

## 21

## International Trade Policy, Comparative Advantage, and Outsourcing

### AFTER READING THIS CHAPTER, YOU SHOULD BE ABLE TO:

- Summarize some important data of trade.
- Explain the principle of comparative advantage.
- List three determinants of the terms of trade.
- Explain why economists' and laypeople's views of outsourcing differ.
- Explain why the United States is losing some of its comparative advantages.
- Explain three policies countries use to restrict trade.
- Summarize why economists generally oppose trade restrictions.
- Explain how free trade associations both help and hinder international trade.

One of the purest fallacies is that trade follows the flag. Trade follows the lowest price current. If a dealer in any colony wished to buy Union Jacks, he would order them from Britain's worst foe if he could save a sixpence.

—Andrew Carnegie

If economists had a mantra, it would be “Trade is good.” Trade allows specialization and division of labor and thereby promotes economic growth. Consistent with that mantra, most economists oppose trade restrictions. Not everyone agrees with economists; almost every day we hear calls from some sector of the economy to restrict foreign imports to save U.S. jobs and protect U.S. workers from unfair competition. In this chapter we consider why economists generally favor free trade, and why, despite what economists tell them, countries impose trade restrictions.

### Patterns of Trade

Before I consider these issues, let's look at some numbers to get a sense of the nature and dimensions of international trade.

#### Increasing but Fluctuating World Trade

In 1928, total world trade was about \$500 billion (in today's dollars). U.S. gross domestic product (GDP) was about \$830 billion, so world trade as a percentage of U.S. GDP was almost 60 percent. In 1935, that ratio had fallen to less than 30 percent. In 1950 it was 20 percent. Then it started rising. Today it is about 200 percent, with world trade amounting to about \$22 trillion. As you can see, international trade has been growing, but with significant fluctuations in that growth. Sometimes international trade has grown rapidly; at other times it has grown slowly or has even fallen.

In part, fluctuations in world trade result from fluctuations in world output. When output rises, international trade rises; when output falls, international trade falls. Fluctuations in world trade are also in part explained by trade restrictions that countries have imposed from time to time. For example, decreases in world income during the Depression caused a large decrease in trade, but that decrease was exacerbated by a worldwide increase in trade restrictions during the 1930s.

## Differences in the Importance of Trade

The importance of international trade to countries' economies differs widely, as we can see in the table below, which presents the importance of the shares of exports—the value of goods and services sold abroad—and imports—the value of goods and services purchased abroad—for various countries.

	Total Output*	Export Ratio	Import Ratio
Netherlands	\$ 461	62%	57%
Canada	959	44	40
Germany	2,271	36	32
France	1,661	27	25
Italy	1,550	27	26
United Kingdom	1,666	26	28
Japan	3,582	11	10
United States	11,000	10	14

\*Numbers in billions.

Source: *World Development Indicators*, 2004, The World Bank.

Among the countries listed, the Netherlands has the highest amount of exports compared to total output; the United States has the lowest.

The Netherlands' imports are also the highest as a percentage of total output. Japan's are the lowest. The relationship between a country's imports and its exports is no coincidence. For most countries, imports and exports roughly equal one another, though in any particular year that equality can be rough indeed. For the United States in recent years, imports have generally significantly exceeded exports. But that situation can't continue forever, as I'll discuss.

Total trade figures provide us with only part of the international trade picture. We must also look at what types of goods are traded and with whom that trade is conducted.

## What and with Whom the United States Trades

The majority of U.S. exports and imports involve significant amounts of manufactured goods. This isn't unusual, since much of international trade is in manufactured goods.

Figure 21-1 shows the regions with which the United States trades. Exports to Canada and Mexico made up the largest percentage of total U.S. exports to individual countries in 2004. The largest regions to whom the U.S. exports are the Pacific Rim and the European Union. Countries from which the United States imports major quantities include Canada and Mexico and the regions of the European Union and the Pacific Rim. Thus, the countries we export to are also the countries we import from.

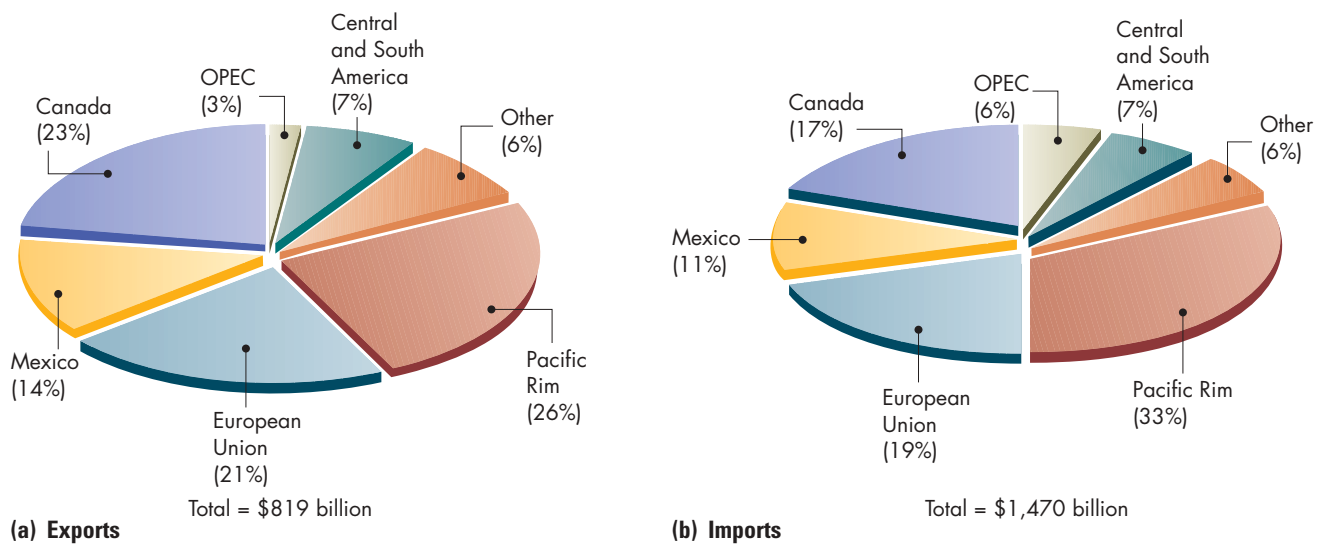
The primary trading partners of the United States are Canada, Mexico, the European Union, and the Pacific Rim countries.

**The Changing Nature of Trade** The nature of trade is continually changing, both in terms of the countries with which the United States trades and the goods and services traded. For example, U.S. imports from China, India, and other East Asian countries have increased substantially in recent years. In 1989 goods from China accounted for 2.5 percent of all U.S. merchandise imports. Today they account for 12 percent. Imports from India have increased tenfold over that time—from 0.1 percent to 1 percent of all goods imported.

**FIGURE 21-1 (A AND B) U.S. Exports and Imports by Region, 2004**

Major regions that trade with the United States include Canada, Mexico, the European Union, and the Pacific Rim.

Source: FT900 U.S. International Trade in Goods and Services 2004, U.S. Census Bureau ([www.census.gov](http://www.census.gov)).



**Q1** How has the nature of U.S. imports from China changed in recent years?

The kind of goods and services the United States imports also has changed. Thirty years ago, the goods the United States imported from China and India were primarily basic manufacturing goods and raw commodities. Technologically advanced goods were produced here in the United States. That is changing. Today we are importing high-tech manufactured goods from these countries, and they are even developing their own new products that require significant research and development. Here's one of many examples: The value of woven fabrics imported from Asian countries declined by nearly one-half since 1989 while the imports of pharmaceuticals have quadrupled and those of furniture have doubled.

The change in the nature of the goods that a country produces and exports up the technological ladder is typical for developing countries. It characterized Japan, Korea, and Singapore in the post-World War II era, and today characterizes China and India. As this movement up the technological ladder occurs, foreign companies that had been subcontractors for U.S. companies become direct competitors of the U.S. companies. For example, the automaker Kia and the electronics producer Samsung have developed into major global firms, and in the future you can expect numerous Chinese companies to become household names.

We can expect the nature of trade to change even more in the future as numerous technological changes in telecommunications continue to reduce the cost of both voice and data communications throughout the world and expand the range of services that can be provided by foreign countries. Production no longer needs to occur in the geographic area where the goods are consumed. For example, financial accounting, compositing (typesetting) of texts, and research can now be done almost anywhere, and transferred with the click of a mouse. Even the customer service calls for a U.S. company can be answered almost anywhere at the same phone costs as if they were answered in the United States. (India, which has a sizeable well-educated, English-speaking population, even trains its employees to speak with a Midwest U.S. accent to

make it less apparent to customers that the call is being answered in India.) This trade in services is what the press often refers to as *outsourcing*, but it is important to remember that outsourcing is simply a description of some aspects of trade.

**Is Chinese and Indian Outsourcing Different than Previous Outsourcing?**

There has been a lot of discussion about outsourcing to China and India recently, and thus it is worthwhile to consider what is, and what is not, different about trade with China and India. First, what isn't new is trade. Manufacturers have used overseas suppliers for years. What is different about outsourcing to China and India today compared to earlier outsourcing to Japan, Singapore, and Korea in the 1980s and 1990s is the potential size of that outsourcing. China and India have a combined population of 2.5 billion people, a sizable number of whom are well educated and willing to work for much lower wages than U.S. workers. As technology opens up more areas to trade, and as India and China move up the technology chain, U.S.-based firms will likely experience much more competition than they have experienced to date. How U.S. companies deal with this competition will likely be the defining economic policy issue for the next decade. If they develop new technologies and new industries in which the United States has comparative advantages, then the United States' future can be bright. If they don't, significant, difficult adjustment will need to occur.

Trade with India and China are different because of the size of their populations.

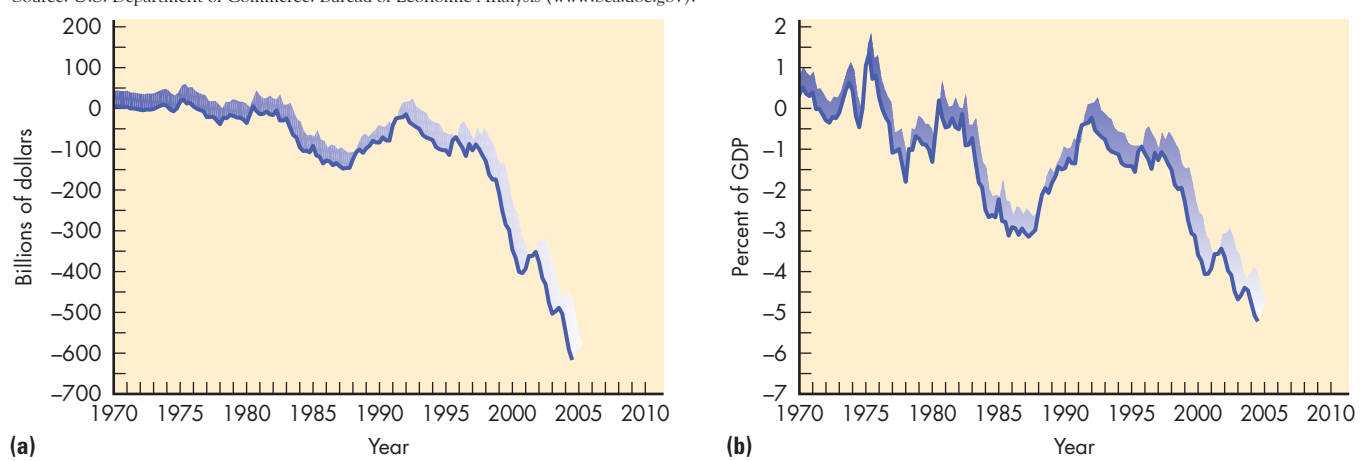
How U.S. companies deal with new high-tech competition will likely be the defining economic policy issue for the next decade.

