstop, and with 20 percent greater fuel efficiency, 250 passengers to any point on earth at close to the speed of sound by 2008. Boeing believes that passengers prefer arriving at their destinations sooner and avoiding congested hubs and the hassle and delays of intermediate stops. Then in 2005, Boeing surprised Airbus by also announcing a new bigger version of its Boeing 747 (the 747-8) to enter service in 2009. Airbus responded by announcing the development of Airbus A350 to compete head-on with the new Boeing 787 with billions of repayable government loans—leading Boeing to file an additional complaint against Airbus at the WTO.

The A380 came into service in 2008 with a delay of more than two years and huge cost overruns, while the first Boeing 787 came off the assembly line in 2011 with a three-year delay and also large cost overruns. As pointed out in Section 9.3E, the WTO ruled in 2010

that both Airbus and Boeing had illegally subsidized their development of new aircrafts over the past decades—but that Airbus was much more guilty and subject to heavier penalties. In 2011, Airbus announced that it had eliminated all illegal subsidies on its planes, but Boeing disputed the claim, and so the dispute goes on.

This type of analysis was first introduced into international trade by *Brander and Spencer* (1985). One serious shortcoming of this analysis is that it is usually very difficult to accurately forecast the outcome of government industrial and trade policies (i.e., get the data to fill a table such as Table 9.5). Even a small change in the table could completely change the results. For example, suppose that if both Airbus and Boeing produce the aircraft, Airbus incurs a loss of \$10 million (as before), but Boeing now makes a profit of \$10 million (without any subsidy), say, because it is more efficient. Then, even if Airbus produces the aircraft with the subsidy, Boeing will remain in the market because it makes a profit without any subsidy. Then Airbus would require a subsidy indefinitely, year after year, in order to continue to produce the aircraft. In this case, giving a subsidy to Airbus does not seem to be such a good idea. Thus, it is extremely difficult to correctly carry out this type of analysis. We would have to correctly forecast the precise outcome of different strategies, and that is very difficult to do. This is why most economists would say that free trade may still be the best policy after all!

9.5c The U.S. Response to Foreign Industrial Targeting and Strategic Trade Policies

While generally opposed to industrial targeting and strategic trade policy domestically, the United States did respond to and retaliated against countries that adopted these policies to the detriment of U.S. economic interests. The best example of direct federal support for civilian technology was Sematech. This was established in Austin, Texas, in 1987 as a nonprofit consortium of 14 major U.S. semiconductor manufacturers with an annual budget of \$225 million (\$100 million from the government and the rest from the 14 member firms). Its aim was to help develop state-of-the-art manufacturing techniques for computer chips to help its members better compete with Japanese firms. By 1991, Sematech claimed that as a result of its efforts U.S. computer chip companies had caught up with their Japanese competitors. Since then, Sematech has become entirely private (i.e., it no longer receives U.S. government financial support), and in 1998 it created International Sematech, a wholly owned subsidiary of 12 major computer companies, including some foreign ones (with headquarters in Albany, New York). Currently International Sematech has 18 members.

The United States has also taken unilateral steps to force foreign markets to open more widely to U.S. exports and has retaliated with restrictions of its own against nations that failed to respond. An example was the 1991 semiconductor agreement under which Japan agreed to help U.S. computer chip producers gain a 20 percent share of the Japanese chip market. The agreement was renewed in 1996 but required only that U.S. and Japanese computer chip industries monitor each other's markets without any market-sharing requirement. Since then, U.S. computer chip companies have retaken world leadership in the field, and so the agreement is no longer in operation.

In the early 1990s, the United States also negotiated an agreement with Japan to open the Japanese construction market to bidding by U.S. firms under the threat to close the U.S. market to Japanese construction firms. On a broader scale, the United States and Japan

engaged in negotiations (called the Structural Impediments Initiative, or SII) during the mid-1990s aimed, among other things, at opening the entire Japanese distribution system more widely to U.S. firms. Furthermore, the United States requested that other countries, such as Brazil, China, and India, remove excessive restrictions against specific U.S. exports and it demanded protection for its intellectual property (such as patented materials) from unauthorized and uncompensated use.

