



After studying this chapter, you will be able to:

- ◆ Explain how markets work with international trade
- ◆ Identify the gains from international trade and its winners and losers
- ◆ Explain the effects of international trade barriers
- ◆ Explain and evaluate arguments used to justify restricting international trade

15

INTERNATIONAL TRADE POLICY

iPods, Wii games, and Nike shoes are just three of the items you might buy that are not produced in the United States. In fact, most of the goods that you buy are produced abroad, often in Asia, and transported here in container ships and FedEx cargo jets. And it's not just goods produced abroad that you buy—it is services too. When you make a technical support call, most likely you'll be talking with someone in India, or to a voice recognition system that was programmed in India. Satellites or fiber cables will carry your conversation along with huge amounts of other voice messages, video images, and data.

All these activities are part of the globalization process that is having a profound effect on our lives. Globalization is controversial and generates heated debate. Many Americans want to know how we can compete with people whose wages are a fraction of our own.

Why do we go to such lengths to trade and communicate with others in faraway places? You will find some answers in this chapter. And in *Reading Between the Lines* at the end of the chapter, you can apply what you've learned and examine the effects of a tariff that the Obama government has put on tires imported from China.

◆ How Global Markets Work

Because we trade with people in other countries, the goods and services that we can buy and consume are not limited by what we can produce. The goods and services that we buy from other countries are our **imports**; and the goods and services that we sell to people in other countries are our **exports**.

International Trade Today

Global trade today is enormous. In 2009, global exports and imports were \$31 trillion, which is one half of the value of global production. The United States is the world's largest international trader and accounts for 10 percent of world exports and 13 percent of world imports. Germany and China, which rank 2 and 3 behind the United States, lag by a large margin.

In 2009, total U.S. exports were \$1.6 trillion, which is about 11 percent of the value of U.S. production. Total U.S. imports were \$2 trillion, which is about 14 percent of total expenditure in the United States.

We trade both goods and services. In 2009, exports of services were about 33 percent of total exports and imports of services were about 19 percent of total imports.

What Drives International Trade?

Comparative advantage is the fundamental force that drives international trade. Comparative advantage (see Chapter 2, p. 38) is a situation in which a person can perform an activity or produce a good or service at a lower opportunity cost than anyone else. This same idea applies to nations. We can define *national comparative advantage* as a situation in which a nation can perform an activity or produce a good or service at a lower opportunity cost than any other nation.

The opportunity cost of producing a T-shirt is lower in China than in the United States, so China has a comparative advantage in producing T-shirts. The opportunity cost of producing an airplane is lower in the United States than in China, so the United States has a comparative advantage in producing airplanes.

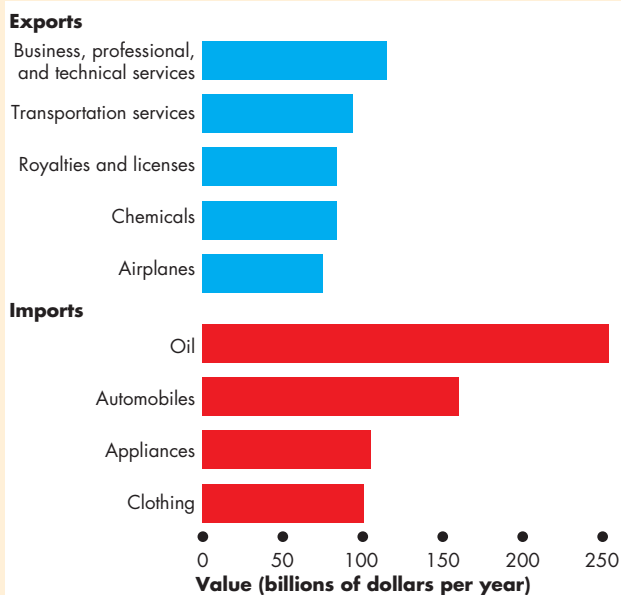
You saw in Chapter 2 how Liz and Joe reap gains from trade by specializing in the production of the good at which they have a comparative advantage and then trading with each other. Both are better off.

Economics in Action

Trading Services for Oil

Services top the list of U.S. exports and oil is the nation's largest import by a large margin.

The services that we export are business, professional, and technical services and transportation services. Chemicals were the largest category of goods that we exported in 2009.



U.S. Exports and Imports

Source of data: Bureau of Economic Analysis.

This same principle applies to trade among nations. Because China has a comparative advantage at producing T-shirts and the United States has a comparative advantage at producing airplanes, the people of both countries can gain from specialization and trade. China can buy airplanes from the United States at a lower opportunity cost than that at which Chinese firms can produce them. And Americans can buy T-shirts from China for a lower opportunity cost than that at which U.S. firms can produce them. Also, through international trade, Chinese producers can get higher prices for their T-shirts and Boeing can sell airplanes for a higher price. Both countries gain from international trade.

Let's now illustrate the gains from trade that we've just described by studying demand and supply in the global markets for T-shirts and airplanes.

Why the United States Imports T-Shirts

The United States imports T-shirts because the rest of the world has a comparative advantage in producing T-shirts. Figure 15.1 illustrates how this comparative advantage generates international trade and how trade affects the price of a T-shirt and the quantities produced and bought.

The demand curve D_{US} and the supply curve S_{US} show the demand and supply in the U.S. domestic market only. The demand curve tells us the quantity of T-shirts that Americans are willing to buy at various prices. The supply curve tells us the quantity of T-shirts that U.S. garment makers are willing to sell at various prices—that is, the quantity supplied at each price when all T-shirts sold in the United States are produced in the United States.

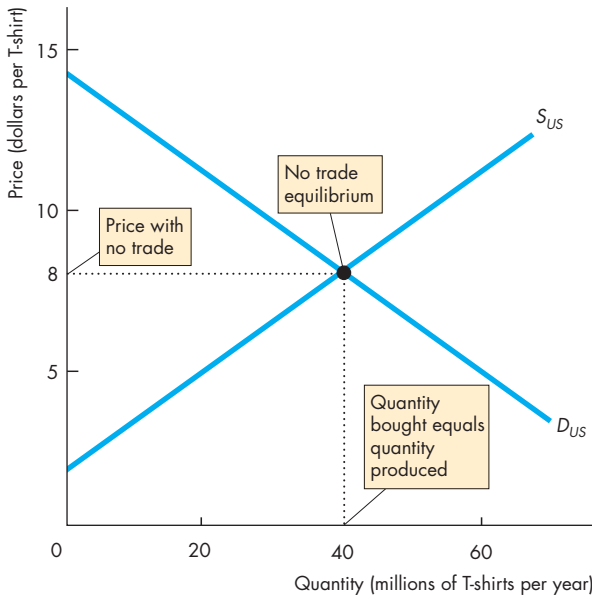
Figure 15.1(a) shows what the U.S. T-shirt market would be like with no international trade. The price

of a shirt would be \$8 and 40 million shirts a year would be produced by U.S. garment makers and bought by U.S. consumers.