The rising competitiveness of Asian economies with the U.S. economy is manifested in the large deficit the United States is running on its **balance of trade**—the difference between the value of exports and the value of imports—as is shown in Figure 21-2(a). A trade deficit means that U.S. imports exceed U.S. exports. The United States has been running trade deficits since the 1970s, and in 2004 the U.S. trade deficit reached over \$600 billion. The trade deficit looks a little less threatening when considered as a percentage of GDP, as is shown in Figure 22-2(b), but it is still of concern. This means that the United States is consuming a lot more than it is producing, and paying for current consumption with promises to pay in the future.

**FIGURE 21-2 (A AND B) The U.S. Trade Balance**

The United States has been running trade deficits since the 1970s. Panel (a) shows the trade deficit in billions of dollars. As (b) shows, the trade deficit looks slightly less threatening when considered as a percent of GDP.

Source: U.S. Department of Commerce: Bureau of Economic Analysis ([www.bea.doc.gov](http://www.bea.doc.gov)).



## International Issues in Perspective



### BEYOND the Tools

Since the 1970s, international issues have become increasingly important for the U.S. economy. That statement would be correct even if the reference period went back as far as the late 1800s. From the late 1800s through the first 40 years of the 1900s, the United States was in an isolationist period in which the country turned inward in both economic and foreign policies.

The statement would not be correct if the reference period were earlier than the late 1800s. In the 1600s, 1700s, and most of the 1800s, international trade was vital to the American economy—even more vital than now. The American nation grew from colonial possessions of England, France, and Spain. These “new world” colonial possessions were valued for their gold, agricultural produce, and natural resources. From a European standpoint, international trade was the colonies’ reason for being.\*

A large portion of the U.S. government’s income during much of the 1800s came from tariffs. Our technology was imported from abroad, and international issues played a central role in wars fought here. (Many historians believe that the most important cause of the U.S. Civil War was the difference of views about tariffs on manufactured goods. The South opposed them because it wanted cheap manufactured goods, while the North favored them because it wanted to protect its manufacturing industries.) Up until the 1900s, no one would have studied the U.S. economy independently of international issues. Not only was there significant international trade; there was also significant immigration. The United States is a country of immigrants.

Only in the late 1800s did the United States adopt an isolationist philosophy in both politics and trade. So in reference to that isolationist period, the U.S. economy has

become more integrated with the world economy. However, in a broader historical perspective, that isolationist period was an anomaly, and today’s economy is simply returning international issues to the key role they’ve usually played.

Another important insight is that international trade has social and cultural dimensions. While much of the chapter deals with specifically economic issues, we must also remember the cultural and social implications of trade.

Let’s consider an example from history. In the Middle Ages, Greek ideas and philosophy were lost to Europe when hordes of barbarians swept over the continent. These ideas and that philosophy were rediscovered in the Renaissance only as a by-product of trade between the Italian merchant cities and the Middle East. (The Greek ideas that had spread to the Middle East were protected from European upheavals.) *Renaissance* means rebirth: a rebirth in Europe of Greek learning. Many of our traditions and sensibilities are based on those of the Renaissance, and that Renaissance was caused, or at least significantly influenced, by international trade. Had there been no trade, our entire philosophy of life might have been different.

In economics courses we do not focus on these broader cultural issues but instead focus on relatively technical issues such as the reasons for trade and the implications of tariffs. But keep in the back of your mind these broader implications as you go through the various components of international economics. They add a dimension to the story that otherwise might be forgotten.

\*The Native American standpoint was, I suspect, somewhat different.

## Debtor and Creditor Nations

Running a trade deficit isn’t necessarily bad.

Running a trade deficit isn’t necessarily bad. In fact, while you’re doing it, it’s rather nice. If you were a country, you probably would be running a trade deficit now since, most likely, you’re consuming (importing) more than you’re producing (exporting). How can you do that? By living off past savings, getting support from your parents or a spouse, or borrowing.

Countries have the same options. They can live off foreign aid, past savings, or loans. The U.S. economy is currently financing its trade deficit by selling off assets—financial

assets such as stocks and bonds, or real assets such as real estate and corporations. Since the assets of the United States total many trillions of dollars, it can continue to run trade deficits of a similar size for years to come, but in doing so it is reducing its wealth each year.

The United States has not always run a trade deficit. Following World War II it ran trade surpluses—an excess of exports over imports—with other countries, so it was an international lender. Thus, it acquired large amounts of foreign assets. Because of the large trade deficits the United States has run since the 1980s, now the United States is a large debtor nation. The United States has borrowed more from abroad than it has lent abroad.

As the United States has gone from being a large creditor nation to being the world's biggest debtor, international considerations have been forced on the nation. The cushion of being a creditor—of having a flow of interest income—has been replaced by the trials of being a debtor and having to pay out interest every year without currently getting anything for it when they pay that interest. Eventually, the United States will have to deal with this issue. Before we consider how it might do so, let's review the principle of comparative advantage, which is central to economists' understanding of trade.

**Q<sub>2</sub>** Will a debtor nation necessarily be running a trade deficit?

## The Principle of Comparative Advantage

The reason two countries trade is that trade can make both countries better off. The reason that this is true is the principle of comparative advantage to which you were introduced in Chapter 2. It is, however, important enough to warrant an in-depth review. The basic idea of the principle of **comparative advantage** is that *as long as the relative opportunity costs of producing goods (what must be given up in one good in order to get another good) differ among countries, then there are potential gains from trade*. Let's review this principle by considering the story of I.T., an imaginary international trader, who convinces two countries to enter into trades by giving both countries some of the advantages of trade; he keeps the rest for himself.

The principle of comparative advantage states that as long as the relative opportunity costs of producing goods differ among countries, then there are potential gains from trade.

## The Gains from Trade

Here's the situation. On his trips to the United States and Saudi Arabia, I.T. noticed that the two countries did not trade. He also noticed that the opportunity cost of producing a ton of food in Saudi Arabia was 10 barrels of oil and that the opportunity cost for the United States of producing a ton of food was 1/10 of a barrel of oil. At the time, the United States' production was 60 barrels of oil and 400 tons of food, while Saudi Arabia's production was 400 barrels of oil and 60 tons of food.

The choices for the United States can be seen in Figure 21-3(a), and the choices for Saudi Arabia can be seen in Figure 21-3(b). The tables give the numerical choices and the figures translate those numerical choices into graphs.

These graphs represent the two countries' production possibility curves. Each combination of numbers in the table corresponds to a point on the curve. For example, point *B* in each graph corresponds to the entries in row *B*, columns 2 and 3, in the relevant table.

Let's assume that the United States has chosen point *C* (production of 60 barrels of oil and 400 tons of food) and Saudi Arabia has chosen point *D* (production of 400 barrels of oil and 60 tons of food).

**Q<sub>3</sub>** If the opportunity cost of oil for food were the same for both the United States and Saudi Arabia, what should I.T. do?

**FIGURE 21-3 (A AND B) Comparative Advantage: The United States and Saudi Arabia**

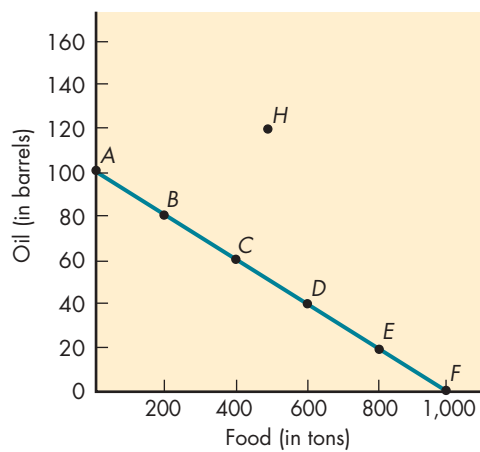
Looking at tables (a) and (b), you can see that if Saudi Arabia devotes all its resources to oil, it can produce 1,000 barrels of oil, but if it devotes all of its resources to food, it can produce only 100 tons of food. For the United States, the story is the opposite: Devoting all of its resources to oil, the United States can only produce 100 barrels of oil—10 times less than Saudi Arabia—but if it devotes all of its resources to food, it can produce 1,000 tons of food—10 times more than Saudi Arabia. Assuming resources are comparable, Saudi Arabia has a comparative advantage in the production of oil, and the United States has a comparative advantage in the production of food. The information in the tables is presented graphically below each table. These are the countries' production possibility curves. Each point on each country's curve corresponds to a row on that country's table.

Percentage of Resources Devoted to Oil	Oil Produced (barrels)	Food Produced (tons)	Row
100%	100	0	A
80	80	200	B
60	60	400	C
40	40	600	D
20	20	800	E
0	0	1,000	F

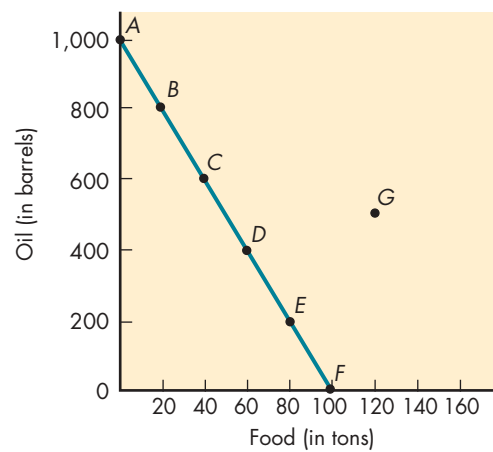
Percentage of Resources Devoted to Oil	Oil Produced (barrels)	Food Produced (tons)	Row
100%	1,000	0	A
80	800	20	B
60	600	40	C
40	400	60	D
20	200	80	E
0	0	100	F

**United States' Production Possibility Table**

**Saudi Arabia's Production Possibility Table**



**(a) United States' Production Possibility Curve**



**(b) Saudi Arabia's Production Possibility Curve**

Now I.T., who understands the principle of comparative advantage, comes along and offers the following deal to the United States:

If you produce 1,000 tons of food and no oil (point F in Figure 21-3(a)) and give me 500 tons of food while keeping 500 tons for yourself, I'll guarantee you 120 barrels of oil, double the amount you're now getting. I'll put you on point H, which is totally above your current production possibility curve. You'll get more oil and have more food. It's an offer you can't refuse.

I.T. then flies off to Saudi Arabia, to whom he makes the following offer:

If you produce 1,000 barrels of oil and no food (point A in Figure 21-3(b)) and give me 500 barrels of oil while keeping 500 barrels for yourself, I guarantee you 120 tons of food, double the amount of food you're now getting. I'll put you on point G, which is totally above your current production possibility curve. You'll get more oil and more food. It's an offer you can't refuse.

Both countries accept; they'd be foolish not to. So the two countries' final consumption positions are as follows:

	Oil (barrels)	Food (tons)
Total production	1,000	1,000
U.S. consumption	120	500
U.S. gain in consumption	+60	+100
Saudi consumption	500	120
Saudi gain in consumption	+100	+60
I.T.'s profit	380	380

For arranging the trade, I.T. makes a handsome profit of 380 tons of food and 380 barrels of oil.

I.T. has become rich because he understands the principle of comparative advantage. Unfortunately for I.T., as other traders come to understand it, he will face competition. Other international traders come in and offer the countries even better deals than I.T. offered, squeezing his share. With free entry and competition in international trade, eventually I.T.'s share is squeezed down to his costs plus a normal return for his efforts.

Now obviously this hypothetical example significantly overemphasizes the gains a trader makes. Generally the person arranging the trade must compete with other traders and offer both countries a better deal than the one presented here. But the person who first recognizes a trading opportunity often makes a sizable fortune. The second and third persons who recognize the opportunity make smaller fortunes. Once the insight is generally recognized, the possibility of making a fortune is gone. Traders still make their normal returns, but the instantaneous fortunes are not to be made without new insight. In the long run, benefits of trade go to the producers and consumers in the trading countries, not the traders.

### Dividing Up the Gains from Trade

As the above story suggests, when countries avail themselves of comparative advantage there are high gains of trade to be made. Who gets these gains is unclear. The principle of comparative advantage doesn't determine how those gains of trade will be divided up among the countries involved and among traders who make the trade possible. While there are no definitive laws determining how real-world gains from trade will be apportioned, economists have developed some insights into how those gains are likely to be divided up. The first insight concerns how much the trader gets. The general rule is

The more competition that exists among traders, the less likely it is that the trader gets big gains of trade; more of the gains from trade will go to the citizens in the two countries, and less will go to the traders.

