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CHAPTER 9

The Political Economy of Trade Policy

In 1981 the United States asked Japan to limit its exports of autos to the United States. This raised the prices of imported cars and forced U.S. consumers to buy domestic autos they clearly did not like as much. While Japan was willing to accommodate the U.S. government on this point, it was unwilling to do so on another—a request that Japan eliminate import quotas on beef and citrus products—quotas that forced Japanese consumers to buy incredibly expensive domestic products instead of cheap imports from the United States. The governments of both countries were thus determined to pursue policies that, according to the cost-benefit analysis developed in Chapter 8, produced more costs than benefits. Clearly, government policies reflect objectives 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 policy on economists' cost-benefit calculations. The examination of the forces motivating trade policy in practice continues in Chapters 10 and 11, 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 that 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 9-1 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 9-1 shows one recent 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 9-1

The Efficiency Case for Free Trade

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

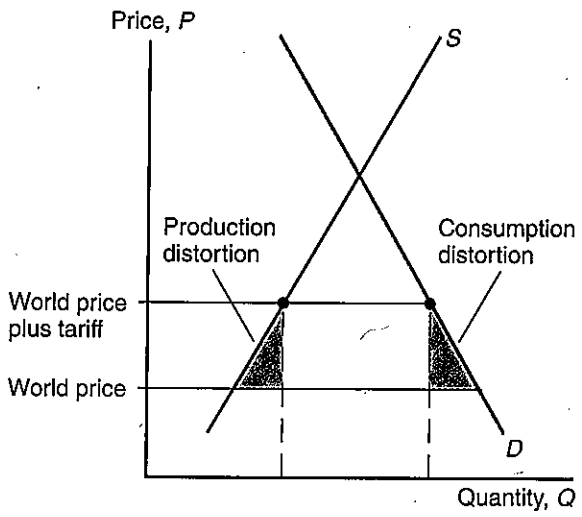


TABLE 9-1 Benefits of a Move to Worldwide Free Trade (percent of GDP)	
United States	0.57
European Union	0.61
Japan	0.85
Developing countries	1.4
World	0.93

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

TABLE 9-2 Estimated Cost of Protection, as a Percentage of National Income	
Brazil (1966)	9.5
Turkey (1978)	5.4
Philippines (1978)	5.4
United States (1983)	0.26

Sources: Brazil: Bela Balassa, *The Structure of Protection in Developing Countries* (Baltimore: The Johns Hopkins Press, 1971); Turkey and Philippines: World Bank, *The World Development Report 1987* (Washington, D.C.: World Bank, 1987); United States: David G. Tarr and Morris E. Morkre, *Aggregate Costs to the United States of Tariffs and Quotas on Imports* (Washington, D.C.: Federal Trade Commission, 1984).

Additional Gains from Free Trade[1]

There is a widespread belief among economists that calculations of the kind reported in Table 9-2, even though they report substantial gains from free trade in some cases, do not represent the whole story. In 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. Protected markets 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

[1]The additional gains from free trade that are 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.

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 10 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.

These additional arguments for free trade are for the most part not quantified. In 1985, however, Canadian economists Richard Harris and David Cox attempted to quantify the gains for Canada of free trade with the United States, taking into account the gains from a more efficient scale of production within Canada. They estimated that Canada's real income would rise by 8.6 percent—an increase about three times as large as the one typically estimated by economists who do not take into account the gains from economies of scale.[2]

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.

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 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 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 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.

[2] See Harris and Cox, *Trade, Industrial Policy, and Canadian Manufacturing* (Toronto: Ontario Economic Council, 1984); and, by the same authors, "Trade Liberalization and Industrial Organization: Some Estimates for Canada," *Journal of Political Economy* 93 (February 1985), pp. 115–145.

Case Study

The Gains from 1992

In 1987 the nations of the European Community (now known as the European Union) agreed on what formally was called the Single European Act, with the intention to create a truly unified European market. Because the act was supposed to go into effect within five years, the measures it embodied came to be known generally as "1992."

