CHAPTER 10

The Political Economy of Trade Policy

In 2008, several developing countries were forced to reduce crop prices domestically. To increase domestic supply for food products, countries like Thailand, Russia, and Ukraine chose to restrict food exports. Such a trade policy was not only politically improper, as it serves only one country's interest, but also economically counter-productive. For example, farmers in Ukraine dumped around €90 million worth of grain as they harvested more than they could supply domestically, due to the export restrictions, while the world supply was insufficient. Banning exports may have reduced domestic prices, but importers had to look elsewhere for sources of supply, creating a rise in global crop prices. Thus, such policies produce more costs than benefits as higher the price, the greater the incentive to hoard, which create shifts in prices. Clearly, government policies reflect intentions that go beyond simple measures of cost and benefit.

In this chapter, we examine some of the reasons governments either should not or, at any rate, do not base their trade policy on economists' cost-benefit calculations. The examination of the forces motivating trade policy in practice continues in Chapters 11 and 12, which discuss the characteristic trade policy issues facing developing and advanced countries, respectively. The first step toward understanding actual trade policies is to ask what reasons there are for governments *not* to interfere with trade—that is, what is the case for free trade? With this question answered, arguments for intervention can be examined as challenges to the assumptions underlying the case for free trade.

LEARNING GOALS

After reading this chapter, you will be able to:

- Articulate arguments for free trade that go beyond the conventional gains from trade.
- Evaluate national welfare arguments against free trade.
- Relate the theory and evidence behind "political economy" views of trade policy.
- Explain how international negotiations and agreements have promoted world trade.
- Discuss the special issues raised by preferential trade agreements.

The Case for Free Trade

Few countries have anything approaching completely free trade. The city of Hong Kong, which is legally part of China but maintains a separate economic policy, may be the only modern economy with no tariffs or import quotas. Nonetheless, since the time of Adam Smith, economists have advocated free trade as an ideal toward which trade policy should strive. The reasons for this advocacy are not quite as simple as the idea itself. At one level, theoretical models suggest that free trade will avoid the efficiency losses associated with protection. Many economists believe free trade produces additional gains beyond the elimination of production and consumption distortions. Finally, even among economists who believe free trade is a less-than-perfect policy, many believe free trade is usually better than any other policy a government is likely to follow.

Free Trade and Efficiency

The **efficiency case for free trade** is simply the reverse of the cost-benefit analysis of a tariff. Figure 10-1 shows the basic point once again for the case of a small country that cannot influence foreign export prices. A tariff causes a net loss to the economy measured by the area of the two triangles; it does so by distorting the economic incentives of both producers and consumers. Conversely, a move to free trade eliminates these distortions and increases national welfare.

In the modern world, for reasons we will explain later in this chapter, tariff rates are generally low and import quotas relatively rare. As a result, estimates of the total costs of distortions due to tariffs and import quotas tend to be modest in size. Table 10-1 shows an estimate of the gains from a move to worldwide free trade, measured as a percentage of GDP. For the world as a whole, according to these estimates, protection costs less than 1 percent of GDP. The gains from free trade are somewhat smaller for advanced economies such as the United States and Europe and somewhat larger for poorer "developing countries."

FIGURE 10-1

The Efficiency Case for Free Trade

A trade restriction, such as a tariff, leads to production and consumption distortions.

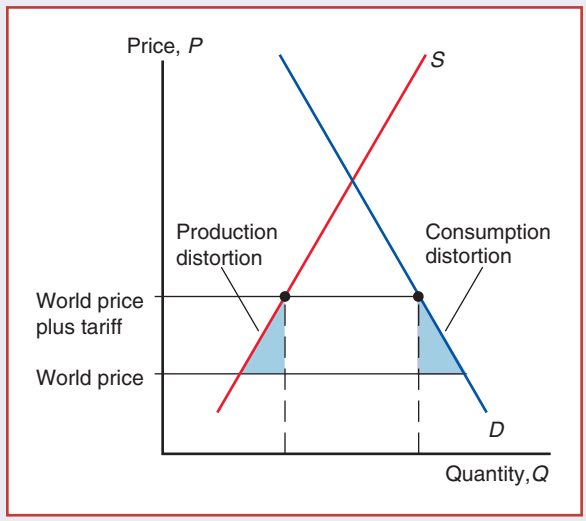


TABLE 10-1 Benefits of a Move to Worldwide Free Trade (percent of GDP)

United States	0.57
European Union	0.61
Japan	0.85
Developing countries	1.4
World	0.93

Source: William Cline, *Trade Policy and Global Poverty* (Washington, D.C.: Institute for International Economics, 2004), p. 180.

Additional Gains from Free Trade[2]

There is a widespread belief among economists that such calculations, even though they report substantial gains from free trade in some cases, do not represent the whole story. In the case of small countries in general and developing countries in particular, many economists would argue that there are important gains from free trade not accounted for in conventional cost-benefit analysis.

One kind of additional gain involves economies of scale, which were the theme of Chapters 7 and 8. Protected markets limit gains from external economies of scale by inhibiting the concentration of industries; when the economies of scale are internal, they not only fragment production internationally, but by reducing competition and raising profits, they also lead too many firms to enter the protected industry. With a proliferation of firms in narrow domestic markets, the scale of production of each firm becomes inefficient. A good example of how protection leads to inefficient scale is the case of the Argentine automobile industry, which emerged because of import restrictions. An efficient scale assembly plant should make from 80,000 to 200,000 automobiles per year, yet in 1964 the Argentine industry, which produced only 166,000 cars, had no fewer than 13 firms! Some economists argue that the need to deter excessive entry and the resulting inefficient scale of production is a reason for free trade that goes beyond the standard cost-benefit calculations.

Another argument for free trade is that by providing entrepreneurs with an incentive to seek new ways to export or compete with imports, free trade offers more opportunities for learning and innovation than are provided by a system of "managed" trade, where the government largely dictates the pattern of imports and exports. Chapter 11 discusses the experiences of less-developed countries that discovered unexpected export opportunities when they shifted from systems of import quotas and tariffs to more open trade policies.

A related form of gains from free trade involves the tendency, documented in Chapter 8, for more productive firms to engage in exports while less productive firms stay with the domestic market. This suggests that a move to free trade makes the economy as a whole more efficient by shifting the industrial mix toward firms with higher productivity.

These additional arguments for free trade are difficult to quantify, although some economists have tried to do so. In general, models that try to take economies of scale and imperfect competition into account yield bigger numbers than those reported

[2]The additional gains from free trade discussed here are sometimes referred to as "dynamic" gains because increased competition and innovation may need more time to take effect than the elimination of production and consumption distortions.

in Table 10-1. However, there is no consensus about just how much bigger the gains from free trade really are. If the additional gains from free trade are as large as some economists believe, the costs of distorting trade with tariffs, quotas, export subsidies, and so on are correspondingly larger than the conventional cost-benefit analysis measures.

Rent Seeking

When imports are restricted with a quota rather than a tariff, the cost is sometimes magnified by a process known as **rent seeking.** Recall from Chapter 9 that to enforce an import quota, a government has to issue import licenses and economic rents accrue to whoever receives these licenses. In some cases, individuals and companies incur substantial costs—in effect, wasting some of the economy's productive resources—in an effort to get import licenses.

A famous example involved India in the 1950s and 1960s. At that time, Indian companies were allocated the right to buy imported inputs in proportion to their installed capacity. This created an incentive to overinvest—for example, a steel company might build more blast furnaces than it expected to need simply because this would give it a larger number of import licenses. The resources used to build this idle capacity represented a cost of protection over and above the costs shown in Figure 10-1.

A more modern and unusual example of rent seeking involves U.S. imports of canned tuna. Tuna is protected by a "tariff-rate quota": A small quantity of tuna (4.8 percent of U.S. consumption) can be imported at a low tariff rate, 6 percent, but any imports beyond that level face a 12.5 percent tariff. For some reason, there are no import licenses; each year, the right to import tuna at the low tariff rate is assigned on a first come, first served basis. The result is a costly race to get tuna into the United States as quickly as possible. Here's how the U.S. International Trade Commission describes the process of rent seeking:

> Importers attempt to qualify for the largest share of the TRQ [tariff-rate quota] as possible by stockpiling large quantities of canned tuna in Customs-bonded warehouses in late December and releasing the warehoused product as soon as the calendar year begins.

The money importers spend on warehousing lots of tuna in December represents a loss to the U.S. economy over and above the standard costs of protection.

Political Argument for Free Trade

A **political argument for free trade** reflects the fact that a political commitment to free trade may be a good idea in practice even though there may be better policies in principle. Economists often argue that trade policies in practice are dominated by special-interest politics rather than by consideration of national costs and benefits. Economists can sometimes show that in theory, a selective set of tariffs and export subsidies could increase national welfare, but that in reality, any government agency attempting to pursue a sophisticated program of intervention in trade would probably be captured by interest groups and converted into a device for redistributing income to politically influential sectors. If this argument is correct, it may be better to advocate free trade without exceptions even though on purely economic grounds, free trade may not always be the best conceivable policy.

The three arguments outlined in the previous section probably represent the standard view of most international economists, at least those in the United States:

1. The conventionally measured costs of deviating from free trade are large.
2. There are other benefits from free trade that add to the costs of protectionist policies.
3. Any attempt to pursue sophisticated deviations from free trade will be subverted by the political process.

Nonetheless, there are intellectually respectable arguments for deviating from free trade, and these arguments deserve a fair hearing.

National Welfare Arguments against Free Trade

Most tariffs, import quotas, and other trade policy measures are undertaken primarily to protect the income of particular interest groups. Politicians often claim, however, that the policies are being undertaken in the interest of the nation as a whole, and sometimes they are even telling the truth. Although economists frequently argue that deviations from free trade reduce national welfare, there are some theoretical grounds for believing that activist trade policies can sometimes increase the welfare of the nation as a whole.

The Terms of Trade Argument for a Tariff

One argument for deviating from free trade comes directly out of cost-benefit analysis: For a large country that is able to affect the prices of foreign exporters, a tariff lowers the price of imports and thus generates a terms of trade benefit. This benefit must be set against the costs of the tariff, which arise because the tariff distorts production and consumption incentives. It is possible, however, that in some cases the terms of trade benefits of a tariff outweigh its costs, so there is a **terms of trade argument for a tariff.**

The appendix to this chapter shows that for a sufficiently small tariff, the terms of trade benefits must outweigh the costs. Thus, at small tariff rates, a large country's welfare is higher than with free trade (Figure 10-2). As the tariff rate is increased, however, the costs eventually begin to grow more rapidly than the benefits and the curve relating national welfare to the tariff rate turns down. A tariff rate that completely prohibits trade (t_p in Figure 10-2) leaves the country worse off than with free trade; further increases in the tariff rate beyond t_p have no effect, so the curve flattens out.

At point 1 on the curve in Figure 10-2, corresponding to the tariff rate t_o, national welfare is maximized. The tariff rate t_o that maximizes national welfare is the **optimum tariff.** (By convention, the phrase *optimum tariff* is usually used to refer to the tariff justified by a terms of trade argument rather than to the best tariff given all possible considerations.) The optimum tariff rate is always positive but less than the prohibitive rate (t_p) that would eliminate all imports.