What this insight means is that where entry into trade is unimpeded, most of the gains of trade will pass from the trader to the countries. Thus, the trader's big gains from trade occur in markets that are newly opened.

This insight isn't lost on trading companies. Numerous import/export companies exist whose business is discovering possibilities for international trade in newly opened markets. Individuals representing trading companies go around hawking projects or goods to countries. For example, at the end of the 1999 NATO bombing campaign in

Three determinants of the terms of trade are

1. The more competition, the less the trader gets.
2. Smaller countries get a larger proportion of the gain than larger countries.
3. Countries producing goods with economies of scale get a larger gain from trade.

Kosovo, what the business world calls the *import/export contingent* flew to Kosovo with offers of goods and services to sell. Many of these same individuals had been in Iraq and Iran in the early 1990s, in Saudi Arabia when oil prices rose in the 1970s, and in the Far East when China opened its doors to international trade in the 1980s.

A second insight is

Once competition prevails, smaller countries tend to get a larger percentage of the gains of trade than do larger countries.

The reason, briefly, is that more opportunities are opened up for smaller countries by trade than for larger countries. The more opportunities, the larger the relative gains. Say, for instance, that the United States begins trade with Mali, a small country in Africa. Enormous new consumption possibilities are opened up for Mali—prices of all types of goods will fall. Assuming Mali has a comparative advantage in fish, before international trade began, cars were probably extraordinarily expensive in Mali, while fish was cheap. With international trade, the price of cars in Mali falls substantially, so Mali gets the gains. Because the U.S. economy is so large compared to Mali's, the U.S. price of fish doesn't change noticeably. Mali's fish are just a drop in the bucket. The price ratio of cars to fish doesn't change much for the United States, so it doesn't get much of the gains of trade. Mali gets almost all the gains from trade.

There's an important catch to this gains-from-trade argument. The argument holds only if competition among traders prevails. That means that Mali residents are sold cars at the same price (plus shipping costs) as U.S. residents. International traders in small countries often have little competition from other traders and keep large shares of the gains from trade for themselves. In the preceding example, the United States and Saudi Arabia didn't get a large share of the benefits. It was I.T. who got most of the benefits. Since the traders often come from the larger country, the smaller country doesn't get this share of the gains from trade; the larger country's international traders do.

A third insight is

Gains from trade go to the countries producing goods that exhibit economies of scale.

Trade allows an increase in production. If there are economies of scale, that increase can lower the average cost of production of a good. Hence, an increase in production can lower the price of the good in the producing country. The country producing the good with the larger economies of scale has its costs reduced by more, and hence gains more from trade than does its trading partner.

**Q.4** In what circumstances would a small country not get the larger percentage of the gains from trade?

Gains from trade are often stealth gains.

## Comparative Advantage in Today's Economy

The comparative advantage model conveys a story with the theme, "trade is good"; trade benefits both parties to the trade. This story doesn't fit much of the lay public's view of trade, nor the fears of outsourcing discussed above. If trade is good, why do so many people oppose it, and what accounts for the difference between economists' view of trade and the lay public's view? I suggest three reasons.

One reason for the difference is that laypeople often do not recognize the gains of trade—the gains are often stealth gains such as a decline in prices—while they easily identify the loss of jobs caused by the trade adjustments as countries shift production to take advantage of trade. For example, consider the price of clothing: A shirt today costs far less in real terms (in terms of the number of hours you have to work to buy it) than it did a decade or two ago. Much of the reason for that is trade. But how many people

attribute that fall in price of shirts to trade? Not many; they just take it for granted. But the reality is that much of our current lifestyle in the United States has been made possible by trade.

Much of our current lifestyle is made possible by trade.

Another reason for the difference between the lay view of trade and economists' view is that the lay public often believes that since countries such as China have lower wages, they must have a comparative advantage in just about everything, so that if we allow free trade, eventually we will lose all U.S. jobs. This belief is an internal logical contradiction; by definition comparative advantage refers to relative opportunity cost. If one country has a comparative advantage in one set of goods, the other country must have a comparative advantage in another set.

That said, economists also must admit that the lay public does have a point. The comparative advantage model assumes that a country's imports and exports are equal. As we saw above, U.S. imports and exports are not equal. Currently, the United States imports much more than it exports, and foreign countries are accepting our IOUs in exchange for those imports. As long as foreign countries are willing to accept those promises some time in the future, they can have a comparative advantage in the production of many more goods than the United States.<sup>1</sup> Currently, people in other countries finance the U.S. trade deficit by buying U.S. assets. Once the other countries decide that it is no longer in their interests to finance the U.S. trade deficit, economic forces, such as the adjustment of exchange rates, will be set in motion to restore a more equal division of comparative advantage.

A third reason accounting for the difference between the lay view of trade and the economist's view is that laypeople often think of trade as trade in just manufactured goods. Trade is much broader, and includes the services that traders provide. Countries can have comparative advantages in trade itself, and the gains the trader makes can account for the seeming differences in countries' comparative advantages.

**Q-5** What are three reasons for the difference between laypeople's and economists' views of trade?

Notice in my example that the international trader who brought the trade about benefited significantly from trade. I included him because trade does not take place on its own—markets and trade require entrepreneurs. The market is not about abstract forces; it is about real people operating to improve their position. Many of the gains from trade do not go to the countries producing or consuming the good but rather to the trader. And the gains that traders get can be enormous.

Consider, for example, the high-priced sneakers (\$100) that many “with-it” students wear. Those sneakers are likely made in China, costing about \$8 to make. So much of the benefits of trade do not go to the producer or the consumer; they go to the trader. However, not all of the difference is profit. The trader has other costs; there are, for example, costs of transportation and advertising—someone has to convince you that you need those “with-it” sneakers. (Just do it, right?) A portion of the benefits of the trade is accruing to U.S. advertising firms, which can pay more to creative people who think up those crazy ads.

The United States currently has a large comparative advantage in facilitating trade. Many of the firms that specialize in the role as trader are U.S.-based companies, and these companies buy many of the goods and services that support trade from their home country—the United States. Therefore, trade with China and India has been generating jobs in the United States. These are jobs that laypeople often do not associate with trade—jobs in research, management, advertising, and distribution of goods. What this means is that goods manufactured in China, India, and other Asian countries are

<sup>1</sup>One could make the model fit reality if one thinks of the United States as having a comparative advantage in producing IOUs.

creating demand for advertising, management, and distribution, and are therefore creating jobs and income in the United States. That's one reason for the large increase in service jobs in the U.S. economy.

A final consideration to keep in mind is that trade increases income and wealth abroad, thereby creating additional demand for U.S. goods. Two billion consumers whose incomes are increasing offer many new growth opportunities for U.S. firms. Trade expands the total pie, and even when a country gets a smaller proportion of the new total pie, the absolute amount it gets can increase.

When one adds these considerations to the initial layperson's reaction to trade, a much more nuanced view emerges that makes trade look much better. This does not mean that trade presents no problems. One big policy problem is that the benefits of trade are quite uneven. The people whose jobs are outsourced are significantly hurt by trade and are very visible. The benefits of trade in lower prices and jobs created by trade are spread throughout the economy and are much less visible. It is the concentrated nature of the costs of trade and dispersed nature of the benefits that will continue to present a challenge to policymakers when dealing with the effects of trade.

The concentrated nature of the costs of trade and the dispersed nature of the benefits present a challenge for policymakers.

### Other Sources of U.S. Comparative Advantage

When thinking about how the theory of comparative advantage relates to the current debate about outsourcing—what jobs are outsourced and what jobs are created in the United States—it is important to remember that comparative advantage is not determined by wages alone. Many other factors enter into comparative advantage and these other factors give the United States a comparative advantage in a variety of goods and services. Some of those other sources of U.S. comparative advantage include

1. *Skills of the U.S. labor force.* Our educational system and experience in production (learning by doing) has created a U.S. workforce that is highly productive, which means that it can be paid more and still be competitive.
2. *U.S. governmental institutions.* The United States has a stable, relatively noncorrupt government, which is required for effective production. These institutions give firms based in the United States a major comparative advantage.
3. *U.S. physical and technological infrastructure.* The United States has probably the best infrastructure for production in the world. This infrastructure includes extensive road systems, telecommunications networks, and power grids.
4. *English is the international language of business.* U.S. citizens learn English from birth. Chinese and Indian citizens must learn it as a second language. One is seldom as comfortable or productive working in one's second language as in one's first language.
5. *Wealth from past production.* The United States is extraordinarily wealthy, which means that the United States is the world's largest consumer. Production that supports many aspects of consumption cannot be easily transferred geographically, and thus the United States will maintain a comparative advantage in producing these nontransferable aspects of consumption.
6. *U.S. natural resources.* The United States is endowed with many resources: rich farmland, a pleasant and varied climate, beautiful scenery for tourism, minerals, and water. These give it comparative advantages in a number of areas.
7. *Cachet.* The United States continues to be a cultural trendsetter. People all over the world want to watch U.S. movies, want to have U.S. goods, and are

influenced by U.S. advertising agencies to favor U.S. goods. As long as that is the case, the United States will have a comparative advantage in goods tied to that cachet.

8. *Inertia*. It takes time and costs money to change production. Companies will not move production to another country for a small cost differential. The difference has to be large, it has to be expected to continue for a long time, and it must be large enough to offset the risk of the unknown. Thus, the current place of production has an advantage over other potential places for production simply because the current location is known.
9. *U.S. intellectual property rights*. Currently, U.S. companies and individuals hold a large number of intellectual property rights, which require other countries that use their patented goods or methods to pay U.S. patent holders. Every time someone (legally) buys the Windows operating system for his or her computer, a portion of the purchase price covers a payment to a U.S. company. America's culture of embracing new ideas and questioning authority cultivates an environment of innovation that will likely continue to generate new intellectual property rights.
10. *A relatively open immigration policy*. Many of the brightest, most entrepreneurial students of developing countries immigrate and settle in the United States. They create jobs and help maintain U.S. comparative advantages in a number of fields, especially high-technology fields. More than 50 percent of the engineering degrees, for example, go to foreign students, many of whom remain in the United States.

United States has numerous sources of comparative advantage.

Combined, these other sources of comparative advantage will maintain the United States' competitiveness in a variety of types of production for the coming decades.

### Some Concerns about the Future

The above discussion of the sources of U.S. comparative advantage should have made those of you who are U.S. citizens feel a bit better about the future of the U.S. economy; the United States is not about to lose all its jobs to outsourcing. But that does not mean that there are not real issues of concern. The typical layperson's concern that the comparative advantage story does not capture what is going on with trade and outsourcing has some real foundations, and deserves to be considered seriously.

***Inherent and Transferable Comparative Advantages*** When David Ricardo first made the comparative advantage argument in the early 1800s, he was talking about an economic environment that was quite different than today's. His example was Britain and Portugal, with Britain producing wool and Portugal producing wine.<sup>2</sup> What caused their differing costs of production was climate; Britain's climate was far less conducive to growing grapes than Portugal's but more conducive to raising sheep. Differing technologies or labor skills in the countries did not play a key role in their comparative advantages, and it was highly unlikely that the climates, and therefore comparative advantages, of the countries could change. Put another way, both countries have **inherent comparative advantages**—*comparative advantages that are based on factors that are relatively unchangeable*, rather than **transferable comparative advantages**—*comparative advantages based on factors that can change relatively easily*.

Transferable comparative advantages will tend to erode over time.

As the theory of comparative advantage developed, economists applied it to a much broader range of goods whose comparative advantages were not due to climate. For

<sup>2</sup>He mentions Poland but doesn't even consider it as a potential trading partner.

example, some countries had a comparative advantage in land, specific resources, capital, types of labor, or technology. Extending the analysis to these other sources of comparative advantage makes sense, but it is important to keep in mind that only some of these comparative advantages are inherent; others are transferable. Comparative advantages due to resources or climate are unlikely to change; comparative advantages that depend on capital, technology, or education, however, can change. In fact, we would expect them to change.