9.6 History of U.S. Commercial Policy

This section surveys the history of U.S. commercial policy. We start by examining the Trade Agreements Act of 1934 and then discuss the importance of the General Agreement on Tariffs and Trade (GATT). Next we examine the 1962 Trade Expansion Act and the results of the Kennedy Round of trade negotiations. Subsequently, we discuss the Trade Reform Act of 1974 and the outcome of the Tokyo Round of trade negotiations. Finally, we examine the 1984 and the 1988 Trade Acts.

9.6A The Trade Agreements Act of 1934

During the early 1930s, world trade in general and U.S. exports in particular fell sharply because of (1) greatly reduced economic activity throughout the world as a result of the Great Depression and (2) passage in 1930 of the [Smoot–Hawley Tariff Act](#), under which the average import duty in the United States reached the all-time high of 59 percent in 1932, provoking foreign retaliation.

The Smoot–Hawley Tariff Act was originally introduced to aid American agriculture. But through log-rolling in Congress, large tariffs were imposed on manufactured imports as well. The aim was clearly beggar-thy-neighbor to restrict imports and stimulate domestic employment. The bill was passed despite the protest of 36 countries that the tariff would seriously hurt them and that they would retaliate. President Hoover signed the bill into law in spite of a petition signed by more than 1,000 American economists urging him to veto it. The result was catastrophic. By 1932, 60 countries retaliated with stiff tariff increases of their own, in the face of the deepening world depression. The net result was a collapse of world trade (American imports in 1932 were only 31 percent of their 1929 level, and exports fell even more), and this contributed in a significant way to the spreading and deepening of the depression around the world.

To reverse the trend toward sharply reduced world trade, the U.S. Congress under the new Roosevelt administration passed the [Trade Agreements Act of 1934](#). The general principles embodied in this act remained the basis for all subsequent trade legislation in the United States. The act transferred the formulation of trade policy from the more politically minded Congress to the President and authorized the President to negotiate with other nations *mutual* tariff reductions by as much as 50 percent of the rates set under the Smoot–Hawley Tariff Act. The Trade Agreements Act was renewed a total of 11 times before it was replaced in 1962 by the Trade Expansion Act. By 1947, the average U.S. import duty was 50 percent below its 1934 level.

The Trade Agreements Act of 1934 and all subsequent trade legislation were based on the [most-favored-nation principle](#). This nondiscrimination principle extended to all trade partners any *reciprocal* tariff reduction negotiated by the United States with any of its

trade partners. The United States would similarly benefit from any bilateral tariff reduction negotiated between any other two nations that were signatories of the most-favored-nation agreement. However, this **bilateral trade** approach faced the serious shortcoming that tariff reductions were negotiated for the most part only in commodities that *dominated* bilateral trade. Otherwise, many “freeloader” nations, not directly involved in the negotiations and not making any tariff concession (reduction) of their own, would also have benefited from reciprocal tariff reductions negotiated between any other two nations.

9.6B The General Agreement on Tariffs and Trade (GATT)

The **General Agreement on Tariffs and Trade (GATT)** was an international organization, created in 1947 and headquartered in Geneva (Switzerland), devoted to the promotion of freer trade through **multilateral trade negotiations**. Originally, it was thought that GATT would become part of the **International Trade Organization (ITO)**, whose charter was negotiated in Havana in 1948 to regulate international trade. When the ITO was not ratified by the U.S. Senate and by the governments of other nations, GATT (which was less ambitious than ITO) was salvaged.

GATT rested on three basic principles:

1. *Nondiscrimination*. This principle refers to the unconditional acceptance of the most-favored-nation principle discussed earlier. The only exceptions to this principle are made in cases of economic integration, such as customs unions (discussed in Chapter 10), and in the trade between a nation and its former colonies and dominions.
2. *Elimination of nontariff trade barriers* (such as quotas), except for agricultural products and for nations in balance-of-payments difficulties.
3. *Consultation among nations in solving trade disputes* within the GATT framework.

By 1993, a total of 123 nations (including the United States and all major countries, with the exception of the countries of the former Soviet Union and China) were signatories of the GATT, and 24 other nations had applied for admission. The agreement covered over 90 percent of world trade.

Under the auspices of GATT, tariffs were reduced by a total of about 35 percent in five different trade negotiations between 1947 and 1962. In 1965 GATT was extended to allow preferential trade treatment to developing nations and to allow them to benefit from tariff reductions negotiated among industrial nations without reciprocity (these are discussed in Chapter 11).