Figure 15.1(b) shows the market for T-shirts with international trade. Now the price of a T-shirt is determined in the world market, not the U.S. domestic market. The world price is less than \$8 a T-shirt, which means that the rest of the world has a comparative advantage in producing T-shirts. The world price line shows the world price at \$5 a shirt.

The U.S. demand curve, D_{US} , tells us that at \$5 a shirt, Americans buy 60 million shirts a year. The U.S. supply curve, S_{US} , tells us that at \$5 a shirt, U.S. garment makers produce 20 million T-shirts a year. To buy 60 million T-shirts when only 20 million are produced in the United States, we must import T-shirts from the rest of the world. The quantity of T-shirts imported is 40 million a year.

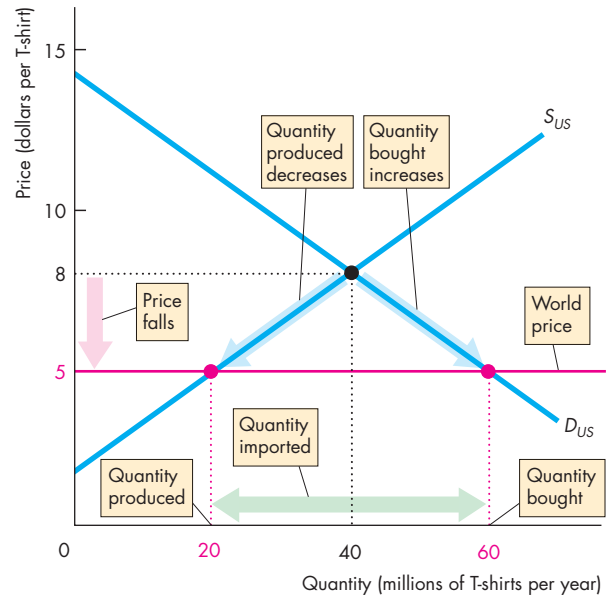
FIGURE 15.1 A Market With Imports



(a) Equilibrium with no international trade

Part (a) shows the U.S. market for T-shirts with no international trade. The U.S. domestic demand curve D_{US} and U.S. domestic supply curve S_{US} determine the price of a T-shirt at \$8 and the quantity of T-shirts produced and bought in the United States at 40 million a year.

Part (b) shows the U.S. market for T-shirts with interna-



(b) Equilibrium in a market with imports

tional trade. World demand and world supply determine the world price, which is \$5 per T-shirt. The price in the U.S. market falls to \$5 a shirt. U.S. purchases of T-shirts increase to 60 million a year, and U.S. production of T-shirts decreases to 20 million a year. The United States imports 40 million T-shirts a year.

Why the United States Exports Airplanes

The United States exports airplanes because it has a comparative advantage in producing them. Figure 15.2 illustrates how this comparative advantage generates international trade in airplanes and how this trade affects the price of an airplane and the quantities produced and bought.

The demand curve D_{US} and the supply curve S_{US} show the demand and supply in the U.S. domestic market only. The demand curve tells us the quantity of airplanes that U.S. airlines are willing to buy at various prices. This demand curve tells us the quantity demanded at each price when all airplanes produced in the United States are bought in the United States. The supply curve tells us the quantity of airplanes that U.S. aircraft makers are willing to sell at various prices.

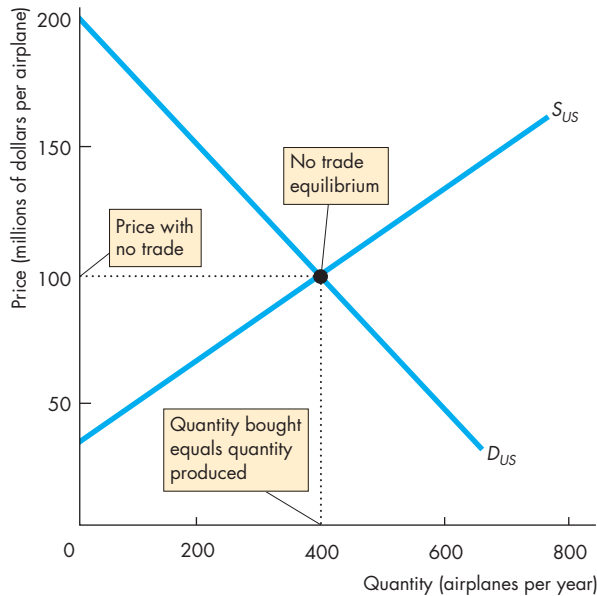
Figure 15.2(a) shows what the U.S. airplane market would be like with no international trade. The

price of an airplane would be \$100 million and 400 airplanes a year would be produced by U.S. aircraft makers and bought by U.S. airlines.

Figure 15.2(b) shows the U.S. airplane market with international trade. Now the price of an airplane is determined in the world market and the world price is higher than \$100 million. Because the world price exceeds the U.S. price with no international trade, the United States has a comparative advantage in producing airplanes. The world price line shows the world price at \$150 million.

The U.S. demand curve, D_{US} , tells us that at \$150 million an airplane, U.S. airlines buy 200 airplanes a year. The U.S. supply curve, S_{US} , tells us that at \$150 million an airplane, U.S. aircraft makers produce 700 airplanes a year. The quantity produced in the United States (700 a year) minus the quantity purchased by U.S. airlines (200 a year) is the quantity of airplanes exported, which is 500 airplanes a year.

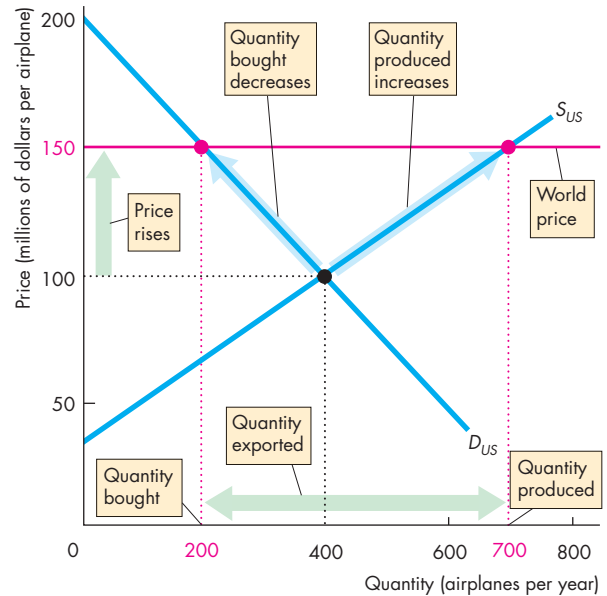
FIGURE 15.2 A Market with Exports



(a) Equilibrium without international trade

In part (a), the U.S. market with no international trade, the U.S. domestic demand curve D_{US} and the U.S. domestic supply curve S_{US} determine the price of an airplane at \$100 million and 400 airplanes are produced and bought each year.