Law of one price: in a competitive market, there will be pressure for equal factors to be priced equally.

**The Law of One Price** Whether a country can maintain a much higher standard of living than another country in the long run depends in part on whether its comparative advantages are transferable or inherent. Saudi Arabia will maintain its comparative advantage in producing oil, but the United States' comparative advantage based on better education is likely to be more fleeting. In cases where comparative advantage is not inherent, economic forces will push to eliminate that comparative advantage. The reason is the law of one price: in a competitive market, there will be pressure for equal factors to be priced equally. If factor prices aren't equal, firms can reduce costs by reorganizing production to countries where factors are priced lower. The tendency of economic forces to eliminate transferable comparative advantage is sometimes called the *convergence hypothesis*. Even seemingly inherent comparative advantages can be changed by technology. Consider oil. The development of cost-effective fuel cells may leave Saudi Arabia with a comparative advantage in oil but not necessarily with a comparative advantage in producing energy.

When markets are working, any country with a comparative advantage due only to transferable capital and technology will lose that comparative advantage as capital and technology spread to other countries. Ultimately, in the case of transferable comparative advantage, production will shift to the lower-wage country that has equivalent institutional structures. This is the law of one price in action: The same good—including equivalent labor—must sell for the same price, unless trade is restricted or other differences exist. That is what's happening now with the United States and outsourcing. Skills needed to do information technology work, for example, are transferable. Because an information technology professional with three to five years' experience earns about \$75,000 in the United States and only \$26,000 in India, those jobs are moving abroad. As long as wages differ, and the workers' productivities in countries are comparable, transferable comparative advantages of U.S. production will continue to erode, and as they erode, production and jobs will be moved abroad.

The question, therefore, is not: Why is outsourcing to China and India occurring today? The question is: Why didn't it happen long ago? How did U.S. productivity, and hence its standard of living, come to so exceed China's and India's productivity, and hence their standards of living? Or alternatively: How did the United States get in its current high-wage position, and is it likely to maintain that position into the indefinite future?

#### **How the United States Gained and Is Now Losing Comparative Advantage**

To better understand the current U.S. position, let's look at it historically. The United States developed its highly favorable position from the 1920s until the late 1940s when the two world wars directed production toward the United States. Those wars, the entrepreneurial spirit of the U.S. population, U.S. institutions conducive to production, and the flow of technology and capital into the United States gave the United States a big boost both during the two world wars and after. Coming out of World War II, the United States had a major cost advantage in producing a large majority of goods, just as China has a cost advantage in producing the large majority of goods today.

Such cost advantages in a majority of areas of production are not sustainable because the balance of trade will be highly imbalanced. In the absence of specific policy by governments, or large private flows of capital, eventually that imbalance will right itself. After World War II, the trade balance that favored the United States was maintained temporarily by U.S. companies, which invested heavily in Europe, and the U.S. government, which transferred funds to Europe with programs such as the Marshall Plan. These flows of capital financed Europe's trade deficits and allowed the United States to run large trade surpluses, just as current flows of investment into the United States from a variety of countries, and the explicit policy of buying U.S. bonds by Chinese and Japanese central banks, are financing the U.S. trade deficits now, and allowing large Chinese trade surpluses with the United States.

In the absence of specific policy by governments, or large private flows of capital, eventually any large trade imbalance will right itself.

**Methods of Equalizing Trade Balances** Capital flows that sustain trade imbalances eventually stop, and when they do, adjustments in relative comparative advantages must take place so that the trade surplus countries—such as China today—become less competitive (lose comparative advantage) and the trade deficit countries—in this case, the United States—become more competitive (gain comparative advantage). This adjustment can occur in a number of ways. The two most likely adjustments today are that wages in China rise relative to wages in the United States or the U.S. exchange rate falls. Both adjustments will make Chinese goods relatively more expensive and U.S. goods relatively cheaper, just as these adjustments did with countries such as Japan, Taiwan, and Korea in previous decades. Neither of these is especially pleasant, which is why we will likely hear continued calls for trade restrictions in the coming decade.

**Q-6** What are two likely adjustments that will reduce the wage gap between China and the United States?

Unfortunately, as I will discuss below, the trade restriction policies that governments can undertake will generally make things worse. The U.S. wage advantage can only be maintained to the degree that total cost of production of a good in the United States (with all the associated costs) is no more expensive than the total cost of producing that same good abroad (with all the associated costs). The degree to which production shifts because of lower wages abroad depends on how transferable are the U.S. comparative advantages that we listed above. Some of them are generally nontransferable, and thus will support sustained higher relative U.S. wages. English as the language of business; the enormous wealth of the United States gained earlier; inertia; and U.S. political, social, and capital infrastructure will keep much production in the United States, and will maintain a comparative advantage for U.S. production even with significantly higher U.S. wages.

The U.S. wage advantage can only be maintained to the degree that total cost of production of a good in the United States is no more than the total cost of that same good abroad.

But in the coming decades, we can expect a narrowing of the wage gap between the United States and China and India. Given these strong market forces that cannot be prevented without undermining the entire international trading system, about the only available realistic strategy for the United States is to adapt to this new situation. Its best strategy is to work toward maintaining existing comparative advantages through investment in education and infrastructure, while continuing to provide an environment conducive to innovation so that we develop comparative advantages in new industries.

## Varieties of Trade Restrictions

The policies countries can use to restrict trade include tariffs and quotas, voluntary restraint agreements, embargoes, regulatory trade restrictions, and nationalistic appeals. I'll consider each in turn and also review the geometric analysis of each.

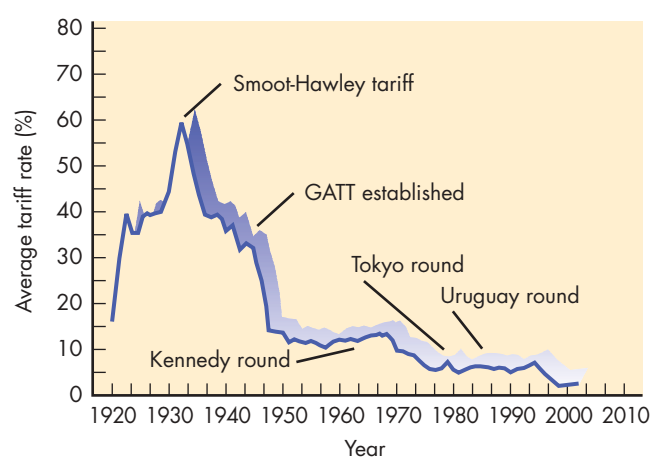
**FIGURE 21-4 (A AND B) Selected Tariff Rates**

The tariff rates in (a) will be continually changing as the changes negotiated by the World Trade Organization come into effect. In (b) you see tariff rates for the United States since 1920.

Source: General Agreement on Tariffs and Trade (GATT), *The Results of the Uruguay Round of Multilateral Trade Negotiations*, November 1994 (www.wto.org) and the World Bank (www.worldbank.org).

Country	%	Country	%
Argentina	11.9	Norway	0.7
Australia	3.9	Peru	12.6
Canada	1.1	Philippines	2.8
Colombia	10.1	Poland	2.9
Czech Rep.	4.1	Singapore	0
European Union	2.4	South Africa	3.6
Hungary	7.5	Sri Lanka	4.2
India	21.0	Thailand	8.7
Indonesia	3.9	United States	2.6
Japan	2.2	Venezuela	11.3
Mexico	4.9	Zimbabwe	12.0

(a) Tariff Rates by Country



(b) U.S. Tariff Rates since 1920

## Tariffs and Quotas

Three policies used to restrict trade are

1. **Tariffs** (taxes on internationally traded goods).
2. **Quotas** (quantity limits placed on imports).
3. **Regulatory trade restrictions** (government-imposed procedural rules that limit imports).

**Tariffs** are taxes governments place on internationally traded goods—generally imports. (Tariffs are also called *customs duties*.) Tariffs are the most-used and most-familiar type of trade restriction. Tariffs operate in the same way a tax does: They make imported goods relatively more expensive than they otherwise would have been, and thereby encourage the consumption of domestically produced goods. On average, U.S. tariffs raise the price of imported goods by less than 3 percent. Figure 21-4(a) presents average tariff rates for industrial goods for a number of countries and the European Union, and Figure 21-4(b) shows the tariff rates imposed by the United States since 1920.

Probably the most infamous tariff in U.S. history is the Smoot-Hawley Tariff of 1930, which raised tariffs on imported goods to an average of 60 percent. It was passed at the height of the Great Depression in the United States in the hope of protecting American jobs. It didn't work. Other countries responded with similar tariffs. As a result of these trade wars, international trade plummeted from \$60 billion in 1928 to \$25 billion in 1938, unemployment worsened, and the international depression deepened. These effects of the tariff convinced many, if not most, economists that free trade is preferable to trade restrictions.

The dismal failure of the Smoot-Hawley Tariff was the main reason the **General Agreement on Tariffs and Trade (GATT)**, a regular international conference to reduce trade barriers, was established in 1947 immediately following World War II. In 1995 GATT was replaced by the **World Trade Organization (WTO)**, an organization whose functions are generally the same as GATT's were—to promote free and fair trade among countries. Unlike GATT, the WTO is a permanent organization with an enforcement system (albeit weak). Since its formation, rounds of negotiations have resulted in a decline in worldwide tariffs.

**Quotas** are quantity limits placed on imports. They have the same effect on equilibrium price and quantity as the quantity restrictions discussed in Chapter 5, and their

effect in limiting trade is similar to the effect of a tariff. Both increase price and reduce quantity. Tariffs, like all taxes on suppliers, shift the supply curve up by the amount of the tax, as Figure 21-5 shows. A tariff,  $T$ , raises equilibrium price from  $P_0$  to  $P_1$  by an amount that is less than the tariff, and equilibrium quantity declines from  $Q_0$  to  $Q_1$ . With a quota,  $Q_1$ , the equilibrium price also rises to  $P_1$ .

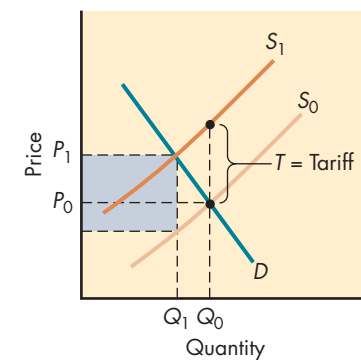
There is, however, a difference between tariffs and quotas. In the case of the tariff, the government collects tariff revenue represented by the shaded region. In the case of a quota, the government collects no revenue. The benefit of the increase in price goes to the importer as additional corporate revenue. So which of the two do you think import companies favor? The quota, of course—it means more profits as long as your company is the one to receive the rights to fill those quotas. In fact, once quotas are instituted, firms compete intensely to get them.

Tariffs affect trade patterns. For example, as of 2005 the United States imposes a tariff on light trucks from Japan, so the United States imports few light trucks from Japan. You will see Japanese-named trucks, but most of these are produced in the United States. Many similar examples exist, and by following the tariff structure, you can gain a lot of insight into patterns of trade.

The issues involved with tariffs and quotas can be seen in a slightly different way by assuming that our country is small relative to the world economy and that imports compete with domestic producers. The small-country assumption means that the supply from the world to this country is perfectly elastic at the world price, \$2, as in Figure 21-6(a).