Greater success in tariff reductions was not achieved before 1962 because tariff negotiations were conducted on a *product-by-product* basis and because in the 1950s the U.S. Congress attached serious protectionist devices to the periodic renewals of the Trade Agreements Act. These protectionist devices were:

1. **Peril-point provisions**, which prevented the president from negotiating any tariff reduction that would cause serious damage to a domestic industry.
2. The **escape clause**, which allowed any domestic industry that claimed injury from imports to petition the International Trade Commission (the U.S. Tariff Commission until 1975), which could then recommend to the president to revoke any *negotiated*

tariff reduction. A rising share of imports in an industry was sufficient to “prove” injury.

3. The [national security clause](#), which prevented tariff reductions (even if already negotiated) when they would hurt industries important for national defense.

Since meaningful tariff reductions *necessarily* hurt some industries (those in which the nation has a comparative disadvantage), these trade restrictions, especially the escape clause, represented a serious obstacle to greater tariff reductions.

9.6c The 1962 Trade Expansion Act and the Kennedy Round

It was primarily to deal with the new situation created by the formation of the European Union, or Common Market, that the [Trade Expansion Act of 1962](#) was passed by the Congress to replace the Trade Agreements Act.

The Trade Expansion Act of 1962 authorized the president to negotiate across-the-board tariff reductions of up to 50 percent of their 1962 level (and to remove completely duties that were 5 percent or less in 1962). This replaced the product-by-product approach of the Trade Agreements Act. In addition, the 1962 act provided [Trade Adjustment Assistance \(TAA\)](#) to displaced workers and firms injured by tariff reductions. This replaced the no-injury doctrine and took the form of retraining and moving assistance to displaced workers and tax relief, low-cost loans, and technical help to injured firms.

The principle of adjustment assistance was the most significant aspect of the Trade Expansion Act of 1962 since society at large (which was the beneficiary of the trade expansion resulting from tariff reductions) was made to bear, or at least share, the burden of adjustment. However, until the early 1970s, when the criteria for assistance were relaxed, few workers or firms qualified for adjustment assistance. In 1980, the trade assistance program’s peak year, more than half a million workers received about \$1.6 billion in assistance. Since then, however, the program has shrunk considerably, with only about 30,000 to 40,000 workers receiving a total of \$200 million to \$400 million in aid each year. The amount of aid provided was greatly expanded to \$2 billion per year by the [Trade Adjustment Reform Act of 2002](#). In 2010, approximately 140,000 workers received [Trade Adjustment Assistance \(TAA\)](#) for a total of \$1 billion.

Under the authority of the 1962 Trade Expansion Act, the United States initiated, under GATT auspices, wide-ranging multilateral trade negotiations. These were known as the [Kennedy Round](#). Negotiations in the Kennedy Round were completed in 1967 and resulted in an agreement to cut average tariff rates on industrial products by a total of 35 percent of their 1962 level, to be phased over a five-year period. By the end of 1972, when the agreement was fully implemented, average tariff rates on industrial products were less than 10 percent in industrial nations. However, there were still many serious nontariff trade barriers, especially in agriculture.

9.6d The Trade Reform Act of 1974 and the Tokyo Round

The 1962 Trade Expansion Act was replaced in 1974 by the [Trade Reform Act](#). This authorized the president (1) to negotiate tariff reductions of up to 60 percent and remove

tariffs of 5 percent or less and (2) to negotiate reductions in nontariff trade barriers. The act also liberalized the criteria for adjustment assistance.

Under the authority of the Trade Reform Act of 1974, the United States participated in the multilateral tariff negotiations known as the [Tokyo Round](#) (actually conducted in Geneva, except for the opening meeting held in Tokyo), which were concluded in 1979. Negotiated tariff reductions phased over an eight-year period, starting in 1980, averaged 31 percent for the United States, 27 percent for the European Union, and 28 percent for Japan. A code of conduct for nations in applying nontariff trade barriers was also prescribed to reduce the restrictive effect of these nontariff barriers. This code included (1) agreement on a government procurement code, (2) uniformity in the application of duties in countervailing and antidumping cases, and (3) a “generalized system of preferences” to the manufactured, semimanufactured, and selected other exports of developing nations. (However, textiles, shoes, consumer electronics, steel, and many other products of great importance to developing nations were excluded.)