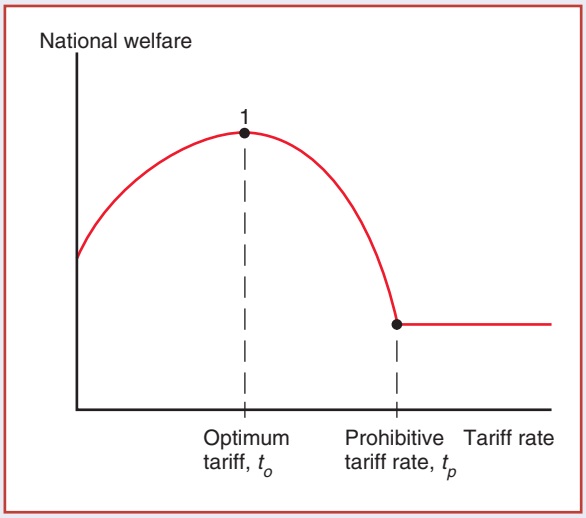
What policy would the terms of trade argument dictate for *export* sectors? Since an export subsidy *worsens* the terms of trade, and therefore unambiguously reduces national welfare, the optimal policy in export sectors must be a negative subsidy, that is, a *tax* on exports that raises the price of exports to foreigners. Like the optimum tariff, the optimum export tax is always positive but less than the prohibitive tax that would eliminate exports completely.

The policy of Saudi Arabia and other oil exporters has been to tax their exports of oil, raising the price to the rest of the world. Although oil prices have fluctuated up and down over the years, it is hard to argue that Saudi Arabia would have been better off under free trade.

FIGURE 10-2

The Optimum Tariff

For a large country, there is an optimum tariff t_o at which the marginal gain from improved terms of trade just equals the marginal efficiency loss from production and consumption distortion.



The terms of trade argument against free trade has some important limitations, however. Most small countries have very little ability to affect the world prices of either their imports or their exports, and thus the terms of trade argument is of little practical importance to them. For big countries like the United States, the problem is that the terms of trade argument amounts to an argument for using national monopoly power to extract gains at other countries' expense. The United States could surely do this to some extent, but such a predatory policy would probably bring retaliation from other large countries. A cycle of retaliatory trade moves would, in turn, undermine the attempts at international trade policy coordination described later in this chapter.

The terms of trade argument against free trade, then, is intellectually impeccable but of doubtful usefulness. In practice, it is more often emphasized by economists as a theoretical proposition than actually used by governments as a justification for trade policy.

The Domestic Market Failure Argument against Free Trade

Leaving aside the issue of the terms of trade, the basic theoretical case for free trade rested on cost-benefit analysis using the concepts of consumer and producer surplus. Many economists have made a case against free trade based on the counterargument that these concepts, producer surplus in particular, do not properly measure costs and benefits.

Why might producer surplus not properly measure the benefits of producing a good? We consider a variety of reasons in Chapters 11 and 12: These include the possibility that the labor used in a sector would otherwise be unemployed or underemployed, the existence of defects in the capital or labor markets that prevent resources from being transferred as rapidly as they should be to sectors that yield high returns, and the possibility of technological spillovers from industries that are new or particularly innovative. These can all be classified under the general heading of **domestic market failures.** That is, in each of these examples, some market in the country is not doing its job right—the labor market is not clearing, the capital market is not allocating resources efficiently, and so on.

Suppose, for example, that the production of some good yields experience that will improve the technology of the economy as a whole but that the firms in the sector cannot appropriate this benefit and therefore do not take it into account in deciding how

much to produce. Then there is a **marginal social benefit** to additional production that is not captured by the producer surplus measure. This marginal social benefit can serve as a justification for tariffs or other trade policies.

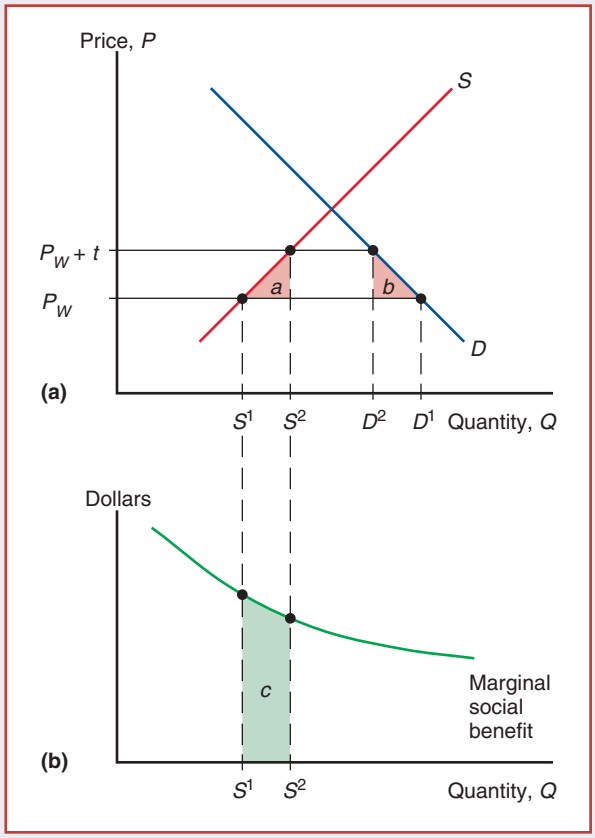
Figure 10-3 illustrates the domestic market failure argument against free trade. Figure 10-3a shows the conventional cost-benefit analysis of a tariff for a small country (which rules out terms of trade effects). Figure 10-3b shows the marginal benefit from production that is not taken account of by the producer surplus measure. The figure shows the effects of a tariff that raises the domestic price from P_W to $P_W + t$. Production rises from S^1 to S^2, with a resulting production distortion indicated by the area labeled a. Consumption falls from D^1 to D^2, with a resulting consumption distortion indicated by the area b. If we considered only consumer and producer surplus, we would find that the costs of the tariff exceed its benefits. Figure 10-3b shows, however, that this calculation overlooks an additional benefit that may make the tariff preferable to free trade. The increase in production yields a social benefit that may be measured by the area under the marginal social benefit curve from S^1 to S^2, indicated by c. In fact, by an argument similar to that in the terms of trade case, we can show that if the tariff is small enough, the area c must always exceed the area $a + b$ and that there is some welfare-maximizing tariff that yields a level of social welfare higher than that of free trade.

The domestic market failure argument against free trade is a particular case of a more general concept known in economics as the **theory of the second best.** This theory states that a hands-off policy is desirable in any one market only if all other markets

FIGURE 10-3

The Domestic Market Failure Argument for a Tariff

If production of a good yields extra social benefits [measured in panel (*b*) by area *c*] not captured as producer surplus, a tariff can increase welfare.



are working properly. If they are not, a government intervention that appears to distort incentives in one market may actually increase welfare by offsetting the consequences of market failures elsewhere. For example, if the labor market is malfunctioning and fails to deliver full employment, a policy of subsidizing labor-intensive industries, which would be undesirable in a full-employment economy, might turn out to be a good idea. It would be better to fix the labor market by, for example, making wages more flexible, but if for some reason this cannot be done, intervening in other markets may be a "second-best" way of alleviating the problem.

When economists apply the theory of the second best to trade policy, they argue that imperfections in the *internal* functioning of an economy may justify interfering in its external economic relations. This argument accepts that international trade is not the source of the problem but suggests nonetheless that trade policy can provide at least a partial solution.

How Convincing Is the Market Failure Argument?

When they were first proposed, market failure arguments for protection seemed to undermine much of the case for free trade. After all, who would want to argue that the real economies we live in are free from market failures? In poorer nations, in particular, market imperfections seem to be legion. For example, unemployment and massive differences between rural and urban wage rates are present in many less-developed countries (Chapter 11). The evidence that markets work badly is less glaring in advanced countries, but it is easy to develop hypotheses suggesting major market failures there as well—for example, the inability of innovative firms to reap the full rewards of their innovations. How can we defend free trade given the likelihood of interventions that could raise national welfare?

There are two lines of defense for free trade: The first argues that domestic market failures should be corrected by domestic policies aimed directly at the problems' sources; the second argues that economists cannot diagnose market failure well enough to prescribe policy.

The point that domestic market failure calls for domestic policy changes, not international trade policies, can be made by cost-benefit analysis modified to account for any unmeasured marginal social benefits. Figure 10-3 showed that a tariff might raise welfare, despite the production and consumption distortions it causes, because it leads to additional production that yields social benefits. If the same production increase were achieved via a production subsidy rather than a tariff, however, the price to consumers would not increase and the consumption loss b would be avoided. In other words, by targeting directly the particular activity we want to encourage, a production subsidy would avoid some of the side costs associated with a tariff.

This example illustrates a general principle when dealing with market failures: It is always preferable to deal with market failures as directly as possible because indirect policy responses lead to unintended distortions of incentives elsewhere in the economy. Thus, trade policies justified by domestic market failure are never the most efficient response; they are always "second-best" rather than "first-best" policies.

This insight has important implications for trade policy makers: Any proposed trade policy should always be compared with a purely domestic policy aimed at correcting the same problem. If the domestic policy appears too costly or has undesirable side effects, the trade policy is almost surely even less desirable—even though the costs are less apparent.

In the European Union (EU), for example, banana producers were guaranteed a price up to a specified ceiling of banana production until 2007. Only around 16 percent of the total EU consumption was produced in the EU. The remaining consumption was

exported from Latin American, African, Caribbean, and Pacific (ACP) countries. To support economic growth for some ACP countries, a large import quota was provided to access the EU market as a support for their economies.

In 1993, the EU had imposed tariffs on banana imports from non-ACP countries. However, the EU compensatory aid policy actually required large subsidy payments, which influenced the central government's budget deficit and required a tax increase. Furthermore, workers in the EU are among the highest-paid workers in the agriculture sector. Thus, the import quota provided to the ACP countries and gains received by the ACP exporters came at a high cost both to Latin American exporters and to EU consumers who had a distortion to consumer choice by paying a higher price. However, this cost came in the form of higher prices rather than direct government expenditures. Following several WTO disputes and subsequent reforms of its banana trade regime, the compensatory aid system for the EU farmers was withdrawn.

Critics of the domestic market failure justification for protection argue that this case is typical: Most deviations from free trade are adopted not because their benefits exceed their costs but because the public fails to understand their true costs. Comparing the costs of trade policy with alternative domestic policies is thus a useful way to focus attention on just how large these costs are.

The second defense of free trade is that because market failures are typically hard to identify precisely, it is difficult to be sure what the appropriate policy response should be. For example, suppose there is urban unemployment in a less-developed country; what is the appropriate policy? One hypothesis (examined more closely in Chapter 11) says that a tariff to protect urban industrial sectors will draw the unemployed into productive work and thus generate social benefits that would more than compensate for the tariff's costs. However, another hypothesis says that this policy will encourage so much migration to urban areas that unemployment will, in fact, increase. It is difficult to say which of these hypotheses is right. While economic theory says much about the working of markets that function properly, it provides much less guidance on those that don't; there are many ways in which markets can malfunction, and the choice of a second-best policy depends on the details of the market failure.

The difficulty of ascertaining the correct second-best trade policy to follow reinforces the political argument for free trade mentioned earlier. If trade policy experts are highly uncertain about how policy should deviate from free trade and disagree among themselves, it is all too easy for trade policy to ignore national welfare altogether and become dominated by special-interest politics. If the market failures are not too bad to start with, a commitment to free trade might in the end be a better policy than opening a Pandora's box of a more flexible approach.

This is, however, a judgment about politics rather than about economics. We need to realize that economic theory does *not* provide a dogmatic defense of free trade, even though it is often accused of doing so.

Income Distribution and Trade Policy

The discussion so far has focused on national welfare arguments for and against tariff policy. It is appropriate to start there, both because a distinction between national welfare and the welfare of particular groups helps to clarify the issues and because the advocates of trade policies usually claim that the policies will benefit the nation as a whole. When looking at the actual politics of trade policy, however, it becomes necessary to deal with the reality that there is no such thing as national welfare; there are only the desires of individuals, which get more or less imperfectly reflected in the objectives of government.

How do the preferences of individuals get added up to produce the trade policy we actually see? There is no single, generally accepted answer, but there has been a growing body of economic analysis that explores models in which governments are assumed to be trying to maximize political success rather than an abstract measure of national welfare.