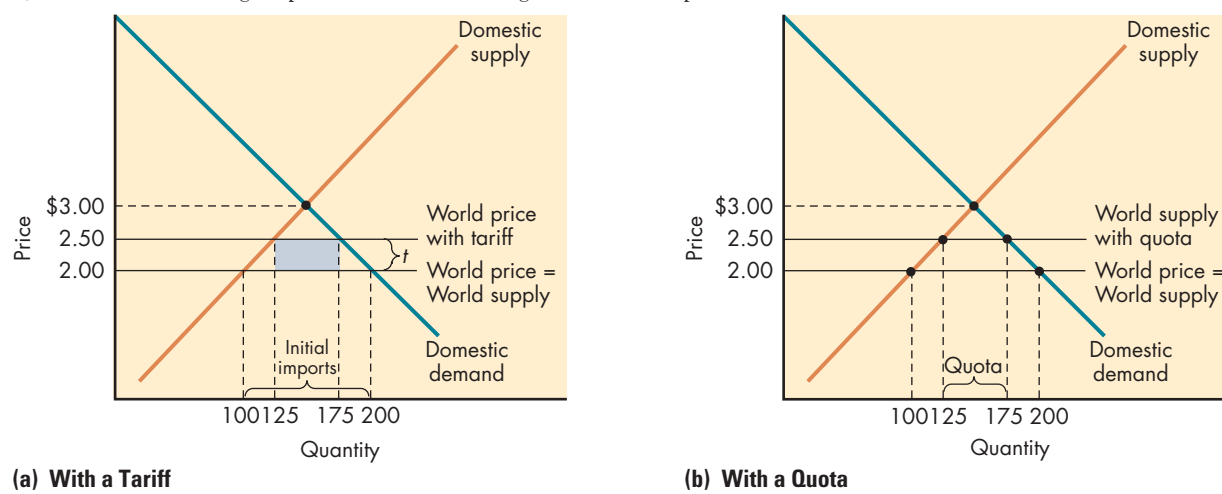
The world price of the good is unaffected by this country's demand. This assumption allows us to distinguish the world supply from domestic supply. In the absence of any trade restrictions, the world price of \$2 would be the domestic price. Domestic low-cost

**FIGURE 21-5** The Effects of Tariffs and Quotas



**FIGURE 21-6 (A AND B)** Tariffs and Quotas When the Domestic Country Is Small

This exhibit shows the effects of a tariff in (a) and of a quota in (b) when the domestic country is small. The small-country assumption means that the world supply is perfectly elastic, in this case at \$2.00 a unit. With a tariff of 50 cents, world supply shifts up by 50 cents. Domestic quantity demanded falls to 175 and domestic quantity supplied rises to 125. Foreign suppliers are left supplying the difference, 50 units. The domestic government collects revenue shown in the shaded area. The figure in (b) shows how the same result can be achieved with a quota of 50. Equilibrium price rises to \$2.50. Domestic firms produce 125 units and consumers demand 175 units. The difference between the tariff and the quota is that, with a tariff, the domestic government collects the revenue from the higher price. With a quota, the benefits of the higher price accrue to the foreign and domestic producers.



suppliers would supply 100 units of the good at \$2. The remaining 100 units demanded are being imported.

In Figure 21-6(a) I show the effect of a tariff of 50 cents placed on all imports. Since the world supply curve is perfectly elastic, all of this tax, shown by the shaded region, is borne by domestic consumers. Price rises to \$2.50 and quantity demanded falls to 175. With a tariff, the rise in price will increase domestic quantity supplied from 100 to 125 and will reduce imports to 50. Now let's compare this situation with a quota of 50, shown in Figure 21-6(b). Under a quota of 50, the final price would be the same, but higher revenue would accrue to foreign and domestic producers rather than to the government. One final difference: Any increase in demand under a quota would result in higher prices because it would have to be filled by domestic producers. Under a tariff, any increase in demand would not affect price.

### Voluntary Restraint Agreements

Voluntary restraint agreements are often not all that voluntary.

Imposing new tariffs and quotas is specifically ruled out by the WTO, but foreign countries know that WTO rules are voluntary and that, if a domestic industry brought sufficient political pressure on its government, the WTO would be forgotten. To avoid the imposition of new tariffs on their goods, countries often voluntarily restrict their exports. That's why Japan has agreed informally to limit the number of cars it exports to the United States.

The effect of such voluntary restraint agreements is similar to the effect of quotas: They directly limit the quantity of imports, increasing the price of the good and helping domestic producers. For example, when the United States encouraged Japan to impose "voluntary" quotas on exports of its cars to the United States, Toyota benefited from the quotas because it could price its limited supply of cars higher than it could if it sent in a large number of cars, so profit per car would be high. Since they faced less competition, U.S. car companies also benefited. They could increase their prices because Toyota had done so.

### Embargoes

An **embargo** is a total restriction on import or export of a good.

An **embargo** is a total restriction on the import or export of a good. Embargoes are usually established for international political reasons rather than for primarily economic reasons.

An example is the U.S. embargo of trade with Iraq. The U.S. government hoped that the embargo would so severely affect Iraq's economy that Saddam Hussein would lose political power. It did make life difficult for Iraqis, but it didn't bring about the downfall of the Hussein government. The United States has also imposed embargoes on Cuba, Iran, and Libya.

### Regulatory Trade Restrictions

www Web Note 21.1  
Regulations

Tariffs, quotas, and embargoes are the primary *direct* methods to restrict international trade. There are also indirect methods that restrict trade in not-so-obvious ways; these are called **regulatory trade restrictions** (*government-imposed procedural rules that limit imports*). One type of regulatory trade restriction has to do with protecting the health and safety of a country's residents. For example, a country might restrict imports of all vegetables grown where certain pesticides are used, knowing full well that all other countries use those pesticides. The effect of such a regulation would be to halt the import of vegetables. Another example involves building codes. U.S. building codes require that plywood have fewer than, say, three flaws per sheet. Canadian building codes require that plywood have fewer than, say, five flaws per sheet. The different building codes are

a nontariff barrier that makes trade in building materials between the United States and Canada difficult.

A second type of regulatory restriction involves making import and customs procedures so intricate and time-consuming that importers simply give up. For example, at one time France required all imported VCRs to be individually inspected in Toulouse. Since Toulouse is a provincial city, far from any port and outside the normal route for imports after they enter France, the inspection process took months.

Some regulatory restrictions are imposed for legitimate reasons; others are designed simply to make importing more difficult and hence protect domestic producers from international competition. It's often hard to tell the difference. A good example of this difficulty began in 1988, when the EU disallowed all imports of meat from animals that had been fed growth-inducing hormones. As the box "Hormones and Economics" on the next page details, the debate continues.

**Q-7** How might a country benefit from having an inefficient customs agency?

Some regulatory restrictions are imposed for legitimate reasons; others are designed simply to make importing more difficult.

### Nationalistic Appeals

Finally, nationalistic appeals can help to restrict international trade. "Buy American" campaigns and Japanese xenophobia<sup>3</sup> are examples. Many Americans, given two products of equal appeal except that one is made in the United States and one is made in a foreign country, would buy the U.S. product. To get around this tendency, foreign and U.S. companies often go to great lengths to get a MADE IN THE U.S.A. classification on goods they sell in the United States. For example, components for many autos are made in Japan but shipped to the United States and assembled in Ohio or Tennessee so that the finished car can be called an American product.

www Web Note 21.2  
Buy American

## Reasons for Trade Restrictions

Let's now turn to a different question: If trade is beneficial, as it is in our example of I.T., why do countries restrict trade?

### Unequal Internal Distribution of the Gains from Trade

One reason is that the gains of trade are not equally distributed. In the example of the argument for trade discussed at the beginning of the chapter, I.T. persuaded Saudi Arabia to specialize in the production of oil rather than food, and persuaded the United States to produce more food than oil. That means, of course, that some U.S. oil workers will have to become farmers, and in Saudi Arabia some farmers will have to become oil producers.

Often people don't want to make radical changes in the kind of work they do—they want to keep on producing what they're already producing. So when these people see the same kinds of goods that they produce coming into their country from abroad, they lobby to prevent the foreign competition.

Had I.T. been open about the difficulties of trading, he would have warned the countries that change is hard. It has very real costs that I.T. didn't point out when he made his offers. But these costs of change are relatively small compared to the gains from trade. Moreover, they're short-run, temporary costs, whereas gains from trade are permanent, long-run gains. Once the adjustment has been made, the costs will be gone but the benefits will still be there.

For most goods, the benefits for the large majority of the population so outweigh the small costs to some individuals that, decided on a strict cost/benefit basis, international

<sup>3</sup>Xenophobia is a Greek word meaning "fear of foreigners." Pronounce the x like z.

## Hormones and Economics

## APPLYING the Tools



Trade restrictions, in practice, are often much more complicated than they seem in textbooks. Seldom does a country say, "We're limiting imports to protect our home producers." Instead the country explains the restrictions in a more politically acceptable way. Consider the fight between the European Union (EU) and the United States over U.S. meat exports. In 1988 the EU, in line with Union-wide internal requirements, banned imports of any meat from animals treated with growth-inducing hormones, which U.S. meat producers use extensively. The result: the EU banned the meat exported from the United States.



The EU claimed that it had imposed the ban only because of public health concerns. The United States claimed that the ban was actually a trade restriction, pointing out that its own residents ate this kind of meat with confidence because a U.S. government agency had certified that the levels of hormones in the meat were far below any danger level.

The United States retaliated against the EU by imposing 100 percent tariffs on Danish and West German hams, Italian tomatoes, and certain other foods produced by EU member nations. The EU threatened to respond by placing

100 percent tariffs on \$100 million worth of U.S. walnuts and dried fruits, but instead entered into bilateral meetings with the United States. Those meetings allowed untreated meats into the EU for human consumption and treated meats that would be used as dog food. In response, the United States removed its retaliatory tariff on hams and tomato sauce, but retained its tariffs on many other goods.

In the 1990s, Europe's dog population seemed to be growing exponentially as Europe's imports of "dog food" increased by leaps and bounds. In 1996 the United States asked the WTO to review the EU ban. It did so in 1997, finding in favor of the United States. The EU appealed and in 1999 the WTO stood by its earlier ruling

and the United States reimposed the 100 percent tariffs. Since then, the EU has stood firm and has conducted studies that, it says, show the use of growth hormones to be unsafe, but the WTO continues to rule that they are safe.

Which side is right in this dispute? The answer is far from obvious. Both the United States and the EU have potentially justifiable positions. As I said, trade restrictions are more complicated in reality than in textbooks.

trade is still a deal you can't refuse. The table below lists economists' estimates of the cost to consumers of saving a job in some industries.

Industry	Cost of Production (per job saved)
Apparel	\$297,550
Footwear	290,323
Sugar	108,900
Ceramic tiles	99,264
Canned tuna	74,000

Source: These are 2002 estimates based on *Economic Effects of Significant Import Restraints*, 2004, International Trade Commission ([www.usit.gov](http://www.usit.gov)).

Benefits of trade are generally widely scattered among the entire population. In contrast, costs of free trade often fall on specific small groups.

With benefits so outweighing costs, it would seem that transition costs could be forgotten. But they can't.

Benefits of trade are generally widely scattered among the entire population. In contrast, costs of free trade often fall on small groups of people who loudly oppose the particular free trade that hurts them. This creates a political push against free trade.

It isn't only in the United States that the push for trade restrictions focuses on the small costs and not on the large benefits. For example, the European Union (EU) places large restrictions on food imports from nonmember nations. If the EU were to remove those barriers, food prices in EU countries would decline significantly—it is estimated that meat prices alone would fall by about 65 percent. Consumers would benefit, but farmers would be hurt. The farmers, however, have the political clout to see that the costs are considered and the benefits aren't. The result: The EU places high duties on foreign agricultural products.

The cost to society of relaxing trade restrictions has led to a number of programs to assist those who are hurt. Such programs are called **trade adjustment assistance programs**—*programs designed to compensate losers for reductions in trade restrictions*.

Governments have tried to use trade adjustment assistance to facilitate free trade, but they've found that it's enormously difficult to limit the adjustment assistance to those who are actually hurt by international trade. As soon as people find that there's assistance for people injured by trade, they're likely to try to show that they too have been hurt and deserve assistance. Losses from free trade become exaggerated and magnified. Instead of only a small portion of the gains from trade being needed for trade adjustment assistance, much more is demanded—often even more than the gains.

Telling people who claim to be hurt that they aren't really being hurt isn't good politics. That's why offering trade adjustment assistance as a way to relieve the pressure to restrict trade is a deal many governments can refuse.

Telling people who claim to be hurt that they aren't really being hurt isn't good politics.

### Haggling by Companies over the Gains from Trade

Many naturally advantageous bargains aren't consummated because each side is pushing for a larger share of the gains from trade than the other side thinks should be allotted.