The total static gains from trade liberalization under the Tokyo Round amounted to an estimated \$1.7 billion annually. With the dynamic gains arising from economies of scale and greater all-around efficiency and innovations, the figure might rise to as high as \$8 billion per year. These figures, however, are only rough “guesstimates.” Although the United States as a whole benefited from the tariff reductions negotiated under the Tokyo Round, labor (the relatively scarce factor in the United States) and industries with a relatively larger share of small businesses (which are more highly protected in the United States) were somewhat hurt.

9.6E The 1984 and 1988 Trade Acts

The Trade Reform Act of 1974 was followed by the U.S. [Trade and Tariff Act of 1984](#). This law had three major provisions: (1) It authorized the president to negotiate international agreements for the protection of intellectual property rights and to lower barriers to trade in services, high-technology products, and direct investments. (2) It extended the Generalized System of Preferences (GSP), which granted preferential access to the exports of developing countries to the United States (see Section 11.6) until July 1993, but with “graduation” or the removal of preferential access for the exports of the most advanced of the developing countries, such as Korea and Taiwan. (3) It provided authority for negotiations that led to a free trade agreement with Israel. It was under the provisions of this act that the United States called for new multilateral trade negotiations (the Uruguay Round) that started in 1986 (see Section 9.7A).

The [Omnibus Trade and Competitiveness Act of 1988](#) included a Super 301 provision, which (1) calls on the U.S. Special Trade Representative (USTR) to designate priority countries that maintain numerous and pervasive trade barriers, (2) sets a rigorous schedule for negotiations to be held on eliminating those barriers, and (3) requires retaliation by curbing imports from those countries if the negotiations are not successful. In May 1989, the United States named Japan, Brazil, and India as the most unfair traders. Japan was cited for the refusal of its public authorities to purchase U.S. satellites and supercomputers and for excluding U.S.-manufactured forest products. Brazil was cited for licensing requirements it imposes on practically all imports, and India for restrictions on foreign investments and curbs on foreign-based insurance companies. Under the Super 301 provision of the 1988

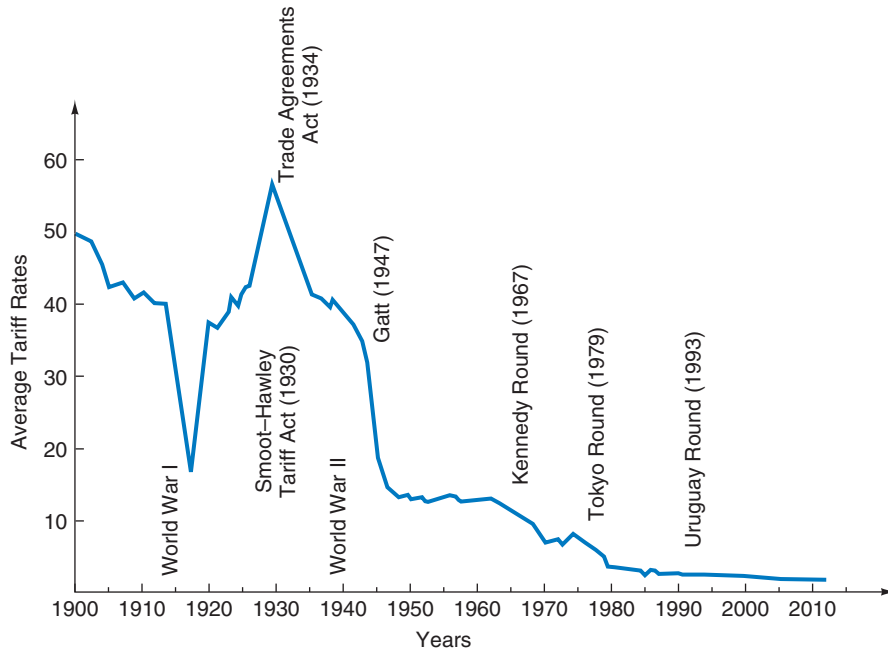


FIGURE 9.3. U.S. Average Tariff Rates on Dutiable Imports, 1900–2012.

Average tariff rates on dutiable imports in the United States ranged from the high of 59 percent, reached in 1932 under the Smoot–Hawley Tariff Act of 1930, to less than 5 percent in 2005. The average tariff rates can fall even without a change in tariff schedules when the proportion of low-tariff imports increases (as after 1972, as a result of the sharp rise in low-tariff petroleum imports).