Electoral Competition

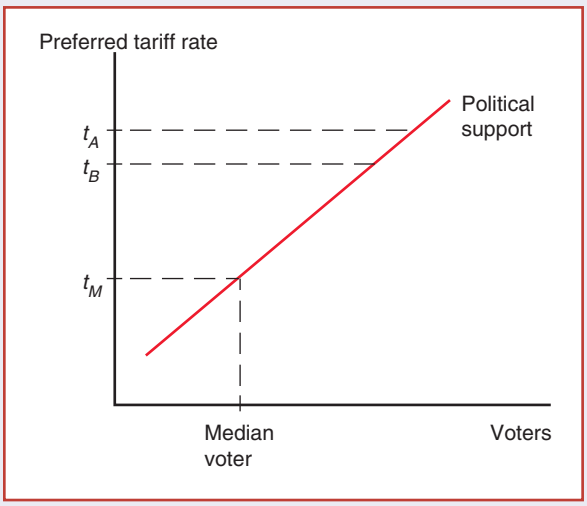
Political scientists have long used a simple model of competition among political parties to show how the preferences of voters might be reflected in actual policies.[3] The model runs as follows: Suppose two competing parties are willing to promise whatever will enable each to win the next election, and suppose policy can be described along a single dimension, say, the level of the tariff rate. And finally, suppose voters differ in the policies they prefer. For example, imagine a country exports skill-intensive goods and imports labor-intensive goods. Then voters with high skill levels will favor low tariff rates, but voters with low skills will be better off if the country imposes a high tariff (because of the Stolper-Samuelson effect discussed in Chapter 5). We can therefore think of lining up all the voters in the order of the tariff rate they prefer, with the voters who favor the lowest rate on the left and those who favor the highest rate on the right.

What policies will the two parties then promise to follow? The answer is that they will try to find the middle ground—specifically, both will tend to converge on the tariff rate preferred by the **median voter,** the voter who is exactly halfway up the lineup. To see why, consider Figure 10-4. In the figure, voters are lined up by their preferred tariff rate, which is shown by the hypothetical upward-sloping curve; t_M is the median voter's preferred rate. Now suppose one of the parties has proposed the tariff rate t_A, which is considerably above that preferred by the median voter. Then the other party could propose the slightly lower rate, t_B, and its program would be preferred by almost all voters who want a lower tariff, that is, by a majority. In other words, it would always be in the political interest of a party to undercut any tariff proposal that is higher than what the median voter wants.

FIGURE 10-4

Political Competition

Voters are lined up in order of the tariff rate they prefer. If one party proposes a high tariff of t_A, the other party can win over most of the voters by offering a somewhat lower tariff, t_B. This political competition drives both parties to propose tariffs close to t_M, the tariff preferred by the median voter.



[3]See Anthony Downs, *An Economic Theory of Democracy* (Washington, D.C.: Brookings Institution, 1957).

Similar reasoning shows that self-interested politicians will always want to promise a higher tariff if their opponents propose one that is lower than the tariff the median voter prefers. So both parties end up proposing a tariff close to the one the median voter wants.

Political scientists have modified this simple model in a number of ways. For example, some analysts stress the importance of party activists in getting out the vote; since these activists are often ideologically motivated, the need for their support may prevent parties from being quite as cynical, or adopting platforms quite as indistinguishable, as this model suggests. Nonetheless, the median voter model of electoral competition has been very helpful as a way of thinking about how political decisions get made in the real world, where the effects of policy on income distribution may be more important than their effects on efficiency.

One area in which the median voter model does not seem to work very well, however, is trade policy! In fact, it makes an almost precisely wrong prediction. According to this model, a policy should be chosen on the basis of how many voters it pleases: A policy that inflicts large losses on a few people but benefits a large number of people should be a political winner; a policy that inflicts widespread losses but helps a small group should be a loser. In fact, however, protectionist policies are more likely to fit the latter than the former description. For example, the U.S. dairy industry is protected from foreign competition by an elaborate system of tariffs and quotas. These restrictions impose losses on just about every family in America while providing much smaller benefits to a dairy industry that employs only about 0.1 percent of the nation's work force. How can such a thing happen politically?

Collective Action

In a now famous book, economist Mancur Olson pointed out that political activity on behalf of a group is a public good; that is, the benefits of such activity accrue to all members of the group, not just the individual who performs the activity.[4] Suppose a consumer writes a letter to his congressperson demanding a lower tariff rate on his favorite imported good, and this letter helps change the congressperson's vote so that the lower tariff is approved. Then all consumers who buy the good benefit from lower prices, even if they did not bother to write letters.

This public good character of politics means policies that impose large losses in total—but small losses on any individual—may not face any effective opposition. Again, take the example of dairy protectionism. This policy imposes a cost on a typical American family of approximately $3 per year. Should a consumer lobby his or her congressperson to remove the policy? From the point of view of individual self-interest, surely not. Since one letter has only a marginal effect on the policy, the individual payoff from such a letter is probably not worth the paper it is written on, let alone the postage stamp. (Indeed, it is surely not worth even learning of the policy's existence unless you are interested in such things for their own sake.) And yet, if a million voters were to write demanding an end to dairy protection, it would surely be repealed, bringing benefits to consumers significantly exceeding the costs of sending the letters. In Olson's phrase, there is a problem of **collective action:** While it is in the interests of the group as a whole to press for favorable policies, it is not in any individual's interest to do so.

The problem of collective action can best be overcome when a group is small (so that each individual reaps a significant share of the benefits of favorable policies)

[4]Mancur Olson, *The Logic of Collective Action* (Cambridge: Harvard University Press, 1965).

POLITICIANS FOR SALE: EVIDENCE FROM THE 1990s

As we explain in the text, it's hard to make sense of actual trade policy if you assume governments are genuinely trying to maximize national welfare. On the other hand, actual trade policy does make sense if you assume special-interest groups can buy influence. But is there any direct evidence that politicians really are for sale?

Votes by the U.S. Congress on some crucial trade issues in the 1990s offer useful test cases. The reason is that U.S. campaign finance laws require politicians to reveal the amounts and sources of campaign contributions; this disclosure allows economists and political scientists to look for any relationship between those contributions and actual votes.

A 1998 study by Robert Baldwin and Christopher Magee* focuses on two crucial votes: the 1993 vote on the North American Free Trade Agreement (generally known as NAFTA, and described at greater length below), and the 1994 vote ratifying the latest agreement under the General Agreement on Tariffs and Trade (generally known as the GATT, also described below). Both votes were bitterly fought, largely along business-versus-labor lines—that is, business groups were strongly in favor; labor unions were strongly against. In both cases, the free trade position backed by business won; in the NAFTA vote, the outcome was in doubt until the last minute, and the margin of victory—34 votes in the House of Representatives—was not very large.

Baldwin and Magee estimate an econometric model of congressional votes that controls for such factors as the economic characteristics of members' districts as well as business and labor contributions to the congressional representative. They find a strong impact of money on the voting pattern. One way to assess this impact is to run a series of "counterfactuals": How different would the overall vote have been if there had been no business contributions, no labor contributions, or no contributions of any type at all?

The following table summarizes the results. The first row shows how many representatives voted in favor of each bill; bear in mind that passage required at least 214 votes. The second row shows the number of votes predicted by Baldwin and Magee's equations: Their model gets it right in the case of NAFTA but overpredicts by a few votes in the case of the GATT. The third row shows how many votes each bill would have received, according to the model, in the absence of labor contributions; the next row shows how many representatives would have voted in favor in the absence of business contributions. The last row shows how many would have voted in favor if both business and labor contributions had been absent.

	Vote for NAFTA	Vote for GATT
Actual	229	283
Predicted by model	229	290
Without labor contributions	291	346
Without business contributions	195	257
Without any contributions	256	323

If these estimates are correct, contributions had big impacts on the vote totals. In the case of NAFTA, labor contributions induced 62 representatives who would otherwise have supported the bill to vote against; business contributions moved 34 representatives the other way. If there had been no business contributions, according to this estimate, NAFTA would have received only 195 votes—not enough for passage.

On the other hand, given that both sides were making contributions, their effects tended to cancel out. Baldwin and Magee's estimates suggest that in the absence of contributions from either labor or business, both NAFTA and the GATT would have passed anyway.

It's probably wrong to emphasize the fact that in these particular cases, contributions from the two sides did not change the final outcome. The really important result is that politicians are, indeed, for sale—which means that theories of trade policy that emphasize special interests are on the right track.

*Robert E. Baldwin and Christopher S. Magee, "Is Trade Policy for Sale? Congressional Voting on Recent Trade Bills," Working Paper 6376, National Bureau of Economic Research, January 1998.

and/or well organized (so that members of the group can be mobilized to act in their collective interest). The reason that a policy like dairy protection can happen is that dairy producers form a relatively small, well-organized group that is well aware of the size of the implicit subsidy members receive, while dairy consumers are a huge population that does not even perceive itself as an interest group. The problem of collective action, then, can explain why policies that not only seem to produce more costs than benefits but that also seem to hurt far more voters than they help can nonetheless be adopted.

Modeling the Political Process

While the logic of collective action has long been invoked by economists to explain seemingly irrational trade policies, the theory is somewhat vague on the ways in which organized interest groups actually go about influencing policy. A growing body of analysis tries to fill this gap with simplified models of the political process.[5]

The starting point of this analysis is obvious: While politicians may win elections partly because they advocate popular policies, a successful campaign also requires money for advertising, polling, and so on. It may therefore be in the interest of a politician to adopt positions against the interest of the typical voter if the politician is offered a sufficiently large financial contribution to do so; the extra money may be worth more votes than those lost by taking the unpopular position.

Modern models of the political economy of trade policy therefore envision a sort of auction in which interest groups "buy" policies by offering contributions contingent on the policies followed by the government. Politicians will not ignore overall welfare, but they will be willing to trade off some reduction in the welfare of voters in return for a larger campaign fund. As a result, well-organized groups—that is, groups that are able to overcome the problem of collective action—will be able to get policies that favor their interests at the expense of the public as a whole.

Who Gets Protected?

As a practical matter, which industries actually get protected from import competition? Many developing countries traditionally have protected a wide range of manufacturing, in a policy known as import-substituting industrialization. We discuss this policy and the reasons why it has become considerably less popular in recent years in Chapter 11. The range of protectionism in advanced countries is much narrower; indeed, much protectionism is concentrated in just two sectors: agriculture and clothing.

Agriculture There are not many farmers in modern economies—in the United States, agriculture employs only about 2 million workers out of a labor force of more than 130 million. Farmers are, however, usually a well-organized and politically powerful group that has been able in many cases to achieve very high rates of effective protection. We discussed Europe's Common Agricultural Policy in Chapter 9; the export subsidies in that program mean that a number of agricultural products sell at two or three times world prices. In Japan, the government has traditionally banned imports of rice, thus driving up internal prices of the country's staple food to more than five times as high as the world price.

[5]See, in particular, Gene Grossman and Elhanan Helpman, "Protection for Sale," *American Economic Review* 89 (September 1994), pp. 833–850.

This ban was slightly relaxed in the face of bad harvests in the mid-1990s, but in late 1998—over the protests of other nations, including the United States—Japan imposed a 1,000 percent tariff on rice imports.

The United States is generally a food exporter, which means that tariffs or import quotas cannot raise prices. (Sugar and dairy products are exceptions.) While farmers have received considerable subsidies from the federal government, the government's reluctance to pay money out directly (as opposed to imposing more or less hidden costs on consumers) has limited the size of these subsidies. As a result of the government's reluctance, much of the protection in the United States is concentrated on the other major protected sector: the clothing industry.

Clothing The clothing industry consists of two parts: textiles (spinning and weaving of cloth) and apparel (assembly of cloth into clothing). Both industries, but especially the apparel industry, historically have been protected heavily through both tariffs and import quotas. Until 2005, they were subject to the Multi-Fiber Arrangement (MFA), which set both export and import quotas for a large number of countries.