To see how companies haggling over the gains of trade can restrict trade, let's reconsider the original deal that I.T. proposed. I.T. got 380 tons of food and 380 barrels of oil. The United States got an additional 100 tons of food and 60 barrels of oil. Saudi Arabia got an additional 100 barrels of oil and 60 tons of food.

Suppose the Saudis had said, "Why should we be getting only 100 barrels of oil and 60 tons of food when I.T. is getting 380 barrels of oil and 380 tons of food? We want an additional 300 tons of food and another 300 barrels of oil, and we won't deal unless we get them." Similarly the United States might have said, "We want an additional 300 tons of food and an additional 300 barrels of oil, and we won't go through with the deal unless we get them." If either the U.S. or the Saudi Arabian company that was involved in the trade for its country (or both) takes this position, I.T. might just walk—no deal. Tough bargaining positions can make it almost impossible to achieve gains from trade.

The side that drives the hardest bargain gets the most gains from the bargain, but it also risks making the deal fall through. Such strategic bargaining goes on all the time. **Strategic bargaining** means *demanding a larger share of the gains from trade than you can reasonably expect*. If you're successful, you get the lion's share; if you're not successful, the deal falls apart and everyone is worse off.

Strategic bargaining can lead to higher gains from trade for the side that drives the hardest bargain, but it also can make the deal fall through.

**Q.8** In strategic trade bargaining, it is reasonable to be unreasonable. True or false? Explain.

### Haggling by Countries over Trade Restrictions

Another type of trade bargaining that often limits trade is bargaining between countries. Trade restrictions and the threat of trade restrictions play an important role in that kind of haggling. Sometimes countries must go through with trade restrictions that they really don't want to impose, just to make their threats credible.

Once one country has imposed trade restrictions, other countries attempt to get those restrictions reduced by threatening to increase their own restrictions. Again, to

**Strategic trade policies** are threats to implement tariffs to bring about a reduction in tariffs or some other concession from the other country.

make the threat credible, sometimes countries must impose or increase trade restrictions simply to show they're willing to do so. For example, in the mid-1990s China was allowing significant illegal copying of U.S. software without paying royalties. The United States exerted pressure to stop such copying but felt that China was not responding effectively. To force compliance, the United States made a list of Chinese goods that it threatened with 100 percent tariffs unless China complied. The United States did not want to put on these restrictions, but felt that it would have more strategic bargaining power if it threatened to do so. Hence the name **strategic trade policies**—*threatening to implement tariffs to bring about a reduction in tariffs or some other concession from the other country*.

Ultimately, strategic bargaining power depends on negotiators' skills and the underlying gains from trade that a country would receive. A country that would receive only a small portion of the gains from trade is in a much stronger bargaining position than a country that would receive significant gains. It's easier for the former to walk away from trade.

The potential problem with strategic trade policies is that they can backfire. One rule of strategic bargaining is that the other side must believe that you'll go through with your threat. Thus, strategic trade policy can lead a country that actually supports free trade to impose trade restrictions, just to show how strongly it believes in free trade.

### Specialized Production

My discussion of comparative advantage took it as a given that one country was inherently more productive than another country in producing certain goods. But when one looks at trading patterns, it's often not at all clear why particular countries have a productive advantage in certain goods. There's no inherent reason for Switzerland to specialize in the production of watches or for South Korea to specialize in the production of cars. Much in trade cannot be explained by inherent resource endowments. If they don't have inherent advantages, why are countries and places often so good at producing what they specialize in? Two important explanations are that they *learn by doing* and that *economies of scale* exist.

**Learning by doing** means becoming better at a task the more you perform it.

**Learning by Doing** *Learning by doing* means becoming better at a task the more often you perform it. Take watches in Switzerland. Initially production of watches in Switzerland may have been a coincidence; the person who started the watch business happened to live there. But then people in the area became skilled in producing watches. Their skill made it attractive for other watch companies to start up. As additional companies moved in, more and more members of the labor force became skilled at watchmaking and word went out that Swiss watches were the best in the world. That reputation attracted even more producers, so Switzerland became the watchmaking capital of the world. Had the initial watch production occurred in Austria, not Switzerland, Austria might be the watch capital of the world.

When there's learning by doing, it's much harder to attribute inherent comparative advantage to a country. One must always ask: Does country A have an inherent comparative advantage, or does it simply have more experience? Once country B gets the experience, will country A's comparative advantage disappear? If it will, then country B has a strong reason to limit trade with country A in order to give its own workers time to catch up as they learn by doing.

In economies of scale, costs per unit of output go down as output increases.

**Economies of Scale** In determining whether an inherent comparative advantage exists, a second complication is **economies of scale**—*the situation in which costs per unit of output fall as output increases*. Many manufacturing industries (such as steel and autos)

## The Antiglobalization Forces

## APPLYING the Tools

Often when the World Trade Organization or a similar type organization promoting free trade hosts a meeting, protests (sometimes violent ones) are held by a loosely organized collection of groups opposing globalization. The goals of these groups are varied. Some argue that trade hurts developed countries such as the United States; others argue that it hurts developing countries by exploiting poor workers so that Westerners can get luxuries cheaply. Still others argue against a more subtle Western economic imperialism in which globalization spreads Western cultural values and undermines developing countries' social structures.

Each of these arguments has some appeal, although making the first two simultaneously is difficult because it says that voluntary trade hurts both parties to the trade. But the arguments have had little impact on the views of most policymakers and economists.

Supporting free trade does not mean that globalization does not have costs. It does, but many of the costs associated with free trade are really the result of technological changes. The reality is that technological developments, such as those in telecommunications and transportation,

are pushing countries closer together and will involve difficult social and cultural changes, regardless of whether trade is free or not. Restricting trade might temporarily slow these changes but is unlikely to stop them.

Most empirical studies have found that, with regard to material goods, the workers in developing countries involved in trade are generally better off than those not involved in trade.

That's why most developing countries work hard to encourage companies to move production facilities into their countries. From a worker's perspective, earning \$4 a day can look quite good when the alternative is earning \$3 a day. Would the worker rather earn \$10 a day? Of course, but the higher the wages in a given country, the less likely it is that firms are going to locate production there.

Many economists are sympathetic to various antiglobalization arguments, but they often become frustrated at the lack of clarity of the antiglobalization groups' views. To oppose something is not enough; to effect positive change, one must not only understand how the thing one opposes works but also have a realistic plan for a better alternative.



exhibit economies of scale. The existence of significant economies of scale means that it makes sense (that is, it lowers costs) for one country to specialize in one good and another country to specialize in another good. But who should specialize in what is unclear. Producers in a country can, and generally do, argue that if only the government will establish barriers, they'll be able to lower their costs per unit and eventually sell at lower costs than foreign producers.

Most countries recognize the importance of learning by doing and economies of scale. A variety of trade restrictions are based on these two phenomena. The most common expression of the learning-by-doing and economies-of-scale insights is the **infant industry argument**, which is that *with initial protection, an industry will be able to become competitive*. Countries use this argument to justify many trade restrictions. They argue, "You may now have a comparative advantage, but that's simply because you've been at it longer, or are experiencing significant economies of scale. We need trade restrictions on our \_\_\_\_\_ industry to give it a chance to catch up. Once an infant industry grows up, then we can talk about eliminating the restrictions."

### Macroeconomic Aspects of Trade

The comparative advantage argument for free trade assumes that a country's resources are fully utilized. When countries don't have full employment, imports can decrease

**Q9** Is it efficient for a country to maintain a trade barrier in an industry that exhibits economies of scale?

The **infant industry argument** says that with initial protection, an industry will be able to become competitive.

domestic aggregate demand and increase unemployment. Exports can stimulate domestic aggregate demand and decrease unemployment. Thus, when an economy is in a recession, there is a strong macroeconomic reason to limit imports and encourage exports. These macroeconomic effects of free trade play an important role in the public's view of imports and exports. When a country is in a recession, pressure to impose trade restrictions increases substantially.

### National Security

Countries often justify trade restrictions on grounds of national security. These restrictions take two forms:

1. Export restrictions on strategic materials and defense-related goods.
2. Import restrictions on defense-related goods. For example, in a war we don't want to be dependent on oil from abroad.

For a number of goods, national security considerations make sense. For example, the United States restricts the sale of certain military items to countries that are likely to be fighting the United States someday. The problem is where to draw the line about goods having a national security consideration. Should countries protect domestic agriculture? All high-technology items, since they might be useful in weapons? All chemicals? Steel? When a country makes a national security argument for trade, we must be careful to consider whether a domestic political reason may be lurking behind that argument.

### International Politics

International politics frequently provides another reason for trade restrictions. As of 2005 the United States restricted trade with Cuba to punish that country for trying to extend its Marxist political and economic policies to other Latin American countries. The United States also has trade restrictions on Iraq for its activities that support terrorists. The list can be extended, but you get the argument: Trade helps you, so we'll hurt you by stopping trade until you do what we want. So what if it hurts us too? It'll hurt you more than it hurts us.

### Increased Revenue Brought in by Tariffs

A final argument made for one particular type of trade restriction—a tariff—is that tariffs bring in revenues. In the 19th century, tariffs were the U.S. government's primary source of revenue. They are less important as a source of revenue today for some developed countries because those countries have instituted other forms of taxes. However, tariffs remain a primary source of revenue for many developing countries. They're relatively easy to collect and are paid by people rich enough to afford imports. These countries justify many of their tariffs with the argument that they need the revenues.

### Why Economists Generally Oppose Trade Restrictions

Each of the preceding arguments for trade restrictions has some validity, but most economists discount them and support free trade. The reason is that, in their considered judgment, the harm done by trade restrictions outweighs the benefits. This is true, even

Reasons for restricting trade include

1. Unequal internal distribution of the gains from trade.
2. Haggling by companies over the gains from trade.
3. Haggling by countries over trade restrictions.
4. Specialized production: learning by doing and economies of scale.
5. Macroeconomic aspects of trade.
6. National security.
7. International politics.
8. Increased revenue brought in by tariffs.

though, from the U.S. perspective, transferable comparative advantages are likely to place significant pressures on jobs to leave the United States, and hold down U.S. wages in the coming decades. While these pressures may be understandable, most economists believe that the United States will be better off if it allows free trade than it would be if it did not.

### Free Trade Increases Total Output

Economists' first argument for free trade is that, viewed from a global perspective, free trade increases total output. From a national perspective, economists agree that particular instances of trade restrictions may actually help one nation, even as most other nations are hurt. But they argue that the country imposing trade restrictions can benefit *only if the other country doesn't retaliate* with trade restrictions of its own. Retaliation is the rule, not the exception, however, and when there is retaliation, trade restrictions cause both countries to lose. Thus, if the United States were to place a tariff on goods from China, those aspects of production that depend on Chinese goods would be hurt, and, as I discussed above, there are many such goods. Moreover, China would likely place tariffs on goods from the United States, hurting both countries. Such tariffs would cut overall production, making both countries worse off.

Economists generally oppose trade restrictions because

1. From a global perspective, free trade increases total output.
2. International trade provides competition for domestic companies.
3. Restrictions based on national security are often abused or evaded.
4. Trade restrictions are addictive.

### International Trade Provides Competition

A second reason most economists support free trade is that trade restrictions reduce international competition. International competition is desirable because it forces domestic companies to stay on their toes. If trade restrictions on imports are imposed, domestic companies don't work as hard and therefore become less efficient.

For example, in the 1950s and 1960s, the United States imposed restrictions on imported steel. U.S. steel industries responded to this protection by raising their prices and channeling profits from their steel production into other activities. By the 1970s, the U.S. steel industry was using outdated equipment to produce overpriced steel. Instead of making the steel industry stronger, restrictions made it a flabby, uncompetitive industry.