The unusual thing about 1992 was that the European Community was already a customs union, that is, there were no tariffs or import quotas on intra-European trade. So what was left to liberalize? The advocates of 1992 argued that there were still substantial barriers to international trade within Europe. Some of these barriers involved the costs of crossing borders; for example, the mere fact that trucks carrying goods between France and Germany had to stop for legal formalities often meant long waits that were costly in time and fuel. Similar costs were imposed on business travelers, who might fly from London to Paris in an hour, then spend another hour waiting to clear immigration and customs. Differences in regulations also had the effect of limiting the integration of markets. For example, because health regulations on food differed among the European nations, one could not simply fill a truck with British goods and take them to France, or vice versa.

Eliminating these subtle obstacles to trade was a very difficult political process. Suppose France is going to allow goods from Germany to enter the country without any checks. What is to prevent the French people from being supplied with manufactured goods that do not meet French safety standards, foods that do not meet French health standards, or medicines that have not been approved by French doctors? The only way that countries can have truly open borders is if they are able to agree on common standards, so that a good that meets French requirements is acceptable in Germany and vice versa. The main task of the 1992 negotiations was therefore one of harmonization of regulations in hundreds of areas, negotiations that were often acrimonious because of differences in national cultures.

The most emotional examples involved food. All advanced countries regulate things such as artificial coloring, to ensure that consumers are not unknowingly fed chemicals that are carcinogens or otherwise harmful. The initially proposed regulations on artificial coloring would, however, have destroyed the appearance of several traditional British foods: pink bangers (breakfast sausages) would have become white, golden kippers gray, and mushy peas a drab rather than a brilliant green. Continental consumers did not mind; indeed they could not understand how the British could eat such things in the first place. But in Britain the issue became tied up with fear over the loss of national identity, and loosening the proposed regulations became a top priority for the government. Britain succeeded in getting the necessary exemptions. On the other hand, Germany was forced to accept imports of beer that did not meet its centuries-old purity laws, and Italy to accept pasta made from—horrors!—the wrong kind of wheat.

But why engage in all this difficult negotiating? What were the potential gains from 1992? Attempts to estimate the direct gains have always suggested that they are fairly modest. Costs associated with crossing borders amount to no more than a few percent of the value of the goods shipped; removing these costs could add at best a fraction of a percent to the real income of Europe as a whole. Yet economists at the European Commission (the administrative arm of the European Community) argued that the true gains would be much larger.

Their reasoning relied to a large extent on the view that the unification of the European market would lead to greater competition among firms and to a more efficient scale of production. Much was made of the comparison with the United States, a country whose purchasing power and population are similar to those of the European Union, but which is a borderless, fully integrated market. Commission economists pointed out that in a number of industries Europe seemed to have markets that were segmented: Instead of treating the whole continent as a single market, firms seemed to have carved it into local zones served by relatively small-scale national producers. They argued that with all barriers to trade removed, there would be a consolidation of these producers, with substantial gains in productivity. These putative gains raised the overall estimated benefits from 1992 to several percent of the initial income of European nations. The Commission economists argued further that there would be indirect benefits, because the improved efficiency of the European economy would improve the trade-off between inflation and unemployment. At the end of a series of calculations, the Commission estimated a gain from 1992 of 7 percent of European income.[3]

While nobody involved in this discussion regarded 7 percent as a particularly reliable number, many economists shared the conviction of the Commission that the gains would be large. There were, however, skeptics, who suggested that the segmentation of markets had more to do with culture than trade policy. For example, Italian consumers wanted washing machines that were quite different from those preferred in Germany. Italians tend to buy relatively few clothes, but those they buy are stylish and expensive, so they prefer slow, gentle washing machines that conserve their clothing investment.

A decade after 1992, it was clear that both the supporters and the skeptics had a valid point. In some cases there have been notable consolidations of industry. For example, Hoover closed its vacuum cleaner plant in France and concentrated all its production in an efficient plant in Britain. In some cases old market segmentations have clearly broken down, and sometimes in surprising ways, like the emergence of British sliced bread as a popular item in France. But in other cases markets have shown little sign of merging. The Germans have shown little taste for imported beer, and the Italians none for pasta made with soft wheat.

How large were the economic gains from 1992? By 2003, the European Commission was offering more modest estimates than it had before 1992: It put the gains at about 1.8 percent of GDP. If this number is correct, it represents a mild disappointment but hardly a failure.

[3] See *The Economics of 1992* (Brussels: Commission of the European Communities, 1988).