Apparel production has two key features. It is labor-intensive: A worker needs relatively little capital, in some cases no more than a sewing machine, and can do the job without extensive formal education. And the technology is relatively simple: There is no great difficulty in transferring the technology even to very poor countries. As a result, the apparel industry is one in which low-wage nations have a strong comparative advantage and high-wage countries have a strong comparative disadvantage. It is also traditionally a well-organized sector in advanced countries; for example, many American apparel workers have long been represented by the International Ladies' Garment Worker's Union.

Later in this chapter, we'll describe how trade negotiations work; one of the most important provisions of the Uruguay Round trade agreements, signed in 1994, was the phaseout of the MFA, which took place at the end of 2004. Although import quotas were reimposed on China in 2005, those quotas have since phased out. At this point, trade in clothing no longer faces many restrictions.

Table 10-2 shows just how important clothing used to be in U.S. protectionism, and how much difference the end of the restrictions on clothing makes. In 2002, with the MFA still in effect, clothing restrictions were responsible for more than 80 percent of the overall welfare costs of U.S. protectionism. Because the MFA assigned import licenses to exporting countries, most of the welfare cost to the United States came not from distortion of production and consumption but from the transfer of quota rents to foreigners.

With the expiration of the MFA, the costs of clothing protection and hence the overall costs of U.S. protection fell sharply.

TABLE 10-2 Welfare Costs of U.S. Protection ($ billion)

	2002 Estimate	2015
Total	14.1	2.6
Textiles and apparel	11.8	0.5

Source: U.S. International Trade Commission.

International Negotiations and Trade Policy

Our discussion of the politics of trade policy has not been very encouraging. We have argued that it is difficult to devise trade policies that raise national welfare and that trade policy is often dominated by interest group politics. "Horror stories" of trade policies that produce costs that greatly exceed any conceivable benefits abound; it is thus easy to be highly cynical about the practical side of trade theory.

Yet, in fact, from the mid-1930s until about 1980, the United States and other advanced countries gradually removed tariffs and some other barriers to trade, and by so doing aided a rapid increase in international integration. Figure 10-5 shows the average tariff rates on imports in the United Kingdom, France, and the United States from 1900 to 2000.[6] Most economists believe, especially in the case of the United States, that this progressive trade liberalization was highly beneficial. Given what we have said about the politics of trade policy, however, how was this removal of tariffs politically possible?

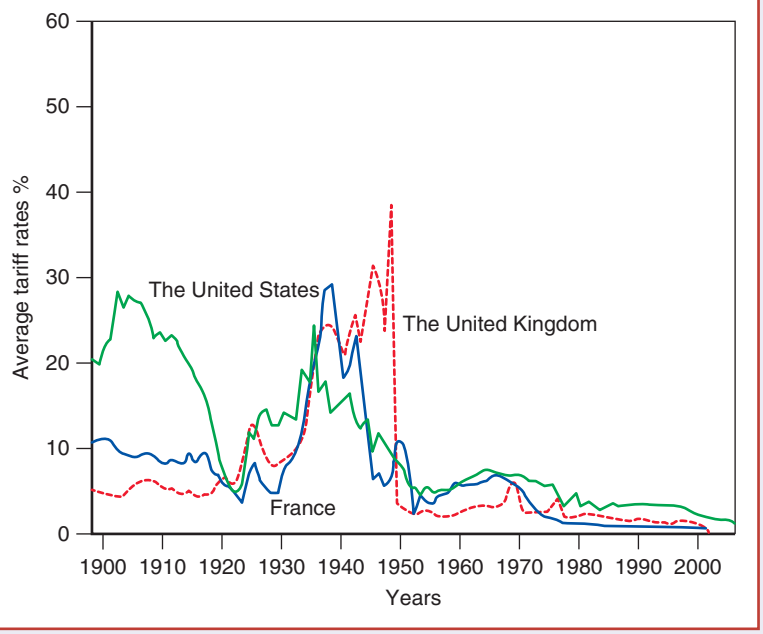


FIGURE 10-5

Average Tariff Rates on Total Imports (France, U.K., U.S.)

[6]Measures of changes in the average rate of protection can be problematic because the composition of imports changes—partly because of tariff rates themselves. Imagine, for example, a country that imposes a tariff on some goods that is so high that it shuts off all imports of these goods. Then the average tariff rate on goods actually imported will be zero! Figure 10-5 has been adapted from Imlah, A. (1958), Economic Elements of the Pax Britannica, New York: Russell and Russell, and the Agricultural Distortions Working Paper 79, May 2009, www.worldbank.org/agdistortions.

At least part of the answer is that the great postwar liberalization of trade was achieved through **international negotiation.** That is, governments agreed to engage in mutual tariff reduction. These agreements linked reduced protection for each country's import-competing industries to reduced protection by other countries against that country's export industries. Such a linkage, as we will now argue, helps to offset some of the political difficulties that would otherwise prevent countries from adopting good trade policies.

The Advantages of Negotiation

There are at least two reasons why it is easier to lower tariffs as part of a mutual agreement than to do so as a unilateral policy. First, a mutual agreement helps mobilize support for freer trade. Second, negotiated agreements on trade can help governments avoid getting caught in destructive trade wars.

The effect of international negotiations on support for freer trade is straightforward. We have noted that import-competing producers are usually better informed and organized than consumers. International negotiations can bring in domestic exporters as a counterweight. The United States and Japan, for example, could reach an agreement in which the United States refrains from imposing import quotas to protect some of its manufacturers from Japanese competition in return for removal of Japanese barriers against U.S. exports of agricultural or high-technology products to Japan. U.S. consumers might not be effective politically in opposing such import quotas on foreign goods, even though these quotas may be costly to them, but exporters who want access to foreign markets may, through their lobbying for mutual elimination of import quotas, protect consumer interests.

International negotiation can also help to avoid a **trade war.** The concept of a trade war can best be illustrated with a stylized example.

Imagine there are only two countries in the world, the United States and Japan, and these countries have only two policy choices: free trade or protection. Suppose these are unusually clear-headed governments that can assign definite numerical values to their satisfaction with any particular policy outcome (Table 10-3).

The particular values of the payoffs given in the table represent two assumptions. First, we assume that each country's government would choose protection if it could take the other country's policy as given. That is, whichever policy Japan chooses, the U.S. government is better off with protection. This assumption is by no means necessarily true; many economists would argue that free trade is the best policy for the nation, regardless of what other governments do. Governments, however, must act not only

TABLE 10-3 The Problem of Trade Warfare

U.S. \ Japan	*Free trade*	*Protection*
Free trade	10, 10	20, –10
Protection	–10, 20	–5, –5

in the public interest but also in their own political interest. For the reasons discussed in the previous section, governments often find it politically difficult to avoid giving protection to some industries.

The second assumption built into Table 10-3 is that even though each government acting individually would be better off with protection, they would both be better off if both chose free trade. That is, the U.S. government has more to gain from an opening of Japanese markets than it has to lose from opening its own markets, and the same is true for Japan. We can justify this assumption simply by appealing to the gains from trade.

To those who have studied game theory, this situation is known as a **Prisoner's dilemma.** Each government, making the best decision for itself, will choose to protect. These choices lead to the outcome in the lower right box of the table. Yet both governments are better off if neither protects: The upper left box of the table yields a payoff that is higher for both countries. By acting unilaterally in what appear to be their best interests, the governments fail to achieve the best outcome possible. If the countries act unilaterally to protect, there is a trade war that leaves both worse off. Trade wars are not as serious as shooting wars, but avoiding them is similar to the problem of avoiding armed conflict or arms races.

Obviously, Japan and the United States need to establish an agreement (such as a treaty) to refrain from protection. Each government will be better off if it limits its own freedom of action, provided the other country limits its freedom of action as well. A treaty can make everyone better off.

This is a highly simplified example. In the real world there are both many countries and many gradations of trade policy between free trade and complete protection against imports. Nonetheless, the example suggests both that there is a need to coordinate trade policies through international agreements and that such agreements can actually make a difference. Indeed, the current system of international trade is built around a series of international agreements.

International Trade Agreements: A Brief History

Internationally coordinated tariff reduction as a trade policy dates back to the 1930s. In 1930, the United States passed a remarkably irresponsible tariff law, the Smoot-Hawley Act. Under this act, tariff rates rose steeply and U.S. trade fell sharply; some economists argue that the Smoot-Hawley Act helped deepen the Great Depression. Within a few years after the act's passage, the U.S. administration concluded that tariffs needed to be reduced, but this posed serious problems of political coalition building. Any tariff reduction would be opposed by those members of Congress whose districts contained firms producing competing goods, while the benefits would be so widely diffused that few in Congress could be mobilized on the other side. To reduce tariff rates, tariff reduction needed to be linked to some concrete benefits for exporters. The initial solution to this political problem was bilateral tariff negotiations. The United States would approach some country that was a major exporter of some good—say, a sugar exporter—and offer to lower tariffs on sugar if that country would lower its tariffs on some U.S. exports. The attractiveness of the deal to U.S. exporters would help counter the political weight of the sugar interest. In the foreign country, the attractiveness of the deal to foreign sugar exporters would balance the political influence of import-competing interests. Such bilateral negotiations helped reduce the average duty on U.S. imports from 59 percent in 1932 to 25 percent shortly after World War II.

Bilateral negotiations, however, do not take full advantage of international coordination. For one thing, benefits from a bilateral negotiation may "spill over" to parties

that have not made any concessions. For example, if the United States reduces tariffs on coffee as a result of a deal with Brazil, Colombia will also gain from a higher world coffee price. Furthermore, some advantageous deals may inherently involve more than two partners: The United States sells more to Europe, Europe sells more to Saudi Arabia, Saudi Arabia sells more to Japan, and Japan sells more to the United States. Thus, the next step in international trade liberalization was to proceed to multilateral negotiations involving a number of countries.

Multilateral negotiations began soon after the end of World War II. Originally, diplomats from the victorious Allies imagined such negotiations would take place under the auspices of a proposed body called the International Trade Organization, paralleling the International Monetary Fund and the World Bank (described in the second half of this book). In 1947, unwilling to wait until the ITO was in place, a group of 23 countries began trade negotiations under a provisional set of rules that became known as the **General Agreement on Tariffs and Trade,** or **GATT.** As it turned out, the ITO was never established because it ran into severe political opposition, especially in the United States. So the provisional agreement ended up governing world trade for the next 48 years.

Officially, the GATT was an agreement, not an organization—the countries participating in the agreement were officially designated as "contracting parties," not members. In practice, the GATT did maintain a permanent "secretariat" in Geneva, which everyone referred to as "the GATT." In 1995, the **World Trade Organization,** or **WTO,** was established, finally creating the formal organization envisaged 50 years earlier. However, the GATT rules remain in force, and the basic logic of the system remains the same.

One way to think about the GATT-WTO approach to trade is to use a mechanical analogy: It's like a device designed to push a heavy object, the world economy, gradually up a slope—the path to free trade. To get there requires both "levers" to push the object in the right direction and "ratchets" to prevent backsliding.

The principal ratchet in the system is the process of **binding.** When a tariff rate is "bound," the country imposing the tariff agrees not to raise the rate in the future. At present, almost all tariff rates in developed countries are bound, as are about three-quarters of the rates in developing countries. There is, however, some wiggle room in bound tariffs: A country can raise a tariff if it gets the agreement of other countries, which usually means providing compensation by reducing other tariffs. In practice, binding has been highly effective, with very little backsliding in tariffs over the past half-century.

In addition to binding tariffs, the GATT-WTO system generally tries to prevent nontariff interventions in trade. Export subsidies are not allowed, with one big exception: Back at the GATT's inception, the United States insisted on a loophole for agricultural exports, which has since been exploited on a large scale by the European Union.