In the 1980s and 1990s, the U.S. steel industry became less and less profitable. Larger mills closed or consolidated, while nonunion minimills, which made new steel out of scrap steel, did well. By the late 1990s, minimills accounted for 45 percent of total U.S. steel production. In 2002, it looked as if a number of larger mills were going to declare bankruptcy, and enormous pressure was placed on the federal government to bail them out by taking over their pension debt and instituting tariffs. President George W. Bush responded by calling for 20–30 percent tariffs on foreign steel imports. Most economists opposed the tariffs and pointed out that they were unlikely to lead to a rebuilding of the U.S. steel industry because other countries had a comparative advantage in steel production. Moreover, other countries would retaliate with tariffs on U.S. goods. Despite their opposition, the tariffs were instituted. Major U.S. trading partners—including EU countries, Japan, and China—responded by implementing tariffs on U.S. goods worth about \$335 million.

The benefits of international competition are not restricted to mature industries like steel; they can also accrue to young industries wherever they appear. Economists dispose of the infant industry argument by reference to the historical record. In theory the argument makes sense. But very few of the infant industries protected by trade restrictions have ever grown up. What tends to happen instead is that infant industries become dependent on the trade restrictions and use political pressure to keep that protection. As a result, they often remain immature and internationally uncompetitive. Most

Very few of the infant industries protected by trade restrictions have ever grown up.

Web Note 21.3  
Protection and  
Industrialization

economists would support the infant industry argument only if the trade restrictions included definite conditions under which the restrictions would end.

### Restrictions Based on National Security Are Often Abused or Evaded

Most economists agree with the national security argument for export restrictions on goods that are directly war related. Selling bombs to Iraq, with whom the United States was at war in early 1991 and 2003, doesn't make much sense (although it should be noted that the United States did exactly that throughout the 1980s when the United States supported Iraq in its war with Iran).

Economists point out that the argument is often carried far beyond goods directly related to national security. For example, in the 1980s the United States restricted exports of sugar-coated cereals to the Soviet Union purportedly for reasons of national security. Sugar-frosted flakes may be great, but they were unlikely to help the Soviet Union in a war.

Another argument that economists give against the national security rationale is that trade restrictions on military sales can often be evaded. Countries simply have another country buy the goods for them. Such third-party sales—called *transshipments*—are common in international trade and limit the effectiveness of any absolute trade restrictions for national security purposes.

Economists also argue that by fostering international cooperation, international trade makes war less likely—a significant contribution to national security.

### Trade Restrictions Are Addictive

Economists' final argument against trade restrictions is: Yes, some restrictions might benefit a country, but almost no country can limit its restrictions to the beneficial ones. Trade restrictions are addictive—the more you have, the more you want. Thus, a majority of economists take the position that the best response to such addictive policies is “Just say no.”

### Institutions Supporting Free Trade

As I have stated throughout the text, economists generally like markets and favor trade being as free as possible. They argue that trade allows specialization and the division of labor. When each country follows its comparative advantage, production is more efficient and the production possibility curve shifts out. These views mean that most economists, liberal and conservative alike, generally oppose international trade restrictions.

Despite political pressures to restrict trade, governments have generally tried to follow economists' advice and have entered into a variety of international agreements and organizations. The most important is the World Trade Organization (WTO), which has about 150 members, and is the successor to the General Agreement on Tariffs and Trade (GATT). You will still occasionally see references to GATT, even though the WTO has taken its place. One of the differences between the WTO and GATT is that the WTO includes some enforcement mechanisms.

The push for free trade has a geographic dimension, which includes **free trade associations**—*groups of countries that have reduced or eliminated trade barriers among themselves*. The European Union (EU) is the most famous free trade association. All barriers to trade among the EU's member countries were removed in 1992. In the coming decade more European countries can be expected to join the EU. In 1993, the United States and Canada agreed to enter into a similar free trade union, and they, together

Yes, some restrictions might benefit a country, but almost no country can limit its restrictions to the beneficial ones.

Web Note 21.4  
Export Promotion

Important international economic organizations include the WTO, which took the place of GATT.

A **free trade association** is a group of countries that allows free trade among its members and puts up common barriers against all other countries' goods.

## Dumping

## APPLYING the Tools



The WTO allows countries to impose trade restrictions on imports if they can show that the goods are being dumped. *Dumping* is selling a good in a foreign country at a lower price than in the country where it's produced. On the face of it, who could complain about someone who wants to sell you a good cheaply? Why not just take advantage of the bargain price? The first objection is the learning-by-doing argument. To stay competitive, a country must keep on producing. Dumping by another country can force domestic producers out of business. Having eliminated the competition, the foreign producer has the field to

itself and can raise the price. Thus, dumping can be a form of predatory pricing.

The second argument against dumping involves the short-term macroeconomic and political effects it can have on the importing country. Even if one believes that dumping is not a preliminary to predatory pricing, it can displace workers in the importing country, causing political pressure on that government to institute trade restrictions. If that country's economy is in a recession, the resulting unemployment will have substantial macroeconomic repercussions, so pressure for trade restrictions will be amplified.

with Mexico, created the North American Free Trade Association (NAFTA). Under NAFTA, tariffs and other trade barriers among these countries are being gradually reduced. Some other trading associations include Mercosur (among South American countries) and ASEAN (among Southeast Asian countries).

Economists have mixed reactions to free trade associations. They see free trade as beneficial, but they are concerned about the possibility that these regional free trade associations will impose significant trade restrictions on nonmember countries. They also believe that bilateral negotiations between member nations will replace multilateral efforts among members and nonmembers. Whether the net effect of these bilateral negotiations is positive or negative remains to be seen.

Groups of other countries have loose trading relationships because of cultural or historical reasons. These loose trading relationships are sometimes called trading zones. For example, many European countries maintain close trading ties with many of their former colonies in Africa where they fit into a number of overlapping trading zones. European companies tend to see that central area as their turf. The United States has close ties in Latin America, making the Western hemisphere another trading zone. Another example of a trading zone is that of Japan and its economic ties with other Far East countries; Japanese companies often see that area as their commercial domain.

These trading zones overlap, sometimes on many levels. For instance, Australia and England, Portugal and Brazil, and the United States and Saudi Arabia are tied together for historical or political reasons, and those ties lead to increased trade between them that seems to deviate from the above trading zones. Similarly, as companies become more and more global, it is harder and harder to associate companies with particular countries. Let me give an example: Do you know who the largest exporters of cars from the United States are? The answer is: Japanese automobile companies!

Thus, there is no hard-and-fast specification of trading zones, and knowing history and politics is important to understanding many of the relationships.

One way countries strengthen trading relationships among groups of countries is through a most-favored-nation status. The term **most-favored nation** refers to a country that will be charged as low a tariff on its exports as any other country. Thus, if the United States lowers tariffs on goods imported from Japan, which has most-favored-nation

**Q-10** What is economists' view of limited free trade associations such as the EU or NAFTA?

A most-favored nation is a country that will pay as low a tariff on its exports as will any other country.

status with the United States, it must lower tariffs on those same types of goods imported from any other country with most-favored-nation status.

## Conclusion

International trade, and changing comparative advantages, will become more and more important for the United States in the coming decades. With international transportation and communication becoming easier and faster, and with other countries' economies growing, the U.S. economy will inevitably become more interdependent with the other economies of the world. As international trade becomes more important, the push for trade restrictions will likely increase. Various countries' strategic trade policies will likely conflict, and the world could find itself on the verge of an international trade war that would benefit no one.

Concern about that possibility leads most economists to favor free trade. As often happens, economists advise politicians to follow a politically unpopular policy—to take the hard course of action. Whether politicians follow economists' advice or whether they follow the politically popular policy will play a key role in determining the course of the U.S. economy in the 2000s.

## Summary

- The nature of trade is continually changing. The United States is importing more and more high-tech goods and services from India and China and other East Asian countries.
- Outsourcing is a type of trade. Outsourcing is a larger phenomenon today compared to 30 years ago because the countries where jobs are outsourced today—China and India—are much larger.
- According to the principle of comparative advantage, as long as the relative opportunity costs of producing goods (what must be given up in one good in order to get another good) differ among countries, there are potential gains from trade.
- Three insights into the terms of trade include:
  1. The more competition exists in international trade, the less the trader gets and the more the involved countries get.
  2. Once competition prevails, smaller countries tend to get a larger percentage of the gains from trade than do larger countries.
  3. Gains from trade go to countries that produce goods that exhibit economies of scale.
- The gains from trade in the form of low consumer prices tend to be widespread and not easily recognized, while the costs in jobs lost tend to be concentrated and readily identifiable.
- The United States has comparative advantages based on its skilled workforce, its institutions, and its language, among other things.
- During the two world wars the United States established comparative advantages that are slowly eroding.
- Trade restrictions include tariffs and quotas, embargoes, voluntary restraint agreements, regulatory trade restrictions, and nationalistic appeals.
- Reasons that countries impose trade restrictions include unequal internal distribution of the gains from trade, haggling by companies over the gains from trade, haggling by countries over trade restrictions, learning by doing and economies of scale, macroeconomic aspects of trade, national security, international political reasons, and increased revenue brought in by tariffs.
- Economists generally oppose trade restrictions because of the history of trade restrictions and their understanding of the advantages of free trade.

- The World Trade Organization is an international organization committed to reducing trade barriers.
- Free trade associations help trade by reducing barriers to trade among member nations. Free trade associations could hinder trade by building up barriers to

trade with nations outside the association; negotiations among members could replace multilateral efforts to reduce trade restrictions among members and nonmembers.

### Key Terms

balance of trade (481)  
comparative advantage (483)  
economies of scale (498)  
embargo (494)  
free trade association (502)  
General Agreement on Tariffs and Trade (GATT) (492)

infant industry argument (499)  
inherent comparative advantage (489)  
learning by doing (498)  
most-favored nation (503)  
quotas (492)

regulatory trade restrictions (494)  
strategic bargaining (497)  
strategic trade policy (498)  
tariffs (492)  
trade adjustment assistance programs (497)

transferable comparative advantage (498)  
World Trade Organization (WTO) (492)

### Questions for Thought and Review

1. Will a country do better importing or exporting a good for which it has a comparative advantage? Why?
2. Widgetland has 60 workers. Each worker can produce 4 widgets or 4 wadgets. Each resident in Widgetland currently consumes 2 widgets and 2 wadgets. Wadgetland also has 60 workers. Each can produce 3 widgets or 12 wadgets. Wadgetland's residents consume 1 widget and 9 wadgets. Is there a basis for trade? If so, offer the countries a deal they can't refuse.
3. How is outsourcing to China and India different than U.S. outsourcing in the past?
4. Why does competition among traders affect how much of the gains to trade are given to the countries involved in the trade?
5. Why do smaller countries usually get most of the gains from trade? What are some reasons why a small country might not get the gains of trade?
6. Which country will get the larger gain from trade: a country with economies of scale or diseconomies of scale? Explain your answer.
7. What are three reasons why economists' and laypeople's view of trade differ?
8. List at least three comparative advantages that the United States has and will likely maintain over the coming decade.
9. How do inherent comparative advantages differ from transferable comparative advantages? From the standpoint of adjustment costs to trade, which would a country prefer and why?
10. What is the law of one price and why is it important to any discussion of the future of the U.S. economy?
11. What are two methods by which the wage gap between Chinese and U.S. workers will likely narrow?
12. Suggest an equitable method of funding trade adjustment assistance programs. Why is it equitable? What problems might a politician have in implementing such a method?
13. If you were economic adviser to a country that was following your advice about trade restrictions and that country fell into a recession, would you change your advice? Why, or why not?
14. What are two reasons economists support free trade?
15. Demonstrate graphically how the effects of a tariff differ from the effects of a quota.
16. How do the effects of voluntary restraint agreements differ from the effects of a tariff? How are they the same?
17. Mexico exports many vegetables to the United States. These vegetables are grown using chemicals that are not allowed in U.S. vegetable agriculture. Should the United States restrict imports of Mexican vegetables? Why or why not?
18. When the United States placed a temporary price floor on tomatoes imported from Mexico, U.S. trade representative Mickey Kantor said, "The agreement will provide strong relief to the tomato growers in Florida and other

states, and help preserve jobs in the industry.” What costs did Americans bear from the price floor?