In part (b), the U.S. market with international trade,



(b) Equilibrium in a market with exports

world demand and world supply determine the world price, which is \$150 million per airplane. The price in the U.S. market rises. U.S. airplane production increases to 700 a year, and U.S. purchases of airplanes decrease to 200 a year. The United States exports 500 airplanes a year.

Winners and Losers from International Trade

International trade has winners, and it has losers. It is because some people lose that we often hear complaints about international competition. We're now going to see who wins and who loses from international trade. Then you will be able to understand who complains about international competition and why. You will learn why we hear producers complaining about cheap foreign imports. You will also see why we never hear consumers of imported goods and services complaining and why we never hear exporters complaining except when they want greater access to foreign markets.

Gains and Losses from Imports We can measure the gains and losses from imports by examining their effect on the price paid and quantity consumed by domestic consumers and their effect on the price received and quantity sold by domestic producers.

Consumers Gain from Imports When a country freely imports something from the rest of the world, it is because the rest of the world has a comparative advantage at producing that item. Compared to a situation with no international trade, the price paid by the consumer falls and the quantity consumed increases. It is clear that the consumer gains. The greater the fall in price and increase in quantity consumed, the greater is the gain to the consumer.

Domestic Producers Lose from Imports Compared to a situation with no international trade, the price received by a domestic producer of an item that is imported falls. Also, the quantity sold by the domestic producer of a good or service that is also imported decreases. Because the domestic producer of an item that is imported sells a smaller quantity and for a lower price, this producer loses from international trade. Import-competing industries shrink in the face of competition from cheaper foreign-produced goods.

The profits of firms that produce import-competing goods and services fall, these firms cut their workforce, unemployment in these industries increases and wages fall. When these industries have a geographical concentration, such as steel production around Gary, Indiana, an entire region can suffer economic decline.

Gains and Losses from Exports Just as we did for imports, we can measure the gains and losses from exports by looking at their effect on the price paid and quantity consumed by domestic consumers and

their effect on the price received and quantity sold by domestic producers.

Domestic Consumers Lose from Exports When a country exports something to the rest of the world, it is because the country has a comparative advantage at producing that item. Compared to a situation with no international trade, the price paid by the consumer rises and the quantity consumed in the domestic economy decreases. The domestic consumer loses. The greater the rise in price and decrease in quantity consumed, the greater is the loss to the consumer.

Domestic Producers Gain from Exports Compared to a situation with no international trade, the price received by a domestic producer of an item that is exported rises. Also, the quantity sold by the domestic producer of a good or service that is also exported increases. Because the domestic producer of an item that is exported sells a larger quantity and for a higher price, this producer gains from international trade. Export industries expand in the face of global demand for their product.

The profits of firms that produce exports rise, these firms expand their workforce, unemployment in these industries decreases and wages rise. When these industries have a geographical concentration, such as software production in Silicon Valley, an entire region can boom.

Net Gain Export producers and import consumers gain, export consumers and import producers lose, but the gains are greater than the losses. In the case of imports, the consumer gains what the producer loses and then gains even more on the cheaper imports. In the case of exports, the producer gains what the consumer loses and then gains even more on the items it exports. So international trade provides a net gain for a country.



REVIEW QUIZ

- 1 Explain the effects of imports on the domestic price and quantity, and the gains and losses of consumers and producers.
- 2 Explain the effects of exports on the domestic price and quantity, and the gains and losses of consumers and producers.

You can work these questions in Study Plan 15.1 and get instant feedback.



International Trade Restrictions

Governments use four sets of tools to influence international trade and protect domestic industries from foreign competition. They are

- Tariffs
- Import quotas
- Other import barriers
- Export subsidies

Tariffs

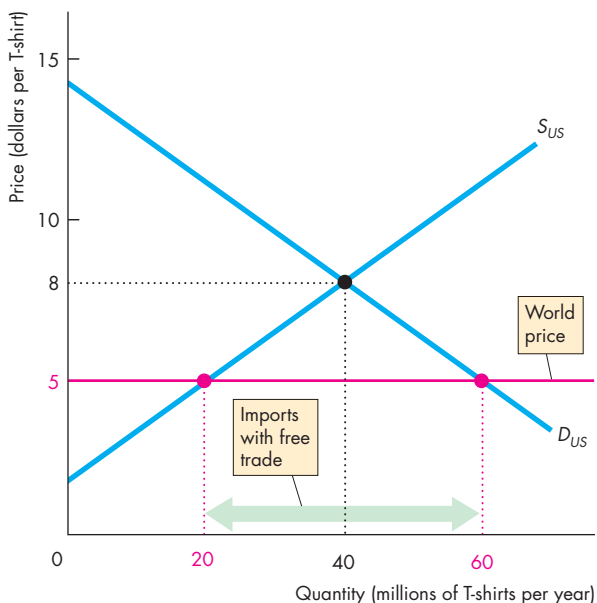
A **tariff** is a tax on a good that is imposed by the importing country when an imported good crosses its international boundary. For example, the government of India imposes a 100 percent tariff on wine imported from California. So when an Indian imports a \$10 bottle of Californian wine, he pays the Indian government a \$10 import duty.

Tariffs raise revenue for the government and enable the government to satisfy the self-interest of the people who earn their incomes in the import-competing industries. But as you will see, tariffs and other restrictions on free international trade decrease the gains from trade and are not in the social interest. Let's see why.

The Effects of a Tariff To see the effects of a tariff, let's return to the example in which the United States imports T-shirts. With free trade, the T-shirts are imported and sold at the world price. Then, under pressure from U.S. garment makers, the U.S. government imposes a tariff on imported T-shirts. Buyers of T-shirts must now pay the world price plus the tariff. Several consequences follow and Fig. 15.3 illustrates them.