As we pointed out earlier in this chapter, most of the actual cost of protection in the United States comes from import quotas. The GATT-WTO system in effect "grandfathers" existing import quotas, though there has been an ongoing and often successful effort to remove such quotas or convert them to tariffs. New import quotas are generally forbidden except as temporary measures to deal with "market disruption," an undefined phrase usually interpreted to mean surges of imports that threaten to put a domestic sector suddenly out of business.

The lever used to make forward progress is the somewhat stylized process known as a **trade round,** in which a large group of countries get together to negotiate a set of tariff reductions and other measures to liberalize trade. Eight trade rounds have been

completed since 1947, the last of which—the Uruguay Round, completed in 1994—established the WTO. In 2001, a meeting in the Persian Gulf city of Doha inaugurated a ninth round, but despite many years of negotiations this never led to an agreement. We'll discuss the reasons for this failure later in this chapter.

The first five trade rounds under the GATT took the form of "parallel" bilateral negotiations, where each country negotiates pairwise with a number of countries at once. For example, if Germany were to offer a tariff reduction that would benefit both France and Italy, it could ask both of them for reciprocal concessions. The ability to make more extensive deals, together with the worldwide economic recovery from the war, helped to permit substantial tariff reductions.

The sixth multilateral trade agreement, known as the Kennedy Round, was completed in 1967. This agreement involved an across-the-board 50 percent reduction in tariffs by the major industrial countries, except for specified industries whose tariffs were left unchanged. The negotiations concerned which industries to exempt rather than the size of the cut for industries not given special treatment. Overall, the Kennedy Round reduced average tariffs by about 35 percent.

The so-called Tokyo Round of trade negotiations (completed in 1979) reduced tariffs by a formula more complex than that of the Kennedy Round. In addition, new codes were established in an effort to control the proliferation of nontariff barriers, such as voluntary export restraints and orderly marketing agreements. Finally, in 1994, an eighth round of negotiations, the so-called Uruguay Round, was completed. The provisions of that round were approved by the U.S. Congress after acrimonious debate; we describe the results of these negotiations below.

The Uruguay Round

Major international trade negotiations invariably open with a ceremony in one exotic locale and conclude with a ceremonial signing in another. The eighth round of global trade negotiations carried out under the GATT began in 1986, with a meeting at the coastal resort of Punta del Este, Uruguay (hence the name Uruguay Round). The participants then repaired to Geneva, where they engaged in years of offers and counteroffers, threats and counterthreats, and, above all, tens of thousands of hours of meetings so boring that even the most experienced diplomat had difficulty staying awake. The round had been scheduled for completion by 1990 but ran into serious political difficulties. In late 1993, the negotiators finally produced a basic document consisting of 400 pages of agreements, together with supplementary documents detailing the specific commitments of member nations with regard to particular markets and products—about 22,000 pages in all. The agreement was signed in Marrakesh, Morocco, in April 1994, and ratified by the major nations—after bitter political controversy in some cases, including in the United States—by the end of that year.

As the length of the document suggests, the end results of the Uruguay Round are not easy to summarize. The most important results, however, may be grouped under two headings, trade liberalization and administrative reforms.

Trade Liberalization

The Uruguay Round, like previous GATT negotiations, cut tariff rates around the world. The numbers can sound impressive: The average tariff imposed by advanced countries fell almost 40 percent as a result of the round. However, tariff rates were already quite low. In fact, the average tariff rate fell only from 6.3 to 3.9 percent, enough to produce only a small increase in world trade.

More important than this overall tariff reduction were the moves to liberalize trade in two important sectors: agriculture and clothing.

World trade in agricultural products has been highly distorted. Japan is notorious for import restrictions that lead to internal prices of rice, beef, and other foods that are several times as high as world market prices; Europe's massive export subsidies under the Common Agricultural Policy were described in Chapter 9. At the beginning of the Uruguay Round, the United States had an ambitious goal: free trade in agricultural products by the year 2000. The actual achievement was far more modest but still significant. The agreement required agricultural exporters to reduce the value of subsidies by 36 percent, and the volume of subsidized exports by 21 percent, over a six-year period. Countries like Japan that protect their farmers with import quotas were required to replace quotas with tariffs, which may not be increased in the future.

World trade in textiles and clothing was also highly distorted by the Multi-Fiber Arrangement, also described in Chapter 9. The Uruguay Round phased out the MFA over a 10-year period, eliminating all quantitative restrictions on trade in textiles and clothing. (Some high tariffs remain in place.) This was a fairly dramatic liberalization—remember, most estimates suggested that protection of clothing imposed a larger cost on U.S. consumers than all other protectionist measures combined. It is worth noting, however, that the formula used in phasing out the MFA was heavily "backloaded": Much of the liberalization was postponed until 2003 and 2004, with the final end of the quotas not taking place until January 1, 2005.

Sure enough, the end of the MFA brought a surge in clothing exports from China. For example, in January 2005, China shipped 27 million pairs of cotton trousers to the United States, up from 1.9 million a year earlier. And there was a fierce political reaction from clothing producers in the United States and Europe. While new restrictions were imposed on Chinese clothing exports, these restrictions were phased out over time; world trade in clothing has, in fact, been largely liberalized. A final important trade action under the Uruguay Round was a new set of rules concerning government procurement, purchases made not by private firms or consumers but by government agencies. Such procurement has long provided protected markets for many kinds of goods, from construction equipment to vehicles. (Recall the box on imported trucks in Chapter 9.) The Uruguay Round set new rules that should open up a wide range of government contracts for imported products.

Administrative Reforms: From the GATT to the WTO

Much of the publicity that surrounded the Uruguay Round, and much of the controversy swirling around the world trading system since then, has focused on the round's creation of a new institution, the World Trade Organization. In 1995, this organization replaced the ad hoc secretariat that had administered the GATT. As we'll see in Chapter 12, the WTO has become the organization that opponents of globalization love to hate; it has been accused by both the left and the right of acting as a sort of world government, undermining national sovereignty.

How different is the WTO from the GATT? From a legal point of view, the GATT was a provisional agreement, whereas the WTO is a full-fledged international organization; however, the actual bureaucracy remains small (a staff of 500). An updated version of the original GATT text has been incorporated into the WTO rules. The GATT, however, applied only to trade in goods; world trade in services—that is, intangible things like insurance, consulting, and banking—was not subject to any agreed-upon set of rules. As a result, many countries applied regulations that openly or de facto discriminated against foreign suppliers. The GATT's neglect of trade in services became an

increasingly glaring omission, because modern economies have increasingly focused on the production of services rather than physical goods. So the WTO agreement includes rules on trade in services (the General Agreement on Trade in Services, or GATS). In practice, these rules have not yet had much impact on trade in services; their main purpose is to serve as the basis for negotiating future trade rounds.

In addition to a broad shift from producing goods to producing services, advanced countries have also experienced a shift from depending on physical capital to depending on "intellectual property," which is protected by patents and copyrights. (Thirty years ago, General Motors was the quintessential modern corporation; now it's Apple or Google.) Thus, defining the international application of international property rights has also become a major preoccupation. The WTO tries to take on this issue with its Agreement on Trade-Related Aspects of Intellectual Property (TRIPS). The application of TRIPS in the pharmaceutical industry has become a subject of heated debate.

The most important new aspect of the WTO, however, is generally acknowledged to be its "dispute settlement" procedure. A basic problem arises when one country accuses another of violating the rules of the trading system. Suppose, for example, that Moldova accuses Ukraine in restraining importation of products originated from Moldova—and Ukraine denies the charge. What happens next?

A dispute can arise when one country adopts a trade policy or violates the WTO agreements. WTO member countries use a multilateral system of settling disputes instead of taking actions unilaterally, meaning abiding by the agreed WTO procedures and respecting judgments. However, the WTO's priority is to settle disputes through consultations and not to pass a judgment.

Let's assume the WTO concludes that Ukraine has, in fact, been violating the rule, but refuses to change its policy. What happens then? The WTO itself has no enforcement powers. What it can do is grant the complainant the right to retaliate. In our given example, the Russian government might be given the right to impose restrictions on Ukrainian exports without being considered in violation of WTO rules.

Under GATT rules there were international tribunals that would take several years to issue a ruling; and even when it did, it was easier to block. Of course, neither country would want to get a reputation of scofflaws, so countries used to make efforts to keep the actions as of the GATT rules.[7] The Uruguay round agreement, under the WTO, introduced a more formal and structured procedure with more clearly defined.

The hope and expectation is that few disputes will get this far. In many cases, the threat to bring a dispute before the WTO should lead to a settlement; in the great majority of other cases, countries accept the WTO ruling and change their policies.

The following box describes an example of the WTO dispute settlement procedure at work: the U.S.–Venezuela dispute over imported gasoline. As the box explains, this case has also become a prime example for those who accuse the WTO of undermining national sovereignty.

Benefits and Costs

The economic impact of the Uruguay Round is difficult to estimate. If nothing else, think about the logistics: To do an estimate, one must translate an immense document from one impenetrable jargon (legalese) into another (economese), assign numbers to the translation, then feed the whole thing into a computer model of the world economy.

The most widely cited estimates are those of the GATT itself and of the Organization for Economic Cooperation and Development, another international

[7]World Trade Organization: www.wto.org.

SETTLING A DISPUTE—AND CREATING ONE

The very first application of the WTO's new dispute settlement procedure has also been one of the most controversial. To WTO supporters, it illustrates the new system's effectiveness. To opponents, it shows that the organization stands in the way of important social goals such as protecting the environment.

The case arose out of new U.S. air pollution standards. These standards set rules for the chemical composition of gasoline sold in the United States. A uniform standard would clearly have been legal under WTO rules. However, the new standards included some loopholes: Refineries in the United States, or those selling 75 percent or more of their output in the United States, were given "baselines" that depended on their 1990 pollutant levels. This provision generally set a less strict standard than was set for imported gasoline, and thus in effect introduced a preference for gasoline from domestic refineries.

Venezuela, which ships considerable quantities of gasoline to the United States, brought a complaint against the new pollution rules early in 1995. Venezuela argued that the rules violated the principle of "national treatment," which says that imported goods should be subject to the same regulations as domestic goods (so that regulations are not used as an indirect form of protectionism). A year later, the panel appointed by the WTO ruled in Venezuela's favor; the United States appealed, but the appeal was rejected. The United States and Venezuela then negotiated a revised set of rules.

At one level, this outcome was a demonstration of the WTO doing exactly what it was supposed to do. The United States had introduced measures that pretty clearly violated the letter of its trade agreements; when a smaller, less influential country appealed against those measures, it got fairly quick results.

On the other hand, environmentalists were understandably upset: The WTO ruling, in effect, blocked a measure that would have made the air cleaner. Furthermore, there was little question that the clean-air rules were promulgated in good faith—that is, they were really intended to reduce air pollution, not to exclude exports.

Defenders of the WTO point out that the United States clearly could have written a rule that did not discriminate against imports; the fact that it had not done so was a political concession to the refining industry, which *did* in effect constitute a sort of protectionism. The most you can say is that the WTO's rules made it more difficult for U.S. environmentalists to strike a political deal with the industry.

In the mythology of the anti-globalization movement, which we discuss in Chapter 12, the WTO's intervention against clean-air standards has taken on iconic status: The case is seen as a prime example of how the organization deprives nations of their sovereignty, preventing them from following socially and environmentally responsible policies. The reality of the case, however, is nowhere near that clear-cut: If the United States had imposed a "clean" clean-air rule that had not discriminated among sources, the WTO would have had no complaints.

organization (this one consisting only of rich countries and based in Paris). Both estimates suggest a gain to the world economy as a whole of more than $200 billion annually, raising world income by about 1 percent. As always, there are dissenting estimates on both sides. Some economists claim that the estimated gains are exaggerated, particularly because the estimates assume that exports and imports responded strongly to the new liberalizing moves. A probably larger minority of critics argues that these estimates are considerably too low, for the "dynamic" reasons discussed earlier in this chapter.