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 often argue that deviations from free trade reduce national welfare, there are, in fact, 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.**

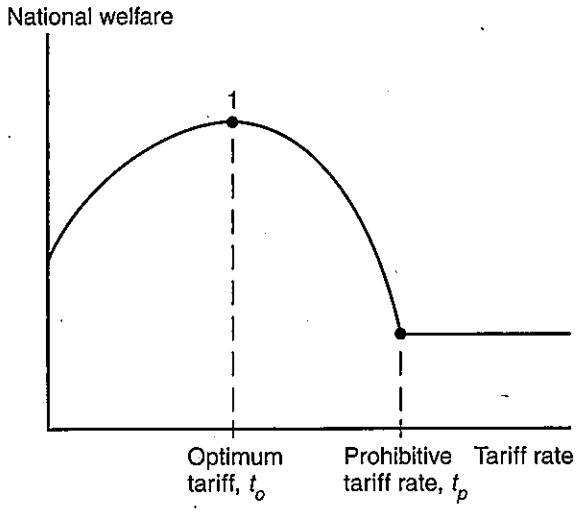
The appendix to this chapter shows that for a sufficiently small tariff the terms of trade benefits must outweigh the costs. Thus at small tariff rates a large country's welfare is higher than with free trade (Figure 9-2). As the tariff rate is increased, however, the costs eventually begin to grow more 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 9-2) 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 9-2, 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.

Figure 9-2

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.



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 fell in the mid-1980s, it is hard to argue that Saudi Arabia would have been better off under free trade.

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 exports, so that the terms of trade argument is of little practical importance. 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 emphasized more by economists as a theoretical proposition than it is 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 the next two chapters: 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, each of these examples is one in which 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.

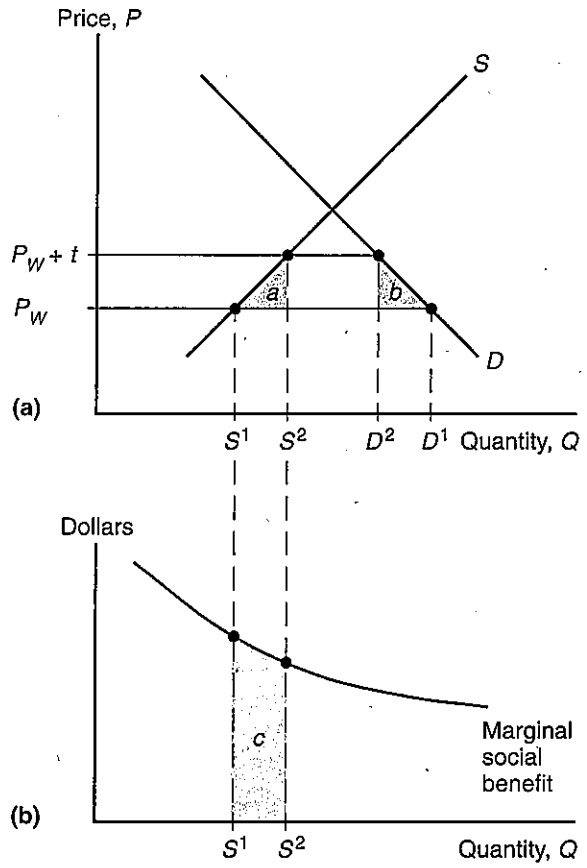
Suppose, for example, that the production of some good yields experience that will improve the technology of the economy as a whole but that the firms in the sector cannot appropriate this benefit and therefore do not take it into account in deciding how much to produce. Then there is a **marginal social 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 9-3 illustrates the domestic market failure argument against free trade. Figure 9-3a shows the conventional cost-benefit analysis of a tariff for a small country (which rules out terms of trade effects). Figure 9-3b 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

Figure 9-3

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.



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 9-3b 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 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, for example, by 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 10). 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 that there are 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 9-3 showed that a tariff might raise welfare, despite the production and consumption distortion 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 policymakers: 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 United States, for example, an import quota on automobiles has been supported on the grounds that it is necessary to save the jobs of autoworkers. The advocates of an import quota argue that U.S. labor markets are too inflexible for autoworkers to remain employed either by cutting their wages or by finding jobs in other sectors. Now consider a purely domestic policy aimed at the same problem: a subsidy to firms that employ autoworkers. Such a policy would encounter massive political opposition. For one thing, to preserve current levels of employment without protection would require large subsidy payments, which would either increase the federal government budget deficit or require a tax increase. Furthermore, autoworkers are among the highest-paid workers in the manufacturing sector; the general public would surely object to subsidizing them. It is hard to believe an employment

subsidy for autoworkers could pass Congress. Yet an import quota *would be even more expensive*, because while bringing about the same increase in employment, it would also distort consumer choice. The only difference is that the costs would be less visible, taking the form of higher automobile prices rather than direct government outlays.