Figure 15.3(a) shows the situation with free international trade. The United States produces 20 million T-shirts a year and imports 40 million a year at the world price of \$5 a shirt. Figure 15.3(b) shows

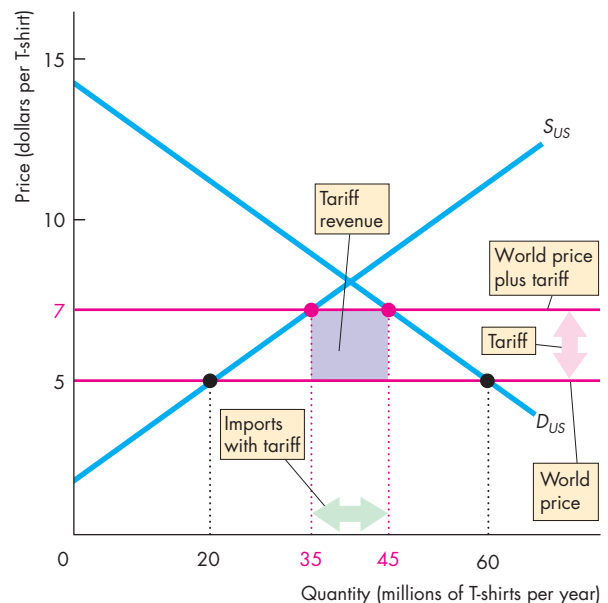
FIGURE 15.3 The Effects of a Tariff



(a) Free trade

The world price of a T-shirt is \$5. With free trade in part (a), Americans buy 60 million T-shirts a year. U.S. garment makers produce 20 million T-shirts a year and the United States imports 40 million a year.

With a tariff of \$2 per T-shirt in part (b), the price in the



(b) Market with tariff

U.S. market rises to \$7 a T-shirt. U.S. production increases, U.S. purchases decrease, and the quantity imported decreases. The U.S. government collects a tariff revenue of \$2 on each T-shirt imported, which is shown by the purple rectangle.

what happens with a tariff set at \$2 per T-shirt. The following changes occur in the market for T-shirts:

- The price of a T-shirt in the United States rises by \$2.
- The quantity of T-shirts bought in the United States decreases.
- The quantity of T-shirts produced in the United States increases.
- The quantity of T-shirts imported into the United States decreases.
- The U.S. government collects a tariff revenue.

Rise in Price of a T-Shirt To buy a T-shirt, Americans must pay the world price plus the tariff, so the price of a T-shirt rises by the \$2 tariff to \$7. Figure 15.3(b) shows the new domestic price line, which lies \$2 above the world price line

Decrease in Purchases The higher price of a T-shirt brings a decrease in the quantity demanded along the demand curve. Figure 15.3(b) shows the decrease from 60 million T-shirts a year at \$5 a shirt to 45 million a year at \$7 a shirt.

Increase in Domestic Production The higher price of a T-shirt stimulates domestic production, and U.S. garment makers increase the quantity supplied along the supply curve. Figure 15.3(b) shows the increase from

20 million T-shirts at \$5 a shirt to 35 million a year at \$7 a shirt.

Decrease in Imports T-shirt imports decrease by 30 million, from 40 million to 10 million a year. Both the decrease in purchases and the increase in domestic production contribute to this decrease in imports.

Tariff Revenue The government’s tariff revenue is \$20 million—\$2 per shirt on 10 million imported shirts—shown by the purple rectangle.

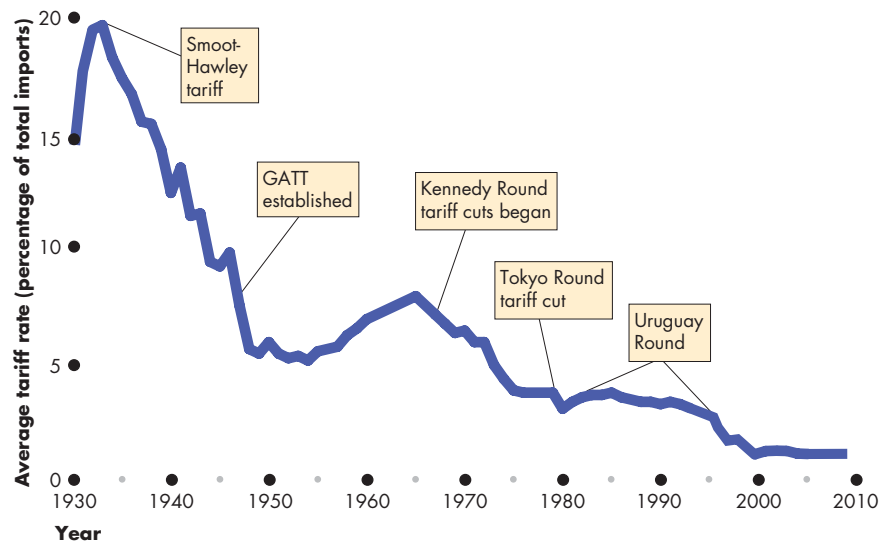
Winners, Losers, and the Social Loss from a Tariff A tariff on an imported good creates winners and losers and we’re now going to identify the winners and losers. When the U.S. government imposes a tariff on an imported good,

- U.S. consumers of the good lose.
- U.S. producers of the good gain.
- U.S. consumers lose more than U.S. producers gain: society loses.

U.S. Consumers of the Good Lose Because the price of a T-shirt in the United States rises, the quantity of T-shirts demanded decreases. The combination of a higher price and smaller quantity bought makes the U.S. consumers worse off when a tariff is imposed.

Economics in Action U.S. Tariffs Almost Gone

The Smoot-Hawley Act, which was passed in 1930, took U.S. tariffs to a peak average rate of 20 percent in 1933. (One third of imports was subject to a 60 percent tariff.) The **General Agreement on Tariffs and Trade (GATT)** was established in 1947. Since then tariffs have fallen in a series of negotiating rounds, the most significant of which are identified in the figure. Tariffs are now as low as they have ever been but import quotas and other trade barriers persist.



Tariffs: 1930-2009

Sources of data: U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 1* (Washington, D.C., 1975); Series U-212: updated from *Statistical Abstract of the United States*: various editions.

U.S. Producers of the Good Gain Because the price of an imported T-shirt rises by the amount of the tariff, U.S. T-shirt producers are now able to sell their T-shirts for the world price plus the tariff. At the higher price, the quantity of T-shirts supplied by U.S. producers increases. The combination of a higher price and larger quantity produced increases the producers' profits. So U.S. producers gain from the tariff.