In any case, it is clear that the usual logic of trade liberalization applies: The costs of the Uruguay Round were felt by concentrated, often well-organized groups, while

the benefit accrued to broad, diffuse populations. The progress on agriculture hurt the small but influential populations of farmers in Europe, Japan, and other countries where agricultural prices are far above world levels. These losses were much more than offset by gains to consumers and taxpayers in those countries, but because these benefits were very widely spread, they were little noticed. Similarly, the liberalization of trade in textiles and clothing produced some concentrated pain for workers and companies in those industries, offset by considerably larger but far less visible consumer gains.

Given these strong distributional impacts of the Uruguay Round, it is actually remarkable that an agreement was reached at all. Indeed, after the failure to achieve anything close to agreement by the 1990 target, many commentators began to pronounce the whole trade negotiation process to be dead. That in the end, agreement was achieved, if on a more modest scale than originally hoped, may be attributed to an interlocking set of political calculations. In the United States, the gains to agricultural exporters and the prospective gains to service exporters if the GATT opened the door to substantial liberalization helped offset the complaints of the clothing industry. Many developing countries supported the round because of the new opportunities it would offer to their own textile and clothing exports. Also, some of the "concessions" negotiated under the agreement were an excuse to make policy changes that would eventually have happened anyway. For example, the sheer expense of Europe's Common Agricultural Policy in a time of budget deficits made it ripe for cutting in any case.

An important factor in the final success of the round, however, was fear of what would happen if it failed. By 1993, protectionist currents were evidently running strong in the United States and elsewhere. Trade negotiators in countries that might otherwise have refused to go along with the agreement—such as France, Japan, or South Korea, in all of which powerful farm lobbies angrily opposed trade liberalization—therefore feared that failure to agree would be dangerous. That is, they feared a failed round would not merely mean lack of progress but substantial backsliding on the progress made toward free trade over the previous four decades.

CASE STUDY Testing the WTO's Metal

In March 2002, the U.S. government imposed 30 percent tariffs on a range of imported steel products. The official reason for this action was that the U.S. industry faced a surge in imports and needed time to restructure. But the real reason, almost everyone agreed, was politics: West Virginia, Ohio, and Pennsylvania, where the steel industry is concentrated, were widely expected to be crucial "swing states" in the 2004 election.

Europe, Japan, China, and South Korea filed suit against the U.S. steel tariff with the WTO, asserting that the U.S. action was illegal. In July 2003, a WTO panel agreed, ruling that the U.S. action was unjustified. Many observers regarded the U.S. response to this ruling as a crucial test of the WTO's credibility: Would the government of the world's most powerful nation really allow an international organization to tell it to remove a politically important tariff? There was even talk of a looming trade war.

In fact, the United States complied with the ruling, lifting the steel tariffs in December 2003. The official explanation for the decision was that the tariffs had served their purpose. Most observers believed, however, that the key motivation was

a threat by the European Union, which by now had received WTO clearance to take retaliatory action, and was getting ready to impose tariffs on more than $2 billion in U.S. exports. (The Europeans, who understand politics as well as we do, targeted their tariffs on goods produced in—you guessed it—political swing states.)

So the WTO passed a big test. Still, it's one thing for the United States to defer to a complaint from the European Union, which is an economic superpower with an economy roughly the same size as that of the United States. The next question is what will happen when the WTO rules in favor of smaller economies against major economic powers like the United States or the EU.

In March 2005, in a landmark decision, the WTO agreed with Brazil's claim that U.S. subsidies to cotton producers were illegal. The United States said it would comply and eliminate the subsidies, but by 2009 had made only partial moves toward compliance; at that point, the WTO authorized Brazil to retaliate with substantial sanctions on U.S. exports. In 2010, however, Brazil withdrew its complaint—not because the United States had ended subsidies, but because it made a side deal to pay Brazil hundreds of millions of dollars in compensation. It was a troubling example of just how powerful special interests can be.

The End of Trade Agreements?

The ninth major round of world trade negotiations began in 2001 with a ceremony in the Persian Gulf city of Doha. But as we've already noted, no agreement was ever reached.

It's important to realize that the failure of the Doha Round does not undo the progress achieved in previous trade negotiations. Remember that the world trading system is a combination of "levers"—international trade negotiations that push trade liberalization forward—and "ratchets," mainly the practice of binding tariffs, which prevent backsliding. The levers seem to have failed in the latest trade round, but the ratchets are still in place: The reductions in tariff rates that took place in the previous eight rounds remain in effect. As a result, world trade remains much freer than at any previous point in modern history.

In fact, Doha's failure owes a lot to the success of previous trade negotiations. Because previous negotiations had been so successful at reducing trade barriers, the remaining barriers to trade are fairly low, so that the potential gains from further trade liberalization are modest. Indeed, barriers to trade in most manufactured goods other than apparel and textiles are now more or less trivial. Most of the potential gains from a move to freer trade would come from reducing tariffs and export subsidies in agriculture—which has been the last sector to be liberalized because it's the most sensitive sector politically.

Table 10-4 illustrates this point. It shows a World Bank estimate of where the welfare gains from "full liberalization"—that is, the elimination of all remaining barriers to trade and export subsidies—would come from, and how they would be distributed across countries. In the modern world, agricultural goods account for less than 10 percent of total international trade. Nonetheless, according to the World Bank's estimate, liberalizing agricultural trade would produce 63 percent of the total world

TABLE 10-4 Percentage Distribution of Potential Gains from Free Trade

Economy	Full Liberalization of: Agriculture and Food	Textiles and Clothing	Other Merchandise	All Goods
Developed	46	6	3	55
Developing	17	8	20	45
All	63	14	23	100

Source: Kym Anderson and Will Martin, "Agricultural Trade Reform and the Doha Agenda," *The World Economy* 28 (September 2005), pp. 1301–1327.

gains from free trade for the world as a whole. And these gains are very hard to get at. As already described, farmers in rich countries are highly effective at getting favors from the political process.

The proposals that came closest to actually getting accepted in the Doha Round in fact fell far short of full liberalization. As a result, the likely gains even from a successful round would have been fairly small. Table 10-5 shows World Bank estimates of the welfare gains, as a percentage of income, under two scenarios of how Doha might have played out: an "ambitious" scenario that would have been very difficult to achieve, and a "less ambitious" scenario in which "sensitive" sectors would have been spared major liberalization. The gains for the world as a whole even in the ambitious scenario would have been only 0.18 percent of GDP; in the more plausible scenario, the gains would have been less than a third as large. For middle- and lower-income countries, the gains would have been even smaller. (Why would China have actually lost? Because, as explained in the box above, it would have ended up paying higher prices for imported agricultural goods.)

DO AGRICULTURAL SUBSIDIES HURT THE THIRD WORLD?

One of the major complaints of developing countries during the Doha negotiations was the continuing existence of large agricultural export and production subsidies in rich countries. The U.S. cotton subsidy, which depresses world cotton prices and therefore hurts cotton growers in West Africa, is the most commonly cited example.

But we learned in Chapter 9 that an export subsidy normally raises the welfare of the importing country, which gets to buy goods more cheaply. So shouldn't export subsidies by rich countries actually help poorer countries?

The answer is that in many cases they do. The estimates shown in Table 10-5 indicate that a successful Doha Round would actually have hurt China. Why? Because China, which exports manufactured goods and imports food and other agricultural products, would be hurt by the removal of agricultural subsidies.

And it's not just China that may actually benefit from rich-country export subsidies. Some third-world farmers are hurt by low prices of subsidized food exports from Europe and the United States—but urban residents in the third world benefit, and so do those farmers producing goods, such as coffee, that don't compete with the subsidized products.

Africa is a case in point. A survey of estimates of the likely effects of the Doha Round on low-income African nations found that, in most cases, African countries would actually be made worse off, because the negative effects of higher food prices would more than offset the gains from higher prices for crops such as cotton.

TABLE 10-5 Percentage Gains in Income under Two Doha Scenarios

	Ambitious	Less Ambitious
High-income	0.20	0.05
Middle-income	0.10	0.00
China	−0.02	−0.05
Low-income	0.05	0.01
World	0.18	0.04

Source: See Table 10-4.

The smallness of the numbers in Table 10-5 helps explain why the round failed. Poor countries saw little in the proposals for them; they pressed for much bigger concessions from rich countries. The governments of rich countries, in turn, refused to take the political risk of crossing powerful interest groups, especially farmers, without something in return—and poor countries were unwilling to offer the deep cuts in their remaining tariffs that might have been sufficient.

Preferential Trading Agreements

The international trade agreements that we have described so far all involved a "nondiscriminatory" reduction in tariff rates. For example, as discussed earlier, the long-lasting Banana dispute the European Commission initiated an agreement on bananas with Latin American suppliers and soured EU and U.S. external trade relations. According to the agreement, the EU gradually cuts the import tariff on bananas (as of eight stages) from the rate of 176 Eur/tonne to 114 Eur/tonne in 2017 at the earliest (or 2019 at the latest) for "most favored nation" (MFN). The MFN status was granted to most Latin American countries, which guarantees that their exporters will pay tariffs no higher than that of the nation that pays the lowest. All countries granted MFN status thus pay the same rates.[8] Tariff reductions under the GATT always—with one important exception—are made on an MFN basis.

There are some important cases, however, in which nations establish **preferential trading agreements** under which the tariffs they apply to each other's products are lower than the rates on the same goods coming from other countries. The GATT in general prohibits such agreements but makes a rather strange exception: It is against the rules for country A to have lower tariffs on imports from country B than on those from country C, but it is acceptable if countries B and C agree to have zero tariffs on each other's products. That is, the GATT forbids preferential trading agreements in general, as a violation of the MFN principle, but allows them if they lead to free trade between the agreeing countries.[9]

In general, two or more countries agreeing to establish free trade can do so in one of two ways. They can establish a **free trade area** in which each country's goods can be shipped to the other without tariffs, but in which the countries set tariffs against the outside world independently. Or they can establish a **customs union** in which the countries must agree on tariff rates. The North American Free Trade Agreement—which establishes free trade among Canada, the United States, and Mexico—creates a free

[8]"Bananas other than Plantains," European Commission, Directorate-General for Agriculture and Rural Development, September 2013, https://ec.europa.eu/agriculture/sites/agriculture/files/bananas/fact-sheet_en.pdf.

[9]The logic here seems to be legal rather than economic. Nations are allowed to have free trade within their boundaries: Nobody insists that California wine pay the same tariff as French wine when it is shipped to New York. That is, the MFN principle does not apply within political units. But what is a political unit? The GATT sidesteps that potentially thorny question by allowing any group of economies to do what countries do, and establish free trade within some defined boundary.

trade area: There is no requirement in the agreement that, for example, Canada and Mexico have the same tariff rate on textiles from China. The European Union, on the other hand, is a full customs union. All of the countries must agree to charge the same tariff rate on each imported good. Each system has both advantages and disadvantages; these are discussed in the accompanying box.

Subject to the qualifications mentioned earlier in this chapter, tariff reduction is a good thing that raises economic efficiency. At first, it might seem that preferential tariff reductions are also good, if not as good as reducing tariffs all around. After all, isn't half a loaf better than none?

Perhaps surprisingly, this conclusion is too optimistic. It is possible for a country to make itself worse off by joining a customs union. The reason may be illustrated by a hypothetical example using Britain, France, and the United States. The United States is a low-cost producer of wheat ($4 per bushel), France a medium-cost producer ($6 per bushel), and Britain a high-cost producer ($8 per bushel). Both Britain and France maintain tariffs against all wheat imports. If Britain forms a customs union with France, the tariff against French, but not U.S., wheat will be abolished. Is this good or bad for Britain? To answer this, consider two cases.