Sources: *Historical Abstract of the United States* (Washington, D.C.: U.S. Government Printing Office, 1972); and *Statistical Abstract of the United States* (Washington, D.C.: U.S. Government Printing Office, 2012) for years since 1971.

Trade Act, these nations faced tariffs of 100 percent on selected exports to the United States if they did not relax trade restrictions.

Figure 9.3 summarizes the history of average tariff rates on dutiable imports in the United States from 1900 to 2010. Tariffs in the other leading developed nations have shown similar declines and are now comparable to U.S. rates (see Table 8.1). Note that the average tariff rates shown in the figure fall even without a change in tariff schedules when the proportion of low-tariff imports increases. For example, the fall in the average tariff rates after 1972 was due mostly to the sharp increase in low-tariff imports of petroleum in the United States.

9.7 The Uruguay Round, Outstanding Trade Problems, and the Doha Round

In December 1993, the Uruguay Round of multilateral trade negotiations was completed, but many trade problems remain. In this section, we first review the provisions of the Uruguay Round and then discuss the outstanding trade problems facing the world today, which were supposed to be taken up in the Doha Round.

9.7A The Uruguay Round

In December 1993, the [Uruguay Round](#), the eighth and most ambitious round of multilateral trade negotiations in history, in which 123 countries participated, was completed after seven years of tortuous negotiations. The Round had started in Punta del Este in Uruguay in September 1986 and had been scheduled to be completed by December 1990, but disagreements between the United States and the European Union (EU), especially France, on reducing agricultural subsidies delayed its conclusion for three years. The aim of the Uruguay Round was to establish rules for checking the proliferation of the new protectionism and reverse its trend; bring services, agriculture, and foreign investments into the negotiations; negotiate international rules for the protection of intellectual property rights; and improve the dispute settlement mechanism by ensuring more timely decisions and compliance with GATT rulings. The agreement was signed by the United States and most other countries on April 15, 1994, and took effect on July 1, 1995.

The major provisions of the accord were the following:

1. *Tariffs.* Tariffs on industrial products were to be reduced from an average of 4.7 percent to 3 percent, and the share of goods with zero tariffs was to increase from 20–22 percent to 40–45 percent; tariffs were removed altogether on pharmaceuticals, construction equipment, medical equipment, paper products, and steel.
2. *Quotas.* Nations were to replace quotas on agricultural imports and imports of textiles and apparel (under the Multifiber Agreement) with less restrictive tariffs by the end of 1999 for agricultural products and by the end of 2004 for textiles and apparel; tariffs on agricultural products were to be reduced by 24 percent in developing nations and by 36 percent in industrial nations, and tariffs on textiles were to be cut by 25 percent.
3. *Antidumping.* The agreement provided for tougher and quicker action to resolve disputes resulting from the use of antidumping laws, but it did not ban their use.
4. *Subsidies.* The volume of subsidized agricultural exports was to be reduced by 21 percent over a six-year period; government subsidies for industrial research were limited to 50 percent of applied research costs.
5. *Safeguards.* Nations could temporarily raise tariffs or other restrictions against an import surge that severely harmed domestic industry, but it barred countries from administering health and safety standards unless based on scientific evidence and not simply to restrict trade. For example, a nation could only keep out beef imports from cattle raised with growth hormones by showing that the beef so produced was unsafe for human consumption.
6. *Intellectual property.* The agreement provided for 20-year protection of patents, trademarks, and copyrights, but it allowed a 10-year phase-in period for patent protection in pharmaceuticals for developing countries.
7. *Services.* The United States failed to secure access to the markets of Japan, Korea, and many developing nations for its banks and security firms, and did not succeed in having France and the European Union lift restrictions on the showing of American films and TV programs in Europe.

8. *Other industry provisions.* The United States and Europe agreed to continue talking about further limiting government subsidies to civil aircraft makers, opening up the distance telephone market, and limiting European subsidies to steelmakers; the United States also indicated that it intended to continue negotiating the further opening of the Japanese computer chip market.
9. *Trade-related investment measures.* The agreement phased out the requirement that foreign investors (such as automakers) buy supplies locally or export as much as they import.
10. *World Trade Organization.* The agreement also called for the replacement of the General Agreement on Tariffs and Trade (GATT) secretariat with the [World Trade Organization \(WTO\)](#) in Geneva with authority not only in trade in industrial products but also in agricultural products and services. Trade disputes were also to be settled by a vote of two-thirds or three-quarters of the nations rather than unanimously as under GATT (which meant that the guilty nation could block any action against it).