U.S. Consumers Lose More Than U.S. Producers Gain: Society Loses Consumers lose from a tariff for three reasons:

1. They pay a higher price to domestic producers
2. They consume a smaller quantity of the good
3. They pay tariff revenue to the government

The tariff revenue is a loss to consumers but is not a social loss. The government can use the tax revenue to buy public services that consumers value. But the other two sources of consumer loss include some social losses.

There is a social loss because part of the higher price paid to domestic producers pays the higher cost of domestic production. The increased domestic production could have been obtained at lower cost as an import. There is also a social loss from the decreased quantity of the good consumed at the higher price.

Import Quotas

We now look at the second tool for restricting trade: import quotas. An **import quota** is a restriction that limits the maximum quantity of a good that may be imported in a given period. Most countries impose import quotas on a wide range of items. The United States imposes them on sugar, bananas, beef, and manufactured goods such as textiles, paper, and tires.

Import quotas enable the government to satisfy the self-interest of the people who earn their incomes in the import-competing industries. But you will discover that like a tariff, an import quota decreases the gains from trade and is not in the social interest.

Economics in Action

Self-Interest Beats the Social Interest

The **World Trade Organization (WTO)** is an international body established by the world's major trading nations for the purpose of supervising international trade and lowering the barriers to trade.

In 2001, at a meeting of trade ministers from all the WTO member-countries held in Doha, Qatar, an agreement was made to begin negotiations to lower tariff barriers and quotas that restrict international trade in farm products and services. These negotiations are called the **Doha Development Agenda** or the **Doha Round**.

In the period since 2001, thousands of hours of conferences in Cancún in 2003, Geneva in 2004, and Hong Kong in 2005, and ongoing meetings at WTO headquarters in Geneva, costing millions of taxpayers' dollars, have made disappointing progress.

Rich nations, led by the United States, the European Union, and Japan, want greater access to the markets of developing nations in exchange for allowing those nations greater access to the rich world's markets, especially for farm products.

Developing nations, led by Brazil, China, India, and South Africa, want access to the farm product markets

of the rich world, but they also want to protect their infant industries.

With two incompatible positions, these negotiations are stalled and show no signs of a breakthrough. The self-interest of rich and developing nations is preventing the achievement of the social interest.



The Effects of an Import Quota The effects of an import quota are similar to those of a tariff. The price rises, the quantity bought decreases, and the quantity produced in the United States increases. Figure 15.4 illustrates the effects.

Figure 15.4(a) shows the situation with free international trade. Figure 15.4(b) shows what happens with an import quota of 10 million T-shirts a year. The U.S. supply curve of T-shirts becomes the domestic supply curve, S_{US} , plus the quantity that the import quota permits. So the supply curve becomes $S_{US} + quota$. The price of a T-shirt rises to \$7, the quantity of T-shirts bought in the United States decreases to 45 million a year, the quantity of T-shirts produced in the United States increases to 35 million a year, and the quantity of T-shirts imported into the United States decreases to the quota quantity of 10 million a year. All the effects of this quota are identical to the effects of a \$2 per shirt tariff, as you can check in Fig. 15.3(b).

Winners, Losers, and the Social Loss from an Import Quota An import quota creates winners and losers that are similar to those of a tariff but with an interesting difference.

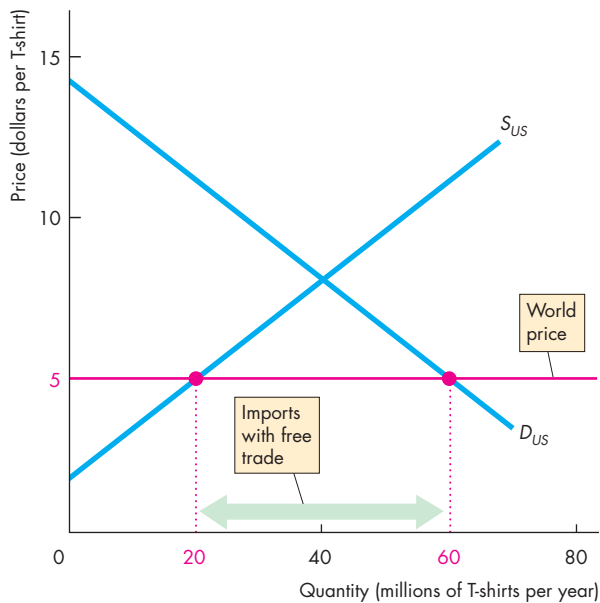
When the government imposes an import quota,

- U.S. consumers of the good lose.
- U.S. producers of the good gain.
- Importers of the good gain.
- Society loses.

U.S. Consumers of the Good Lose Because the price of a T-shirt in the United States rises, the quantity of T-shirts demanded decreases. The combination of a higher price and smaller quantity bought makes the U.S. consumers worse off. So U.S. consumers lose when an import quota is imposed.

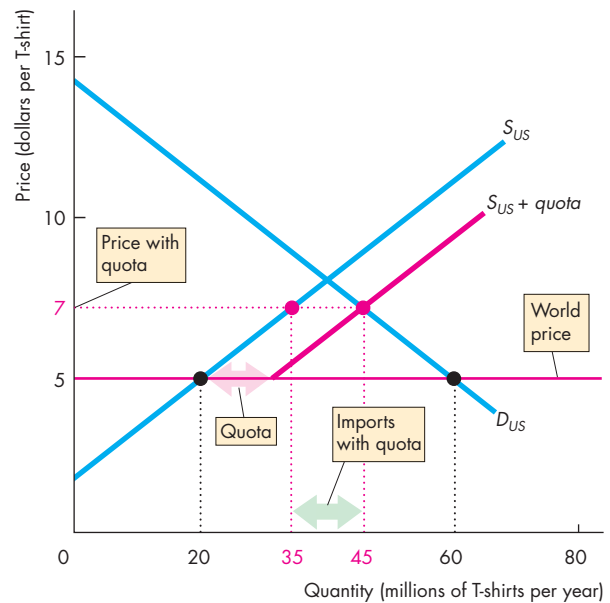
U.S. Producers of the Good Gain Because the price of an imported T-shirt rises, U.S. T-shirt producers increase production. The combination of a higher

FIGURE 15.4 The Effects of an Import Quota



(a) Free trade

With free international trade, in part (a), Americans buy 60 million T-shirts at the world price. The United States produces 20 million T-shirts and imports 40 million a year. With an import quota of 10 million T-shirts a year, in part (b), the



(b) Market with import quota

supply of T-shirts in the United States is shown by the curve $S_{US} + quota$. The price in the United States rises to \$7 a T-shirt. U.S. production increases, U.S. purchases decrease, and the quantity of T-shirts imported decreases.

price and larger quantity produced increases producers' profit. So U.S. producers gain from the quota.