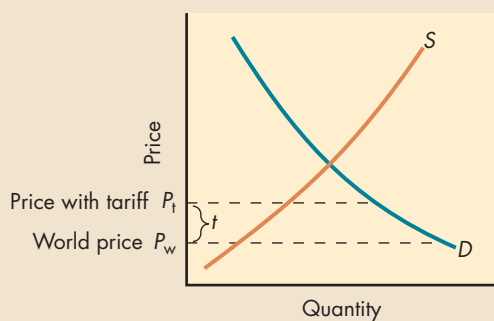
19. A study by the World Bank on the effects of Mercosur, a regional trade pact among four Latin American countries,

concluded that free trade agreements “might confer significant benefits, but there are also significant dangers.” What are those benefits and dangers?

20. What is the relationship between GATT and WTO?

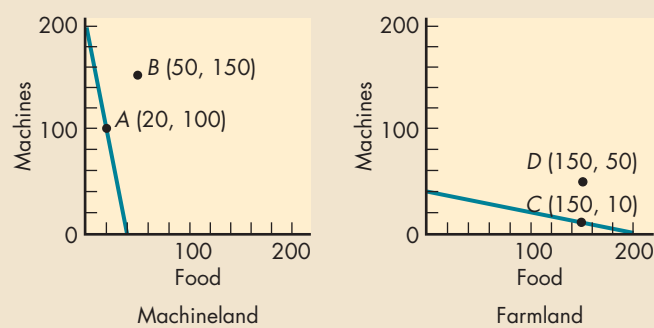
### Problems and Exercises

- Suppose there are two states that do not trade: Iowa and Nebraska. Each state produces the same two goods: corn and wheat. For Iowa the opportunity cost of producing 1 bushel of wheat is 3 bushels of corn. For Nebraska the opportunity cost of producing 1 bushel of corn is 3 bushels of wheat. At present, Iowa produces 20 million bushels of wheat and 120 million bushels of corn, while Nebraska produces 20 million bushels of corn and 120 million bushels of wheat.
  - Explain how, with trade, Nebraska can end up with 40 million bushels of wheat and 120 million bushels of corn while Iowa can end up with 40 million bushels of corn and 120 million bushels of wheat.
  - If the states ended up with the numbers given in *a*, how much would the trader get?
- Country A can produce, at most, 40 olives or 20 pickles, or some combination of olives and pickles such as the 20 olives and 10 pickles it is currently producing. Country B can produce, at most, 120 olives or 60 pickles, or some combination of olives and pickles such as the 100 olives and 50 pickles it is currently producing.
  - Is there a basis for trade? If so, offer the two countries a deal they can't refuse.
  - How would your answer to *a* change if you knew that there were economies of scale in the production of pickles and olives rather than the production possibilities described in the question? Why? If your answer is yes, which country would you have produce which good?
- The world price of textiles is  $P_w$ , as in the accompanying figure of the domestic supply and demand for textiles.



The government imposes a tariff  $t$ , to protect the domestic producers. For this tariff:

- Shade in the gains to domestic producers.
  - Shade in the revenue to government.
  - Shade in the costs to domestic producers.
  - Are the gains greater than the costs? Why?
- In 2003 the hourly cost to employers per German industrial worker was \$29.91. The hourly cost to employers per U.S. industrial worker was \$21.97, while the average cost per Taiwanese industrial worker was \$5.84.
    - Give three reasons why firms produce in Germany rather than in a lower-wage country.
    - Germany has just entered into an agreement with other EU countries that allows people in any EU country, including Greece and Italy, which have lower wage rates, to travel and work in any EU country, including high-wage countries. Would you expect a significant movement of workers from Greece and Italy to Germany right away? Why or why not?
    - Workers in Thailand are paid significantly less than workers in Taiwan. If you were a company CEO, what other information would you want before you decided where to establish a new production facility?
  - Suppose that two countries, Machineland and Farmland, have the following production possibility curves.



- Explain how these two countries can move from points A and C, where they currently are, to points B and D.
- If possible, state by how much total production for the two countries has risen.

- c. If you were a trader, how much of the gains from trade would you deserve for discovering this trade?
  - d. If there were economies of scale in the production of both goods, how would your analysis change?
6. Suppose there are two countries, Busytown and Lazyasiwannabe, with the following production possibility tables:

% of Resources Devoted to Cars	Busytown	
	Cars Produced (thousands)	Gourmet Meals Produced (thousands)
100%	60	0
80	48	10
60	36	20
40	24	30
20	12	40
0	0	50

% of Resources Devoted to Cars	Lazyasiwannabe	
	Cars Produced (thousands)	Gourmet Meals Produced (thousands)
100%	50	0
80	40	10
60	30	20
40	20	30
20	10	40
0	0	50

- a. Draw the production possibility curves for each country.
- b. Which country has the comparative advantage in producing cars? In producing gourmet meals?
- c. Suppose each country specializes in the production of one good. Explain how Busytown can end up with 36,000 cars and 22,000 meals and Lazyasiwannabe can end up with 28,000 meals and 24,000 cars.

- 7. One of the basic economic laws is “the law of one price.” It says that given certain assumptions one would expect that if free trade is allowed, the price of goods in countries should converge.
  - a. Can you list what three of those assumptions likely are?
  - b. Should the law of one price hold for labor also? Why or why not?
  - c. Should it hold for capital more so or less so than for labor? Why or why not?
- 8. On January 1, 2005, quotas on clothing imports to the United States first instituted in the 1960s to protect the U.S. garment industry were eliminated.
  - a. Demonstrate graphically how this change affected equilibrium price and quantity of imported garments.
  - b. Demonstrate graphically how U.S. consumers benefited from the end of the quota system.
  - c. What was the likely effect on profits of foreign companies that sold clothing in the U.S. market?
- 9. The U.S. government taxes U.S. companies for their overseas profits, but it allows them to deduct from their U.S. taxable income the taxes that they pay abroad and interest on loans funding operations abroad with no limits on the amount deducted.
  - a. Is it possible that the overseas profit tax produces no net revenue?
  - b. What would you suggest to the government about this tax if its desire were to increase corporate income tax revenue?
  - c. Why might the government keep this tax even if it were not collecting any net revenue?
- 10. In the 1930s Clair Wilcox of Swarthmore College organized a petition by economists “that any measure which provided for a general upward revision of tariff rates be denied passage by Congress, or if passed, be vetoed.” It was signed by one-third of all economists in the United States at the time, of all political persuasions. A month later, the Smoot-Hawley Tariff was passed.
  - a. Why did economists oppose the tariff?
  - b. Demonstrate the effect of the tariff on the price of goods.
  - c. How would the tariff help the economy if other countries did not institute a retaliatory tariff?
  - d. What would be the effect on the macro economy if other countries did institute a retaliatory tariff?

### Questions from Alternative Perspectives

- 1. Evaluate the following statement: Comparative advantage will benefit all people because everyone has a comparative advantage in something. Therefore, trade based on comparative advantage should be facilitated without undue government intervention. (Austrian)
- 2. In the 10th century B.C., King Solomon brought the Israelites into great economic wealth through specialization and trade. It was difficult when faced with the practices and beliefs of their trading partners, however, for Israel to maintain its identity as a people of one God.

King Solomon, for example, provided a place for each of his wives to worship the gods of her own people. If such syncretism (adoption of foreign practices and beliefs) is inevitable with increased globalization, should trade be encouraged, even today? (Religious)

3. Global outsourcing has cost the U.S. economy between 500,000 to 995,000 jobs since March, 2001, or somewhere between 15 percent and 35 percent of the total decline in employment since the onset of the 2001 recession.
  - a. How does outsourcing affect the bargaining power of U.S. workers and the bargaining power of U.S. employers?
  - b. What will it likely do the overall level of U.S. workers' wages?
  - c. What will it likely do to lawyer's wages?
  - d. If you stated that it affected lawyer's wages differently, do you believe that the U.S. policy response to outsourcing would be different? (Post Keynesian)
4. In David Ricardo's original example of comparative advantage in his *Principles of Political Economy*, written in 1817, Portugal possesses an absolute advantage in both the production of cloth and the production of wine. But

England has a comparative advantage in the production of cloth, while Portugal's comparative advantage is in wine production. According to Ricardo, an English political economist, England should specialize in the production of cloth and Portugal in wine making.

- a. Was Ricardo's advice self-serving?
- b. Knowing that light manufacturing, such as clothing and textile production, has led most industrialization processes, would you have advised nineteenth century Portugal to specialize in wine making? (Radical)
5. The text presents free trade as advantageous for developing countries. However in its period of most rapid development, the half century following the Civil War, the United States imposed tariffs on imports that averaged around 40 percent, a level higher than those in all but one of today's developing economies.
  - a. Why did so many of today's industrialized countries not follow those policies as they were developing?
  - b. What does this insight into economic history suggest about the doctrine of free trade and whose interests it serves? (Radical)

## Web Questions

1. Go to the WTO's home page at [www.wto.org](http://www.wto.org) to find out how trade disputes are settled.
  - a. What is the procedure for settling disputes?
  - b. What is the timetable for the settlement procedure?
  - c. What happens if one of the countries does not abide by the settlement?
2. Go to the National Center for Policy Analysis Web site ([www.ncpa.org](http://www.ncpa.org)). Select "Policy Issues," then "Trade" and finally "Tariffs and other Trade Barriers" to answer the following:
  - a. List three trade barriers mentioned in the articles.
  - b. What are the reasons the trade barriers were instituted?
  - c. According to the articles, what was the result of those trade barriers?
3. Go to the home page of free trade association ASEAN ([www.aseansec.org](http://www.aseansec.org)) and answer the following questions:
  - a. What countries belong to the trade association?
  - b. When was the association established?
  - c. What is the association's stated objective?
  - d. What is the combined gross domestic product of all members?
4. Choose a country, and using *The Economist* magazine's country site ([www.economist.com/countries](http://www.economist.com/countries)), answer the following questions:
  - a. Using export and import shares, how globalized is your country?
  - b. What goods does your country export and import?
  - c. What are the probable goods for which your country has a comparative advantage?

## Answers to Margin Questions

1. The type of goods being imported has changed from primarily low-tech goods to technologically advanced goods. (480)
2. A debtor nation will not necessarily be running a trade deficit. *Debt* refers to accumulated past deficits. If a country had accumulated large deficits in the past, it could run a surplus now but still be a debtor nation. (483)
3. He should walk away because there is no basis for trade. (483)
4. The percentage of gains of trade that goes to a country depends upon the change in the price of the goods being traded. If trade led to no change in prices in a small country, then that small country would get no gains from trade. Another case in which a small country gets a small

percentage of the gains from trade would occur when its larger trading partner was producing a good with economies of scale and the small country was not. A third case is when the traders who extracted most of the surplus or gains from trade come from the larger country; then the small country would end up with few of the gains from trade. (486)

5. Three reasons for the difference are (1) gains from trade are often stealth gains, (2) comparative advantage is determined by more than wages, and (3) nations trade more than just manufactured goods. (487)
6. Two likely adjustments that will reduce the wage gap are a fall in the value of the dollar (U.S. exchange rate) and a rise in Chinese wages relative to U.S. wages. (491)
7. An inefficient customs agency can operate with the same effect as a trade restriction, and if trade restrictions would help the country, then it is possible that an inefficient customs agency could also help the country. (495)
8. True. In strategic trade bargaining it is reasonable to be unreasonable. The belief of the other bargainer that you will be unreasonable leads you to be able to extract larger

gains from trade. Of course, this leads to the logical paradox that if “unreasonable” is “reasonable,” unreasonable really is reasonable, so it is only reasonable to be reasonable. Sorting out that last statement can be left for a philosophy or logic class. (497)

9. Whether or not it is efficient for a country to maintain barriers to trade in an industry that exhibits economies of scale depends upon the marginal costs and marginal benefits of maintaining those barriers. Having significant economies of scale does mean that average costs of production will be lower at higher levels of production; however, trade restrictions might mean that the industry might be able to inflate its costs. (499)
10. Most economists have a mixed view of limited free trade associations such as NAFTA or the EU. While they see free trade as beneficial, they are concerned about the possibility that these limited trade associations will impose trade restrictions on nonmember countries. Whether the net effect of these will be positive or negative is a complicated issue. (509)