Although the completion of the Uruguay Round was in and of itself a great achievement, only some of its aims were met and many trade problems remain (see the next section). It was estimated that the implementation of the Uruguay Round by 2005 increased world welfare by \$73 billion, of which \$58.3 billion of the gains went to developed countries and \$19.2 billion to developing countries (see Case Study 9-7). The collapse of the Uruguay Round, however, would have been disastrous psychologically and could have led to the unrestrained proliferation of trade restrictions and destructive trade wars.

During 1996 and 1997, multilateral agreements to open up trade in telecommunications, financial services, and information technology (that were not reached at the Uruguay Round) were concluded. Over time, these agreements could provide larger gains in trade volumes than the entire Uruguay Round treaty. In 1999, the European Union reached a free trade agreement with Mexico (which became effective in July 2000) to end all tariffs on their bilateral trade. China became the 144th member of the WTO in 2001 and Russia became the 156th member in 2012.

In August 2002, Congress granted the president [trade promotion authority](#), formerly known as “*fast track*,” to negotiate broad trade agreements that allowed no amendments, but only an up-or-down vote by Congress to ratify or reject the agreements. The purpose of this legislation was to assure foreign governments that Congress would act expeditiously on any agreement that they negotiate with the U.S. Government. The legislation also required the president to consider environmental protection, labor rights, and antidumping laws in his negotiations, and it provided up to \$1.2 billion a year in health insurance and other benefits to workers who lost their jobs, and added farmers and ranchers to the list of those eligible. Fast track, however, was not renewed after it expired in 2007.

Since 2001, the United States has reached free trade agreements (FTAs) with Australia, Bahrain, Chile, Jordan, Morocco, Peru, and Singapore, and signed DRCAFTA (Dominica Republic-Central American Free Trade Agreement, with Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic). Then, in October 2011, the United States ratified the FTA with South Korea, Colombia, and Panama (in July 2011, the

■ CASE STUDY 9-7 Gains from the Uruguay Round

Table 9.6 provides an estimate of the welfare gains, in dollars and as a percentage of GDP, as well as the percentage increase in real wages, in various nations and regions of the world resulting from the full implementation of the Uruguay Round by 2005. The table shows that the world welfare rises by \$73 billion, of which \$53.8 billion or 74 percent goes to the developed countries and the rest to developing countries. European Union (EU) and the European Free Trade Area (EFTA) gain the most (\$23.7 billion), followed by the United States (with a gain of \$19.8 billion) and Japan (with

\$6.9 billion). Among developing nations, India gains the most (\$2.8 billion), followed by the rest of South Asia (\$2.7 billion), Malaysia (\$2.6 billion), and South Korea and the Philippines (with \$2.5 billion each). China gains \$1.3 billion. Only Hong Kong loses a little (\$100 million). In terms of percentages of GDP and real wages, the gains of developed nations are less than 0.4 percent, while those of developing countries exceed 2 percent of GDP for the rest of South Asia, Singapore, Malaysia, and the Philippines (except for a gain of 1.92 percent in real wages for Singapore).

■ **TABLE 9.6.** Real Income Gains from the Uruguay Round

Country or Region	Welfare Gains (billions of dollars)	Welfare Gains (percent of GDP)	Gains in Real Wages (percent)
Developed Countries:			
United States	19.8	0.22	0.21
Europe Union & EFTA	23.7	0.22	0.21
Japan	6.9	0.11	0.09
Canada	1.6	0.22	0.20
Australia & New Zealand	1.8	0.34	0.36
Developing Countries:			
Asia			
India	2.8	0.68	0.54
Sri Lanka	0.1	0.70	0.54
Rest of South Asia	2.7	2.29	2.43
China	1.3	0.14	0.23
Hong Kong	-0.1	-0.11	0.47
South Korea	2.5	0.45	0.45
Singapore	1.6	2.11	1.92
Indonesia	0.6	0.24	0.32
Malaysia	2.6	2.19	2.56
Philippines	2.5	2.82	3.91
Thailand	0.8	0.40	0.76
Other:			
Mexico	0.1	0.01	0.03
Turkey	0.2	0.11	0.09
Central Europe	1.2	0.33	0.34
Central and South America	0.3	0.02	0.04
Total	73.0		

Source: D. K. Brown, A. V. Deardorff, and R. Stern, "Computational Analysis of Multilateral Trade Liberalization in the Uruguay Round," *Discussion Paper No. 489*, School of Public Affairs, University of Michigan, December 8, 2002.