Importers of the Good Gain The importer is able to buy the good on the world market at the world market price, and sell the good in the domestic market at the domestic price. Because the domestic price exceeds the world price, the importer gains.

Society Loses Society loses because the loss to consumers exceeds the gains of domestic producers and importers. Just like the social losses from a tariff, there is a social loss from the quota because part of the higher price paid to domestic producers pays the higher cost of domestic production. There is a social loss from the decreased quantity of the good consumed at the higher price.

Tariff and Quota Compared You've looked at the effects of a tariff and a quota and can now see the essential differences between them. A tariff brings in revenue for the government while a quota brings a profit for the importers. All the other effects of a quota are the same as the effects of a tariff, provided the quota is set at the same quantity of imports that results from the tariff.

Tariffs and quotas are equivalent ways of restricting imports, benefiting domestic producers, and harming domestic consumers.

Let's now look at some other import barriers.

Other Import Barriers

Two sets of policies that influence imports are

- Health, safety, and regulation barriers
- Voluntary export restraints

Health, Safety, and Regulation Barriers Thousands of detailed health, safety, and other regulations restrict international trade. For example, U.S. food imports are examined by the Food and Drug Administration to determine whether the food is "pure, wholesome, safe to eat, and produced under sanitary conditions." The discovery of BSE (mad cow disease) in just one U.S. cow in 2003 was enough to close down international trade in U.S. beef. The European Union bans imports of most genetically modified foods, such as U.S.-produced soybeans. Although regulations of the type we've just described are not designed to limit international trade, they have that effect.

Voluntary Export Restraints A *voluntary export restraint* is like a quota allocated to a foreign exporter of a good. This type of trade barrier isn't common. It was initially used during the 1980s when Japan voluntarily limited its exports of car parts to the United States.

Export Subsidies

A *subsidy* is a payment by the government to a producer. When the government pays a subsidy, the cost of production falls by the amount of the subsidy so supply increases. An **export subsidy** is a payment by the government to the producer of an exported good so it increases the supply of exports. Export subsidies are illegal under a number of international agreements including the North American Free Trade Agreement (NAFTA) and the rules of the World Trade Organization (WTO).

Although export subsidies are illegal, the subsidies that the U.S. and European Union governments pay to farmers end up increasing domestic production, some of which gets exported. These exports of subsidized farm products make it harder for producers in other countries, notably in Africa and Central and South America, to compete in global markets.

Export subsidies bring gains to domestic producers, but they result in inefficient overproduction of some food products in the rich industrial countries, underproduction in the rest of the world, and create a social loss for the world as a whole.



REVIEW QUIZ

- 1 What are the tools that a country can use to restrict international trade?
- 2 Explain the effects of a tariff on domestic production, the quantity bought, and the price.
- 3 Explain who gains and who loses from a tariff and why the losses exceed the gains.
- 4 Explain the effects of an import quota on domestic production, consumption, and price.
- 5 Explain who gains and who loses from an import quota and why the losses exceed the gains.

You can work these questions in Study Plan 15.2 and get instant feedback.



◆ The Case Against Protection

For as long as nations and international trade have existed, people have debated whether a country is better off with free international trade or with protection from foreign competition. The debate continues, but for most economists, a verdict has been delivered and is the one you have just seen. Free trade promotes prosperity for all countries; protection is inefficient. We've seen the most powerful case for free trade—it brings gains for consumers that exceed any losses incurred by producers, so there is a net gain for society.

But there is a broader range of issues in the free trade versus protection debate. Let's review these issues.

Two classical arguments for restricting international trade are

- The infant-industry argument
- The dumping argument

The Infant-Industry Argument

The **infant-industry argument** for protection is that it is necessary to protect a new industry to enable it to grow into a mature industry that can compete in world markets. The argument is based on the idea of *dynamic comparative advantage*, which can arise from *learning-by-doing*.

Learning-by-doing, a powerful engine of productivity growth, and on-the-job experience can change comparative advantage. But these facts do not justify protection.

First, the infant-industry argument is valid only if the benefits of learning-by-doing *not only* accrue to the owners and workers of the firms in the infant industry but also *spill over* to other industries and parts of the economy. For example, there are huge productivity gains from learning-by-doing in the manufacture of aircraft.

But almost all of these gains benefit the stockholders and workers of Boeing and other aircraft producers. Because the people making the decisions, bearing the risk, and doing the work are the ones who benefit, they take the dynamic gains into account when they decide on the scale of their activities. In this case, almost no benefits spill over to other parts of the economy, so there is no need for government assistance to achieve an efficient outcome.

Second, even if the case is made for protecting an infant industry, it is more efficient to do so by giving the firms in the industry a subsidy, which is financed out of taxes. Such a subsidy would encourage the industry to mature and to compete with efficient world producers and keep the price faced by consumers at the world price.

The Dumping Argument

Dumping occurs when a foreign firm sells its exports at a lower price than its cost of production. Dumping might be used by a firm that wants to gain a global monopoly. In this case, the foreign firm sells its output at a price below its cost to drive domestic firms out of business. When the domestic firms have gone, the foreign firm takes advantage of its monopoly position and charges a higher price for its product. Dumping is illegal under the rules of the WTO and is usually regarded as a justification for temporary tariffs, which are called *countervailing duties*.

But there are powerful reasons to resist the dumping argument for protection. First, it is virtually impossible to detect dumping because it is hard to determine a firm's costs. As a result, the test for dumping is whether a firm's export price is below its domestic price. But this test is a weak one because it can be rational for a firm to charge a low price in a market in which the quantity demanded is highly sensitive to price and a higher price in a market in which demand is less price-sensitive.

Second, it is hard to think of a good that is produced by a *global* monopoly. So even if all the domestic firms in some industry were driven out of business, it would always be possible to find alternative foreign sources of supply and to buy the good at a price determined in a competitive market.

Third, if a good or service were a truly global monopoly, the best way of dealing with it would be by regulation—just as in the case of domestic monopolies. Such regulation would require international cooperation.

The two arguments for protection that we've just examined have an element of credibility. The counterarguments are in general stronger, however, so these arguments do not make the case for protection. But they are not the only arguments that you might encounter. There are many other new arguments

against globalization and for protection. The most common ones are that protection

- Saves jobs
- Allows us to compete with cheap foreign labor
- Penalizes lax environmental standards
- Prevents rich countries from exploiting developing countries

Saves Jobs

First, free trade does cost some jobs, but it also creates other jobs. It brings about a global rationalization of labor and allocates labor resources to their highest-valued activities. International trade in textiles has cost tens of thousands of jobs in the United States as textile mills and other factories closed. But tens of thousands of jobs have been created in other countries as textile mills opened. And tens of thousands of U.S. workers got better-paying jobs than as textile workers because U.S. export industries expanded and created new jobs. More jobs have been created than destroyed.