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 a useful way to focus attention on 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 about the appropriate policy response. For example, suppose there is urban unemployment in a less-developed country; what is the appropriate policy? One hypothesis (examined more closely in Chapter 10) says that a tariff to protect urban industrial sectors will draw the unemployed into productive work and thus generate social benefits that more than compensate for its costs. Another hypothesis says, however, 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 right 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 the Pandora's box of a more flexible approach.

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

Income Distribution and Trade Policy

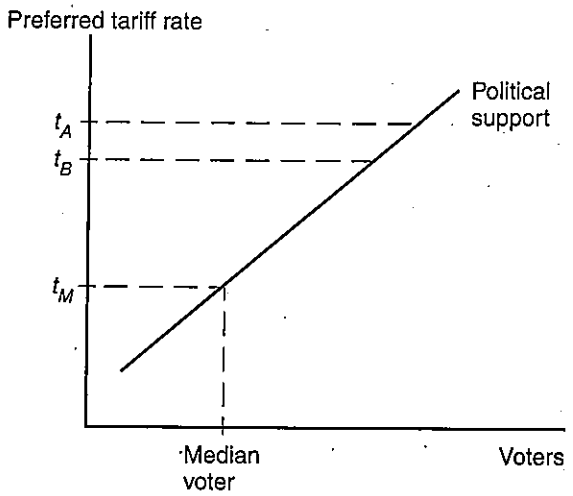
The discussion so far has focused on national welfare arguments for and against tariff policy. It is appropriate to start there, both because a distinction between national welfare and the welfare of particular groups helps to clarify the issues and because the advocates of trade policies usually claim they 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.

Figure 9-4

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.



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.[4] The model runs as follows: Suppose that there are two competing parties, each of which is willing to promise whatever will enable it to win the next election. Suppose that policy can be described along a single dimension, say, the level of the tariff rate. And finally, suppose that voters differ in the policies they prefer. For example, imagine that 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 4). 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 9-4. 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 that 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 wanted 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.

But 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 to getting out the vote; since these activists are often ideologically motivated, the need for their support may prevent parties

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

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. Recall the example of the U.S. sugar import quota, discussed in Chapter 8: According to the estimates presented there, the quota imposed a loss of about $2.5 billion on U.S. consumers—that is, on tens of millions of voters—while providing a much smaller gain to a few thousand sugar industry workers and businesspersons. 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.[5] 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 that policies that impose large losses in total, but small losses on any individual, may not face any effective opposition. Again take the example of the sugar import quota. This policy imposes a cost on a typical American family of approximately $30 per year. Should a consumer lobby his or her congressperson to remove the quota? 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 literally not worth the paper it is written on, let alone the postage stamp. (Indeed, it is surely not worth even learning of the quota'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 the quota, it would surely be repealed, bringing benefits to consumers far exceeding the cost 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) 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 the sugar quota can happen is that the sugar producers form a relatively small, well-organized group that is well aware of the size of the implicit subsidy members receive, while sugar 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.

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

Politicians for Sale: Evidence from the 1990s

As we explained in the text, it's hard to make sense of actual trade policy if you assume that governments are genuinely trying to maximize national welfare. On the other hand, actual trade policy does make sense if you assume that 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 at all?

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

Modeling the Political Process

While the logic of collective action has long been invoked by economists to explain seemingly irrational trade policies, it is somewhat vague on the way in which organized interest groups actually go about influencing policy. A growing body of recent analysis tries to fill this gap with simplified models of the political process.[6]

The starting point of this analysis is an obvious point: 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 that are against the interest of the typical voter if he or she 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.

Recent 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

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

	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

how many would have voted in favor in the absence of business contributions. The last line shows how many would have voted in favor if both business and labor contributions had been absent.

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," National Bureau of Economic Research Working Paper no. 6376.