■ CASE STUDY 9-8 The Multilateral Rounds of Trade Negotiations

Table 9.7 provides a summary of the year, the place and name of the trade round, the number of participating countries, the subject covered, and the percentage of tariff reduction achieved. From the table we see that the most significant rounds sponsored by the GATT were those of 1947,

1964–1967 (Kennedy Round), 1973–1979 (Tokyo Round), and 1986–1993 (Uruguay Round). The new Doha Round (2001–) sponsored by the WTO is the largest and most difficult one, but it seems unlikely to be successfully concluded.

■ **TABLE 9.7.** The GATT Trade Rounds and the WTO Round

Year	Place/Name	Number of Participating Countries	Subject Covered	Percentage Cut in Tariffs
1947	Geneva	23	Tariffs	21
1949	Annecy	13	Tariffs	2
1951	Torquay	38	Tariffs	3
1956	Geneva	26	Tariffs	4
1960–1961	Geneva (Dillon Round)	26	Tariffs	2
1964–1967	Geneva (Kennedy Round)	62	Tariffs and antidumping measures	35
1973–1979	Geneva (Tokyo Round)	99	Tariffs, nontariff measures, multilateral agreements	33
1986–1993	Geneva (Uruguay Round)	125	Tariffs, nontariff measures, agriculture, services, textiles, intellectual property, dispute settlement, creation of WTO	34
2001–	Doha (Doha Round)	150	To liberalize global trade in agriculture, industrial goods, and service	To be determined

Source: World Trade Organization, *Annual Report* (Geneva: WTO, 2011).

European Union also signed a free trade agreement with South Korea). Case Study 9-8 provides a summary of the eight rounds of multilateral trade negotiations conducted under the auspices of the GATT since 1947, as well as the new (ninth) Doha Round sponsored by the WTO, which was announced in November 2001 in Doha, the capital of the Gulf state of Qatar, but all but collapsed in July 2006, and all attempts to revive it have so far failed.

9.7B Outstanding Trade Problems and the Doha Round

Despite the great benefits resulting from the successful completion of the Uruguay Round, many serious trade problems remain. *One problem* is continued widespread trade protectionism. As discussed in Sections 9.3 to 9.5, advanced nations often seek to protect domestic production and jobs from foreign competition and use strategic trade and industrial policies to encourage new high-tech industries, and so do emerging market economies. Europe has

increased protection on a number of industries out of fear of turning into an industrial wasteland. Russia raised tariffs on used car imports, India banned Chinese toys, and Argentina has tightened licensing requirements on auto parts imports, textiles, and leather goods. The United States and some European countries are subsidizing their embattled automakers and car dealers, their farmers, and their banks—and so the list goes on.

A *second problem* is that subsidies and tariffs on agricultural products remain very high; antidumping measures and safeguards are still possible and frequently abused, and so the potential for serious trade disputes remains. A *third trade problem* is the tendency for the world to break up into three major trading blocs: the European Union (EU), the North America Free Trade Area (NAFTA), and a (much less defined) Asian bloc. (Trading blocs are examined in detail in Chapter 11.) Although these trading blocs could be regarded as building blocks of a freer trading system, they can also become stumbling blocks and lead to more bilateral deals, protectionism, and interbloc trade conflicts.

The *fourth problem* is the call by some developed countries, such as the United States and France, for the establishment of labor and environmental standards. These are supposed to ensure a “leveling of working conditions” between developed and developing countries and avoid “social dumping” by the latter (i.e., developing countries competing unfairly by denying their workers basic rights and decent wages and working conditions). The danger is that the movement to establish labor and environmental standards can easily be captured by protectionistic forces. The same is true for environmental standards (see Section 6.6c). Trade-related competition policies (such as subsidies and regulations) as well as *trade-related investment measures (TRIMs)* also need to be dealt with more adequately than they have been in the Uruguay Round.