Although protection does save particular jobs, it does so at a high cost. For example, until 2005, U.S. textile jobs were protected by an international agreement called the Multifiber Arrangement. The U.S. International Trade Commission (ITC) has estimated that because of import quotas, 72,000 jobs existed in the textile industry that would otherwise have disappeared and that the annual clothing expenditure in the United States was \$15.9 billion (\$160 per family) higher than it would have been with free trade. Equivalently, the ITC estimated that it cost \$221,000 a year to save each textile job.

Imports don't only destroy jobs. They create jobs for retailers that sell imported goods and for firms that service those goods. Imports also create jobs by creating income in the rest of the world, some of which is spent on U.S.-made goods and services.

Allows Us to Compete with Cheap Foreign Labor

With the removal of tariffs on trade between the United States and Mexico, people said we would hear a "giant sucking sound" as jobs rushed to Mexico. Let's see what's wrong with this view.

The labor cost of a unit of output equals the wage rate divided by labor productivity. For example, if a U.S. autoworker earns \$30 an hour and produces 15 units of output an hour, the average labor cost of a

unit of output is \$2. If a Mexican auto assembly worker earns \$3 an hour and produces 1 unit of output an hour, the average labor cost of a unit of output is \$3. Other things remaining the same, the higher a worker's productivity, the higher is the worker's wage rate. High-wage workers have high productivity; low-wage workers have low productivity.

Although high-wage U.S. workers are more productive, on average, than low-wage Mexican workers, there are differences across industries. U.S. labor is relatively more productive in some activities than in others. For example, the productivity of U.S. workers in producing movies, financial services, and customized computer chips is relatively higher than their productivity in the production of metals and some standardized machine parts. The activities in which U.S. workers are relatively more productive than their Mexican counterparts are those in which the United States has a *comparative advantage*. By engaging in free trade, increasing our production and exports of the goods and services in which we have a comparative advantage and decreasing our production and increasing our imports of the goods and services in which our trading partners have a comparative advantage, we can make ourselves and the citizens of other countries better off.

Penalizes Lax Environmental Standards

Another argument for protection is that many poorer countries, such as China and Mexico, do not have the same environmental policies that we have and, because they are willing to pollute and we are not, we cannot compete with them without tariffs. So if poorer countries want free trade with the richer and "greener" countries, they must raise their environmental standards.

This argument for protection is weak. First, a poor country cannot afford to be as concerned about its environmental standards as a rich country can. Today, some of the worst pollution of air and water is found in China, Mexico, and the former communist countries of Eastern Europe. But only a few decades ago, London and Los Angeles topped the pollution chart. The best hope for cleaner air in Beijing and Mexico City is rapid income growth. And free trade contributes to that growth. As incomes in developing countries grow, they will have the *means* to match their desires to improve their environment. Second, a poor country may have a comparative advantage at doing "dirty" work, which helps it to raise its income and at the same time enables

the global economy to achieve higher environmental standards than would otherwise be possible.

Prevents Rich Countries from Exploiting Developing Countries

Another argument for protection is that international trade must be restricted to prevent the people of the rich industrial world from exploiting the poorer people of the developing countries and forcing them to work for slave wages.

Child labor and near-slave labor are serious problems that are rightly condemned. But by trading with poor countries, we increase the demand for the goods that these countries produce and, more significantly, we increase the demand for their labor. When the demand for labor in developing countries increases, the wage rate also increases. So, rather than exploiting people in developing countries, trade can improve their opportunities and increase their incomes.

The arguments for protection that we've reviewed leave free-trade unscathed. But a new phenomenon is at work in our economy: *offshore outsourcing*. Surely we need protection from this new source of foreign competition. Let's investigate.

Offshore Outsourcing

Citibank, the Bank of America, Apple, Nike, Wal-Mart: What do these U.S. icons have in common? They all send jobs that could be done in America to China, India, Thailand, or even Canada—they are offshoring. What exactly is offshoring?

What Is Offshoring? A firm in the United States can obtain the things that it sells in any of four ways:

1. Hire American labor and produce in the United States.
2. Hire foreign labor and produce in other countries.
3. Buy finished goods, components, or services from other firms in the United States.
4. Buy finished goods, components, or services from other firms in other countries.

Activities 3 and 4 are **outsourcing**, and activities 2 and 4 are **offshoring**. Activity 4 is **offshore outsourcing**. Notice that offshoring includes activities that take place inside U.S. firms. If a U.S. firm opens its own facilities in another country, then it is offshoring.

Offshoring has been going on for hundreds of years, but it expanded rapidly and became a source of concern during the 1990s as many U.S. firms moved information technology services and general office services such as finance, accounting, and human resources management, overseas.

Why Did Offshoring of Services Boom During the 1990s? The gains from specialization and trade that you saw in the previous section must be large enough to make it worth incurring the costs of communication and transportation. If the cost of producing a T-shirt in China isn't lower than the cost of producing the T-shirt in the United States by more than the cost of transporting the shirt from China to America, then it is more efficient to produce shirts in the United States and avoid the transportation costs.

The same considerations apply to trade in services. If services are to be produced offshore, then the cost of delivering those services must be low enough to leave the buyer with an overall lower cost. Before the 1990s, the cost of communicating across large distances was too high to make the offshoring of business services efficient. But during the 1990s, when satellites, fiber-optic cables, and computers cut the cost of a phone call between America and India to less than a dollar an hour, a huge base of offshore resources became competitive with similar resources in the United States.

What Are the Benefits of Offshoring? Offshoring brings gains from trade identical to those of any other type of trade. We could easily change the names of the items traded from T-shirts and airplanes (the examples in the previous sections of this chapter) to banking services and call center services (or any other pair of services). An American bank might export banking services to Indian firms, and Indians might provide call center services to U.S. firms. This type of trade would benefit both Americans and Indians provided the United States has a comparative advantage in banking services and India has a comparative advantage in call center services.

Comparative advantages like these emerged during the 1990s. India has the world's largest educated English-speaking population and is located in a time zone half a day ahead of the U.S. east coast and midway between Asia and Europe, which facilitates 24/7 operations. When the cost of communicating with a worker in India was several dollars a minute, as it was

before the 1990s, tapping these vast resources was just too costly. But at today's cost of a long-distance telephone call or Internet connection, resources in India can be used to produce services in the United States at a lower cost than those services can be produced by using resources located in the United States. And with the incomes that Indians earn from exporting services, some of the services (and goods) that Indians buy are produced in the United States.