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 have been 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 10. 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 percent of the work force. Farmers are, however, usually a well-organized and politically effective group, which has been able in many cases to

achieve very high rates of effective protection. We discussed Europe's Common Agricultural Policy in Chapter 8; 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. 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 by and large a food exporter, which means that tariffs or import quotas cannot raise prices. (Sugar is an exception.) 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 that cloth into clothing). Both industries, but especially the apparel industry, have been heavily protected both through tariffs and through import quotas; they are currently subject to the Multi-Fiber Arrangement, which sets 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.

Table 9-3 gives an indication of the dominant role of the clothing industry in modern U.S. protection; it also suggests how hard it is to rationalize actual policies in terms of any economic logic. As the table suggests, apparel and textiles together accounted for more than three-fourths of the consumer costs of protection in 1990, and more than five-sixths of the overall welfare costs. What is peculiar is that because clothing imports were limited by the Multi-Fiber Agreement—which assigned import licenses to exporting countries—most of the welfare cost came not from distortion of production and consumption but from the transfer of quota rents to foreigners.

TABLE 9-3 Effects of Protection in the United States ($ billion)

Effect	Apparel	Textiles	All Industries
Consumer cost	21.16	3.27	32.32
Producer gain	9.90	1.75	15.78
Tariff revenue	3.55	0.63	5.86
Quota rent	5.41	0.71	7.12
Producer and consumer distortion	2.30	0.18	3.55
Overall welfare loss	7.71	0.89	10.42

Source: Gary Hufbauer and Kimberly Elliott, *Measuring the Costs of Protection in the United States* (Washington, D.C.: Institute for International Economics, 1994), pp. 8–9.

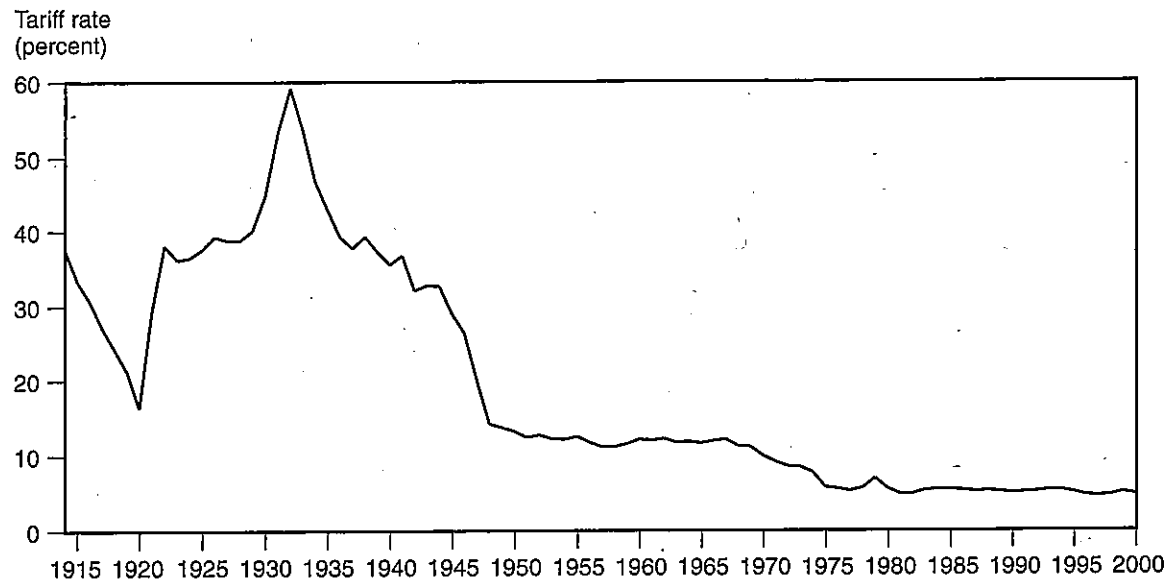


Figure 9-5

The U.S. Tariff Rate

After rising sharply at the beginning of the 1930s, the average tariff rate of the United States has steadily declined.

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 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 9-5 shows the average U.S. tariff rate on dutiable imports from 1914 to 2000; after rising sharply in the early 1930s, the rate has steadily declined.[7] Most economists believe 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?