An attempt was made to launch a “Millennium Round” of trade negotiations at the WTO Trade Conference held in Seattle in December 1999. The attempt failed because (1) developing countries were adamantly opposed to putting labor and environmental standards on the agenda for the new round; (2) the European Union and Japan objected to the U.S. desire to put on the agenda the complete liberalization of trade in agricultural products; and (3) the United States objected to discussing competition and investment policies that the European Union wanted. All this came up in the face of large demonstrations organized by a strong *antiglobalization movement*, which blamed globalization for many human and environmental problems worldwide and for sacrificing human and environmental well-being to the corporate profits of multinationals (see Section 1.1).

In November 2001, the *Doha Round* was launched in Doha, Qatar. The agenda included (1) the further liberalization of production and trade in agriculture, industrial products, and services, and (2) the further tightening of rules for antidumping measures and safeguards, as well as investment and competition policies (Case Study 9-9 gives estimates of the welfare benefits to developed and developing countries of a likely Doha scenario). From the very beginning, developing nations were reluctant to make concessions because they felt that the Uruguay Round failed to deliver a great deal of what it promised them and insisted on making the Doha Round a true “development round.” The Doha Round was supposed to be concluded by the end of 2004, but after five years of negotiations the Round all but collapsed in July 2006 over disagreements over agricultural subsidies between developed and developing countries and among developed countries themselves. All attempts to revive the Doha Round had failed as of the end of 2012. The WTO has now begun to discuss Plan B to reach agreement on those aspects of the Doha negotiations where agreement is possible. In the meantime, there have been renewed efforts to negotiate more bilateral deals.

■ CASE STUDY 9-9 Benefits from a Likely Doha Scenario

Table 9.8 gives an estimate of benefits (total, per capita, as a percentage of GDP) that developed and developing countries can expect from a “likely” Doha scenario by 2015. The “likely” scenario involves a reduction in agricultural tariffs of between 45 and 75 percent in developed countries and between 35 and 60 percent in developing countries (except for the least-developed countries, which would not be required to make any reductions in agricultural tariffs). For non-agricultural tariffs, the “likely” scenario involves a reduction in tariffs of 50 percent in developed countries and

35 percent in developing countries (and no reductions in the least-developed countries).

Table 9.8 shows that the total projected benefits of a “likely” Doha scenario would be \$96 billion (or about one-third of the estimated value of full liberalization) (see Table 9.4 in Case Study 9-6), of which \$80 billion would go to developed countries (representing \$79.04 per capita and 0.24 percent of their GDP) and \$16 billion would go to developing countries (representing \$3.13 per capita and 0.14 percent of their GDP).

■ **TABLE 9.8.** Benefits from a Likely Doha Scenario

	Developed Countries	Developing Countries	World
Total amounts, billions of dollars	\$80	\$16	\$96
Per capita, dollars per person	\$79.04	\$3.13	\$15.67
Percentage of GDP	0.24%	0.14%	0.23%

Source: K. Anderson and W. Martin, ed., *Agricultural Reform and the Doha Development Agenda* (Washington, D.C.: World Bank, 2006), Ch. 12.

SUMMARY

1. A quota is a direct quantitative restriction on imports or exports. An import quota has the same consumption and production effects as an (equivalent) import tariff. If the government auctions off import licenses to the highest bidder in a competitive market, the revenue effect also is the same. The adjustment to any shift in demand or supply occurs in the domestic price with an import quota and in the quantity of imports with a tariff. If import licenses are not auctioned off, they lead to monopoly profits and possible corruption. An import quota is in general more restrictive than an equivalent import tariff.
2. Voluntary export restraints refer to the case where an importing nation induces another nation to curb its exports of a commodity “voluntarily,” under the threat
3. An international cartel is an organization of suppliers of a commodity located in different nations (or a group of governments) that agrees to restrict output

of higher all-around trade restrictions. When successful, their economic impact is the same as that of an equivalent import quota, except for the revenue effect, which is now captured by foreign suppliers. Voluntary export restraints are not likely to be completely successful in limiting imports, however, and they were for the most part phased out by the end of 1999 as a result of the Uruguay Round agreement. There are also numerous other nontariff trade restrictions. These became more important than tariffs as obstructions to the flow of international trade over the past three decades.