First, suppose Britain's initial tariff was high enough to exclude wheat imports from either France or the United States. For example, with a tariff of $5 per bushel, it would cost $9 to import U.S. wheat and $11 to import French wheat, so British consumers would buy $8 British wheat instead. When the tariff on French wheat is eliminated, imports from France will replace British production. From Britain's point of view, this is a gain, because it costs $8 to produce a bushel of wheat domestically, while Britain needs to produce only $6 worth of export goods to pay for a bushel of French wheat.

FREE TRADE AREA VERSUS CUSTOMS UNION

The difference between a free trade area and a customs union is, in brief, that the first is politically straightforward but an administrative headache, while the second is just the opposite.

Consider first the case of a customs union. Once such a union is established, tariff administration is relatively easy: Goods must pay tariffs when they cross the border of the union, but from then on can be shipped freely between countries. A cargo that is unloaded at Marseilles or Rotterdam must pay duties there, but will not face any additional charges if it then goes by truck to Munich. To make this simple system work, however, the countries must agree on tariff rates: The duty must be the same whether the cargo is unloaded at Marseilles, Rotterdam, or, for that matter, Hamburg, because otherwise, importers would choose the point of entry that minimizes their fees. So a customs union requires that Germany, France, the Netherlands, and all the other countries agree to charge the same tariffs. This is not easily done: Countries are, in effect, ceding part of their sovereignty to a supranational entity, the European Union.

This has been possible in Europe for a variety of reasons, including the belief that economic unity would help cement the postwar political alliance between European democracies. (One of the founders of the European Union once joked that it should erect a statue of Joseph Stalin, without whose menace the Union might never have been created.) But elsewhere these conditions are lacking. The three nations that formed NAFTA would find it very difficult to cede control over tariffs to any supranational body; if nothing else, it would be hard to devise any arrangement that would give due weight to U.S. interests without effectively allowing the United States to dictate trade policy to Canada and Mexico. NAFTA, therefore, while it permits Mexican goods to enter the United

States without tariffs and vice versa, does not require that Mexico and the United States adopt a common external tariff on goods they import from other countries.

This, however, raises a different problem. Under NAFTA, a shirt made by Mexican workers can be brought into the United States freely. But suppose the United States wants to maintain high tariffs on shirts imported from other countries, while Mexico does not impose similar tariffs. What is to prevent someone from shipping a shirt from, say, Bangladesh to Mexico, then putting it on a truck bound for Chicago?

The answer is that even though the United States and Mexico may have free trade, goods shipped from Mexico to the United States must still pass through a customs inspection. And they can enter the United States without duty only if they have documents proving that they are in fact Mexican goods, not transshipped imports from third countries.

But what is a Mexican shirt? If a shirt comes from Bangladesh, but Mexicans sew on the buttons, does that make it Mexican? Probably not. But if everything except the buttons were made in Mexico, it probably should be considered Mexican. The point is that administering a free trade area that is not a customs union requires not only that the countries continue to check goods at the border, but that they specify an elaborate set of "rules of origin" that determine whether a good is eligible to cross the border without paying a tariff.

As a result, free trade agreements like NAFTA impose a large burden of paperwork, which may be a significant obstacle to trade even when such trade is in principle free.

On the other hand, suppose the tariff was lower, for example, $3 per bushel, so that before joining the customs union, Britain bought its wheat from the United States (at a cost to consumers of $7 per bushel) rather than producing its own wheat. When the customs union is formed, consumers will buy French wheat at $6 rather than U.S. wheat at $7. So imports of wheat from the United States will cease. However, U.S. wheat is really cheaper than French wheat; the $3 tax that British consumers must pay on U.S. wheat returns to Britain in the form of government revenue and is therefore not a net cost to the British economy. Britain will have to devote more resources to exports to pay for its wheat imports and will be worse off rather than better off.

BREXIT

The European Union began in 1957 as the Common Market, a customs union among six nations. Ever since, it has been the world's prime example of how a customs union can work—and for almost half a century it was an overwhelming success story. Over time the economic integration of Europe was both widened and deepened; that is, more countries joined the customs union, and the range of activities on which Europe was united expanded. But in 2016 the European Union experienced a shocking reversal: Britain held a referendum on whether to leave the union—a proposition that came to be known as "Brexit" (for British exit)—and a narrow majority of the public voted to leave.

What happened? It probably wasn't about trade in goods and services; that is, it wasn't about the customs union. Instead, there was a backlash against the ways Europe tried to become more than a customs union, an effort symbolized by the change in name from Common Market to European Union.

More specifically, in 1992 the group known by then as the European Economic Community established new rules that harmonized regulations and, perhaps more important, guaranteed free

movement of people among member countries. At first, this seemed to cause few problems. But after 2004 the Union was also expanded substantially, adding a number of former Communist countries in Eastern Europe. These countries are relatively poor—for example, per capita income in both Romania and Bulgaria is less than half its level in Britain. As a result, significant numbers of workers began migrating to richer European nations.

There is a widespread perception in the countries experiencing inward migration that the migrants are having an adverse effect on native-born citizens: taking jobs, putting strain on public services, and so on. Most economic analyses suggest that this perception greatly overstates the reality and fails to take account of the benefits of additional workers, but it's not hard to see why such claims get popular traction, especially given declining wages for many blue-collar workers. Add in fears that national identity is being undermined, and the conditions were there for a populist backlash.

At the time of this writing the British government had not yet begun the formal process of withdrawing from the European Union, so it was unclear what form future economic relations within Europe would take. What is clear from the story of Brexit is that the political economy of international economic policy remains difficult, and one should not take the historical downward trend in barriers to economic integration as irreversible.

This possibility of a loss is another example of the theory of the second best. Think of Britain as initially having two policies that distort incentives: a tariff against U.S. wheat and a tariff against French wheat. Although the tariff against French wheat may seem to distort incentives, it may actually help to offset the distortion of incentives resulting from the tariff against the United States by encouraging consumption of the cheaper U.S. wheat. Thus, removing the tariff on French wheat can actually reduce welfare.

Returning to our two cases, notice that Britain gains if the formation of a customs union leads to new trade—French wheat replacing domestic production—while it loses if the trade within the customs union simply replaces trade with countries outside the union. In the analysis of preferential trading arrangements, the first case is referred to as **trade creation,** while the second is **trade diversion.** Whether a customs union is desirable or undesirable depends on whether it mainly leads to trade creation or trade diversion.

CASE STUDY Trade Diversion in South America

In 1991, four South American nations, Argentina, Brazil, Paraguay, and Uruguay, formed a free trade area known as Mercosur. The pact had an immediate and dramatic effect on trade: Within four years, the value of trade among the nations tripled. Leaders in the region proudly claimed Mercosur as a major success, part of a broader package of economic reform.

But while Mercosur clearly was successful in increasing intraregional trade, the theory of preferential trading areas tells us that this need not be a good thing: If the new trade came at the expense of trade that would otherwise have taken place with the rest of the world—that is, if the pact diverted trade instead of

created it—it might actually have reduced welfare. And sure enough, in 1996 a study prepared by the World Bank's chief trade economist concluded that despite Mercosur's success in increasing regional trade—or rather, because that success came at the expense of other trade—the net effects on the economies involved were probably negative.

In essence, the report argued that as a result of Mercosur, consumers in the member countries were being induced to buy expensively produced manufactured goods from their neighbors rather than cheaper but heavily tariffed goods from other countries. In particular, because of Mercosur, Brazil's highly protected and somewhat inefficient auto industry had in effect acquired a captive market in Argentina, thus displacing imports from elsewhere, just like our text example in which French wheat displaces American wheat in the British market. "These findings," concluded the initial draft of the report, "appear to constitute the most convincing, and disturbing, evidence produced thus far concerning the potential adverse effects of regional trade arrangements."

But that is not what the final, published report said. The initial draft was leaked to the press and generated a firestorm of protest from Mercosur governments, Brazil in particular. Under pressure, the World Bank first delayed publication and then eventually released a version that included a number of caveats. Still, even in its published version, the report made a fairly strong case that Mercosur, if not entirely counterproductive, nonetheless has produced a considerable amount of trade diversion.

The Trans-Pacific Partnership

In early 2016 negotiators from twelve countries around the Pacific Rim, including the United States but not including China, agreed on a proposal for a new economic agreement called the Trans-Pacific Partnership, or TPP. In some ways TPP sounded like previous trade agreements, and negotiators seem to have expected the proposal to follow the path of efforts like the Uruguay Round or NAFTA. That is, they expected that there would be considerable controversy, but that eventually economic self-interest would lead the nations involved to ratify the agreement.

At the time of this writing, however, TPP seemed to be very nearly a dead letter, unlikely to go anywhere. In part this was because of a widespread backlash against globalization, discussed further in Chapter 12. But it was also because TPP, arguably, wasn't really a trade agreement in the traditional sense. That is, it didn't do much to reduce tariffs or eliminate import quotas, largely because previous agreements had done so much to eliminate conventional barriers to trade.

So what did TPP do? One important aspect was a strengthening of "intellectual property rights"—the ability to enforce patents and copyrights across borders. Another aspect was "investor-state dispute settlement"—dealing with arguments between private businesses and national governments. TPP would have set up special panels, with representatives from both sectors, to resolve such disputes.

There was a case to be made for both aspects, which would arguably provide businesses with an assurance of fair treatment and foster greater trade and investment. There was also, however, a reasonable case against the agreement, which was that it might reinforce corporate interests at the expense of workers—for example, making

it easier for drug companies to charge high prices. The point is not that one side was right and the other wrong, but rather that the simple logic of free trade offered little guidance to the desirability of TPP.

This murkiness, combined with growing skepticism about trade in general, made TPP a more or less impossible sell. And the apparent failure of TPP, along with the Doha Round, added to a sense that big trade agreements are a thing of the past.

SUMMARY

1. Although few countries practice free trade, most economists continue to hold up free trade as a desirable policy. This advocacy rests on three lines of argument. First is a formal case for the efficiency gains from free trade that is simply the cost-benefit analysis of trade policy read in reverse. Second, many economists believe that free trade produces additional gains that go beyond this formal analysis. Finally, given the difficulty of translating complex economic analysis into real policies, even those who do not see free trade as the best imaginable policy see it as a useful rule of thumb.
2. There is an intellectually respectable case for deviating from free trade. One argument that is clearly valid in principle is that countries can improve their terms of trade through optimal tariffs and export taxes. This argument is not too important in practice, however. Small countries cannot have much influence on their import or export prices, so they cannot use tariffs or other policies to raise their terms of trade. Large countries, on the other hand, can influence their terms of trade, but in imposing tariffs, they run the risk of disrupting trade agreements and provoking retaliation.
3. The other argument for deviating from free trade rests on domestic market failures. If some domestic market, such as the labor market, fails to function properly, deviating from free trade can sometimes help reduce the consequences of this malfunctioning. The theory of the second best states that if one market fails to work properly, it is no longer optimal for the government to abstain from intervention in other markets. A tariff may raise welfare if there is a marginal social benefit to production of a good that is not captured by producer surplus measures.
4. Although market failures are probably common, the domestic market failure argument should not be applied too freely. First, it is an argument for domestic policies rather than trade policies; tariffs are always an inferior, "second-best" way to offset domestic market failure, which is always best treated at its source. Furthermore, market failure is difficult to analyze well enough to be sure of the appropriate policy recommendation.
5. In 2004 the United States signed a free trade agreement with several Central American nations and the Dominican Republic, known as DR-CAFTA. The agreement was expected to boost clothing exports from these nations, which had until then been suffering from growing Asian competition. Assuming the agreement worked in this respect, what would this say about its overall economic impact?
6. One important theme in the 2016 U.S. presidential election was a backlash against trade agreements in general; a significant number of voters were convinced that America's trade deals amounted to a giveaway of sovereignty, and that the United States should stop tying its own hands and pursue whatever trade policy serves its self-interest. How would you respond to that assertion?