Why Is Offshoring a Concern? Despite the gain from specialization and trade that offshoring brings, many people believe that it also brings costs that eat up the gains. Why?

A major reason is that offshoring is taking jobs in services. The loss of manufacturing jobs to other countries has been going on for decades, but the U.S. service sector has always expanded by enough to create new jobs to replace the lost manufacturing jobs. Now that service jobs are also going overseas, the fear is that there will not be enough jobs for Americans. This fear is misplaced.

Some service jobs are going overseas, while others are expanding at home. The United States imports call center services, but it exports education, health care, legal, financial, and a host of other types of services. Jobs in these sectors are expanding and will continue to expand.

The exact number of jobs that have moved to lower-cost offshore locations is not known, and estimates vary. But even the highest estimate is a tiny number compared to the normal rate of job creation.

Winners and Losers Gains from trade do not bring gains for every single person. Americans, on average, gain from offshore outsourcing, but some people lose. The losers are those who have invested in the human capital to do a specific job that has now gone offshore.

Unemployment benefits provide short-term temporary relief for these displaced workers. But the long-term solution requires retraining and the acquisition of new skills.

Beyond providing short-term relief through unemployment benefits, there is a large role for government in the provision of education and training to enable the labor force of the twenty-first century to be capable of ongoing learning and rapid retooling to take on new jobs that today we can't foresee.

Schools, colleges, and universities will expand and get better at doing their jobs of producing a highly educated and flexible labor force.

Avoiding Trade Wars

We have reviewed the arguments commonly heard in favor of protection and the counterarguments against it. There is one counterargument to protection that is general and quite overwhelming: Protection invites retaliation and can trigger a trade war.

The best example of a trade war occurred during the Great Depression of the 1930s when the United States introduced the Smoot-Hawley tariff. Country after country retaliated with its own tariff, and in a short period, world trade had almost disappeared. The costs to all countries were large and led to a renewed international resolve to avoid such self-defeating moves in the future. The costs also led to the creation of the General Agreement on Tariffs and Trade (GATT) and are the impetus behind current attempts to liberalize trade.

Why Is International Trade Restricted?

Why, despite all the arguments against protection, is trade restricted? There are two key reasons:

- Tariff revenue
- Rent seeking

Tariff Revenue Government revenue is costly to collect. In developed countries such as the United States, a well-organized tax collection system is in place that can generate billions of dollars of income tax and sales tax revenues. This tax collection system is made possible by the fact that most economic transactions are done by firms that must keep properly audited financial records. Without such records, revenue collection agencies (the Internal Revenue Service in the United States) would be severely hampered in their work. Even with audited financial accounts, some potential tax revenue is lost. Nonetheless, for industrialized countries, the income tax and sales taxes are the major sources of revenue and tariffs play a very small role.

But governments in developing countries have a difficult time collecting taxes from their citizens. Much economic activity takes place in an informal economy with few financial records, so only a small amount of revenue is collected from income taxes and sales taxes. The one area in which economic transactions are well recorded and audited is international trade. So this activity is an attractive base for tax collection in these countries and is used much more extensively than it is in developed countries.

Rent Seeking Rent seeking is the major reason why international trade is restricted. **Rent seeking** is lobbying for special treatment by the government to create economic profit or to divert the gains from international trade away from others. Free trade increases consumption possibilities *on average*, but not everyone shares in the gain and some people even lose. Free trade brings benefits to some and imposes costs on others, with total benefits exceeding total costs. The uneven distribution of costs and benefits is the principal obstacle to achieving more liberal international trade.

Returning to the example of trade in T-shirts and airplanes, the benefits from free trade accrue to all the producers of airplanes and to those producers of T-shirts that do not bear the costs of adjusting to a smaller garment industry. These costs are transition costs, not permanent costs. The costs of moving to free trade are borne by the garment producers and their employees who must become producers of other goods and services in which the United States has a comparative advantage.

The number of winners from free trade is large, but because the gains are spread thinly over a large number of people, the gain per person is small. The winners could organize and become a political force lobbying for free trade. But political activity is costly. It uses time and other scarce resources and the gains per person are too small to make the cost of political activity worth bearing.

In contrast, the number of losers from free trade is small, but the loss per person is large. Because the loss per person is large, the people who lose *are* willing to incur considerable expense to lobby against free trade.

Both the winners and losers weigh benefits and costs. Those who gain from free trade weigh the benefits it brings against the cost of achieving it. Those who lose from free trade and gain from protection weigh the benefit of protection against the cost of maintaining it. The protectionists undertake a larger quantity of political lobbying than the free traders.

Compensating Losers

If, in total, the gains from free international trade exceed the losses, why don't those who gain compensate those who lose so that everyone is in favor of free trade?

Some compensation does take place. When Congress approved the North American Free Trade

Agreement (NAFTA) with Canada and Mexico, it set up a \$56 million fund to support and retrain workers who lost their jobs as a result of the new trade agreement. During NAFTA's first six months, only 5,000 workers applied for benefits under this scheme. The losers from international trade are also compensated indirectly through the normal unemployment compensation arrangements. But only limited attempts are made to compensate those who lose.

The main reason why full compensation is not attempted is that the costs of identifying all the losers and estimating the value of their losses would be enormous. Also, it would never be clear whether a person who has fallen on hard times is suffering because of free trade or for other reasons that might be largely under her or his control. Furthermore, some people who look like losers at one point in time might, in fact, end up gaining. The young autoworker who loses his job in Michigan and becomes a computer assembly worker in Minneapolis might resent the loss of work and the need to move. But a year later, looking back on events, he counts himself fortunate.

Because we do not, in general, compensate the losers from free international trade, protectionism is a popular and permanent feature of our national economic and political life.

REVIEW QUIZ

- 1 What are the infant industry and dumping arguments for protection? Are they correct?
- 2 Can protection save jobs and the environment and prevent workers in developing countries from being exploited?
- 3 What is offshore outsourcing? Who benefits from it and who loses from it?
- 4 What are the main reasons for imposing a tariff?
- 5 Why don't the winners from free trade win the political argument?

You can work these questions in Study Plan 15.3 and get instant feedback.



◆ We end this chapter on international trade policy with *Reading Between the Lines* on pp. 386–387. It applies what you've learned by looking at the effects of a U.S. tariff on imports of tires from China.