7. Although some progress was made in the 1930s toward trade liberalization via bilateral agreements, since World War II international coordination has taken place primarily via multilateral agreements under the auspices of the General Agreement on Tariffs and Trade. The GATT, which comprises both a bureaucracy and a set of rules of conduct, is the central institution of the international trading system. The most recent worldwide GATT agreement also set up a new organization, the World Trade Organization (WTO), to monitor and enforce the agreement.
8. In addition to the overall reductions in tariffs that have taken place through multilateral negotiation, some groups of countries have negotiated preferential trading agreements under which they lower tariffs with respect to each other but not the rest of the world. Two kinds of preferential trading agreements are allowed under the GATT: customs unions, in which the members of the agreement set up common external tariffs, and free trade areas, in which members do not charge tariffs on each other's products but set their own tariff rates against the outside world. Either kind of agreement has ambiguous effects on economic welfare. If joining such an agreement leads to replacement of high-cost domestic production by imports from other members of the agreement—the case of trade creation—a country gains. But if joining leads to the replacement of low-cost imports from outside the zone with higher-cost goods from member nations—the case of trade diversion—a country loses.
9. Production of high-technology products such as smartphones depends crucially on the use of "rare earths," a small group of exotic metals. As it happens, China dominates the production of these rare earths; given possible international tensions, there have been calls for special policies to encourage rare-earth production in the United States. Can such calls be justified in economic terms? Where would the justification fit into the analysis of this chapter?

KEY TERMS

binding, p. 291
collective action, p. 284
customs union, p. 299
domestic market failures, p. 279
efficiency case for free trade, p. 275
free trade area, p. 299
General Agreement on Tariffs and Trade (GATT), p. 291
international negotiation, p. 289
marginal social benefit, p. 280
median voter, p. 283
optimum tariff, p. 278
political argument for free trade, p. 277
preferential trading agreement, p. 299
Prisoner's dilemma, p. 290
rent seeking, p. 277
terms of trade argument for a tariff, p. 278
theory of the second best, p. 280
trade creation, p. 302
trade diversion, p. 302
trade round, p. 291
trade war, p. 289
World Trade Organization (WTO), p. 291

PROBLEMS

Pearson MyLab Economics

1. "For a small country like the Philippines, a move to free trade would have huge advantages. It would let consumers and producers make their choices based on the real costs of goods, not artificial prices determined by government policy; it would allow escape from the confines of a narrow domestic market; it would open new horizons for entrepreneurship; and, most important, it would help to clean up domestic politics." Separate and identify the arguments for free trade in this statement.

2. Which of the following are potentially valid arguments for tariffs or export subsidies, and which are not? Explain your answers.
   a. "Dairy producer earning in Wales are at their lowest peak despite an overall rise in farm business incomes."
   b. "The more ecologically certified foods European Union requires, the higher the price of these products will be on common market."
   c. "US soybean exports to China and India don't just mean increased wealth for farmers – they mean increased wealth for everyone in the value chain."
   d. "The PET industry continued to sustain U.S. recycling programs; this shows the strength of the PET recycling market in the face of significant global economic slowdown and a drop in virgin feedstock prices."
   e. "The price of coal has been stable, but the production dropped 10.3 percent, and workers have been forced to look for other jobs."
3. A small country can import a good at a world price of 5 per unit. The domestic supply curve of the good is

$$S = 10 + 10P.$$

   The demand curve is

$$D = 600 - 5P.$$

   In addition, each unit of production yields a marginal social benefit of 15.
   a. Calculate the total effect on welfare of a tariff of 10 per unit levied on imports.
   b. Calculate the total effect of a production subsidy of 10 per unit.
   c. Why does the production subsidy produce a greater gain in welfare than the tariff?
   d. What would the optimal production subsidy be?
4. Suppose demand and supply are exactly as described in problem 3, but there is no marginal social benefit to production. However, for political reasons, the government counts a dollar's worth of gain to producers as being worth $5 of either consumer gain or government revenue. Calculate the effects on the government's objective of a tariff of 10 per unit.
5. Upon Poland's entering the European Union, suppose it is discovered that the cost of automobile production in Poland is €20,000 while it is €30,000 in Germany. Suppose the EU, which has a customs union, has an X percent tariff on automobiles and the costs of production are equal to Y (valued in euros) in Japan. Comment on whether the addition of Poland to the European Union would result in trade *creation* or trade *diversion* under the following scenarios:
   a. $X = 50\%$ and $Y = €18{,}000$
   b. $X = 100\%$ and $Y = €18{,}000$
   c. $X = 100\%$ and $Y = €12{,}000$
6. "China gives its aluminum industry an unfair advantage through underpriced loans and other illegal government subsidies. These kinds of policies have disadvantaged American manufacturers and contributed to the global glut in aluminum, steel and other sectors." Discuss both the economics and the political economy of this viewpoint.
7. Give an intuitive explanation for the optimal tariff argument.
8. If governments make trade policies based on national economic welfare, is the problem of trade warfare still represented by a Prisoner's dilemma game as in

Table 10-3? What is the equilibrium solution to the game if governments formulate policy in this way? Would they ever choose the strategy of protectionism?

9. Norway banned the imports of agricultural biotech products and developed extremely restrictive policies for crops derived from agricultural biotech, which are not related to the protection of health, food safety, or the environment. These policies are made to protect domestic agricultural interests, as Norway cares a lot about rural employment and subsidizes small farms to help them remain competitive with imported goods. Comment on this trade policy approach.

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APPENDIX TO CHAPTER 10

Proving That the Optimum Tariff Is Positive

A tariff always improves the terms of trade of a large country but at the same time distorts production and consumption. This appendix shows that for a sufficiently small tariff, the terms of trade gain is always larger than the distortion loss. Thus, there is always an optimal tariff that is positive.

To make the point, we focus on the case where all demand and supply curves are *linear*, that is, are straight lines.

Demand and Supply

We assume that Home, the importing country, has a demand curve whose equation is

$$D = a - b\widetilde{P}, \tag{10A-1}$$

where $\widetilde{P}$ is the internal price of the good, and a supply curve whose equation is

$$Q = e + f\widetilde{P}. \tag{10A-2}$$

Home's import demand is equal to the difference between domestic demand and supply,

$$D - Q = (a - e) - (b + f)\widetilde{P}. \tag{10A-3}$$

Foreign's export supply is also a straight line,

$$(Q^* - D^*) = g + hP_W, \tag{10A-4}$$

where P_W is the world price. The internal price in Home will exceed the world price by the tariff

$$\widetilde{P} = P_W + t. \tag{10A-5}$$

The Tariff and Prices

A tariff drives a wedge between internal and world prices, driving the internal Home price up and the world price down (Figure 10A-1).

In world equilibrium, Home import demand equals Foreign export supply:

$$(a - e) - (b + f) \times (P_W + t) = g + hP_W. \tag{10A-6}$$

Let P_F be the world price that would prevail if there were no tariff. Then a tariff, t, will raise the internal price to

$$\widetilde{P} = P_F + th/(b + f + h), \tag{10A-7}$$

while lowering the world price to

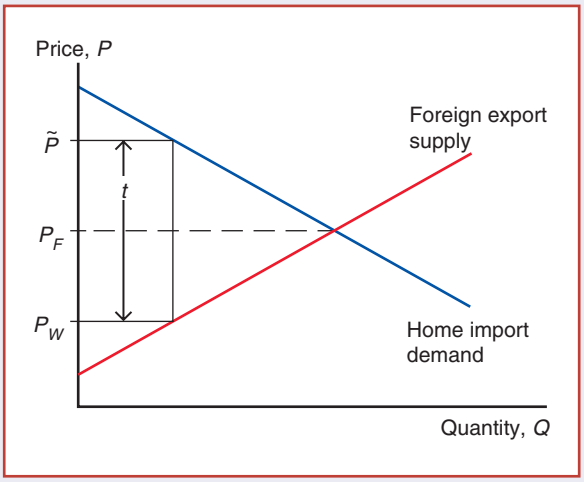
$$P_W = P_F - t(b + f)/(b + f + h). \tag{10A-8}$$

(For a small country, foreign supply is highly elastic; that is, h is very large. So for a small country, a tariff will have little effect on the world price while raising the domestic price almost one-for-one.)

FIGURE 10A-1

Effects of a Tariff on Prices

In a linear model, we can calculate the exact effect of a tariff on prices.



The Tariff and Domestic Welfare

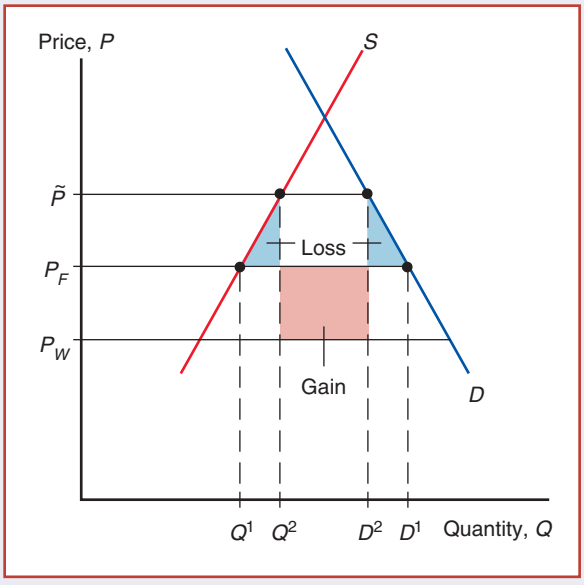
We now use what we have learned to derive the effects of a tariff on Home's welfare (Figure 10A-2). Q^1 and D^1 represent the free trade levels of consumption and production. With a tariff, the internal price rises, with the result that Q rises to Q^2 and D falls to D^2, where

$$Q^2 = Q^1 + tfh/(b + f + h) \qquad \text{(10A-9)}$$

FIGURE 10A-2

Welfare Effects of a Tariff

The net benefit of a tariff is equal to the area of the colored rectangle minus the area of the two shaded triangles.



and

$$D^2 = D^1 - tbh/(b + f + h). \tag{10A-10}$$

The gain from a lower world price is the area of the rectangle in Figure 10A-2, the fall in the price multiplied by the level of imports after the tariff:

$$\begin{aligned}\text{Gain} &= (D^2 - Q^2) \times t(b + f)/(b + f + h) \\ &= t \times (D^1 - Q^1) \times (b + f)/(b + f + h) - (t)^2 \times h(b + f)^2/(b + f + h)^2.\end{aligned} \tag{10A-11}$$

The loss from distorted consumption is the sum of the areas of the two triangles in Figure 10A-2:

$$\begin{aligned}\text{Loss} &= (1/2) \times (Q^2 - Q^1) \times (\widetilde{P} - P_F) + (1/2) \times (D^1 - D^2) \times (\widetilde{P} - P_F) \\ &= (t)^2 \times (b + f) \times (h)^2/2(b + f + h)^2.\end{aligned} \tag{10A-12}$$

The net effect on welfare, therefore, is

$$\text{Gain} - \text{loss} = t \times U - (t)^2 \times V, \tag{10A-13}$$

where U and V are complicated expressions that are, however, independent of the level of the tariff and positive. That is, the net effect is the sum of a positive number times the tariff rate and a negative number times the *square* of the tariff rate.

We can now see that when the tariff is small enough, the net effect must be positive. The reason is that when we make a number smaller, the square of that number gets smaller faster than the number itself. Suppose a tariff of 20 percent turns out to produce a net loss. Then try a tariff of 10 percent. The positive term in that tariff's effect will be only half as large as with a 20 percent tariff, but the negative part will be only one-quarter as large. If the net effect is still negative, try a 5 percent tariff; this will again reduce the negative effect twice as much as the positive effect. At some sufficiently low tariff, the negative effect will have to be outweighed by the positive effect.