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

[7] 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! To try to correct for this, the measure we use in Figure 9-5 shows the rate only on "dutiable" imports; that is, it excludes imports that for some reason were exempt from tariff. At their peak, U.S. tariff rates were so high that goods subject to tariffs accounted for only one-third of imports; by 1975 that share had risen to two-thirds. As a result, the average tariff rate on all goods fell much less than the rate on dutiable goods. The numbers shown in Figure 9-5, however, give a more accurate picture of the major liberalization of trade actually experienced by the United States.

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 that there are only two countries in the world, the United States and Japan, and that these countries have only two policy choices, free trade or protection. Suppose that these are unusually clear-headed governments that can assign definite numerical values to their satisfaction with any particular policy outcome (Table 9-4).

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 in the public interest but 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 9-4 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

TABLE 9-4 The Problem of Trade Warfare

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

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 countries 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 countries: 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 that 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, as well as "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 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, which was still in progress when this book went to press. The round's slow progress has been marked by disagreement between developed and developing countries over agricultural protection.

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 were over which industries to exempt rather than over 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 seven 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 was 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 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 that easy to summarize. The most important results may, however, 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 will fall almost 40 percent as a result of the round. However, tariff rates were already quite low. In fact, the average tariff rate will fall 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 several times as high as world market prices; Europe's massive export subsidies under the Common Agricultural Program were described in Chapter 8. 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 that protect their farmers with import quotas, like Japan, were required to replace quotas with tariffs, which may not be increased in the future.

World trade in textiles and clothing has also been highly distorted by the Multi-Fiber Arrangement also described in Chapter 8. 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 is a fairly dramatic liberalization—remember that most estimates suggest that protection of clothing imposes 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. Many trade experts worried that when push came to shove, there would be strong political pressure to reintroduce limits on apparel exports.

Sure enough, as this book went to press, 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. It remains to be seen whether the liberalization of clothing trade will actually prove politically sustainable.

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 Hungarian buses in Chapter 8.) The Uruguay Round set new rules that should open up a wide range of government contracts for imported products.

From the GATT to the WTO

Much of the publicity surrounding 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 administered the GATT. As we'll see in Chapter 11, 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, while 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 included 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," protected by patents and copyrights. (Thirty years ago General Motors was the quintessential modern corporation; now it's Microsoft.) 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. The basic problem arises when one country accuses another of violating the rules of the trading system. Suppose, for example, that Canada accuses the United States of unfairly limiting timber imports—and the United States denies the charge. What happens next?

Before the WTO, there were international tribunals in which Canada could press its case, but such proceedings tended to drag on for years, even decades. And even when a ruling had been issued, there was no way to enforce it. This did not mean that the GATT's rules had no force: Neither the United States nor other countries wanted to acquire a reputation as scofflaws, so they made considerable efforts to keep their actions "GATT-legal." But gray-area cases tended to go unresolved.

The WTO contains a much more formal and effective procedure. Panels of experts are selected to hear cases, normally reaching a final conclusion in less than a year; even with appeals the procedure is not supposed to take more than 15 months.

Suppose that the WTO concludes that a nation has, in fact, been violating the rules—and the country nonetheless refuses to change its policy. Then what? The WTO itself has no enforcement powers. What it can do is grant the country that filed the complaint the right to retaliate. To use our Canada–U.S. example, the government of Canada might be given the right to impose restrictions on U.S. exports, without itself being considered in violation of WTO rules. In the case of the banana dispute described in the box on p. 234, a WTO ruling found the European Union in violation; when Europe remained recalcitrant, the United States temporarily imposed tariffs on such items as designer handbags.

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 box on p. 230 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 matter is made worse by the fact that as described above, much of the important action is "backloaded," so that we will not really see some of the important provisions of the round work in practice until nearly a decade after its signing.

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 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 did not 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 11, 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 did not discriminate among sources, the WTO would have had no complaints.

The most widely cited estimates are those of the GATT itself and of the Organization for Economic Cooperation and Development, another international 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 once the agreement is fully in force; this would raise world real 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 they assume that exports and imports will respond 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 will apply: The costs of the Uruguay Round will be felt by concentrated, often well-organized groups, while much of the benefit will accrue to broad, diffuse populations. The progress on agriculture will directly hurt the small but influential populations of farmers in Europe, Japan, and other

countries where agricultural prices are far above world levels. These losses should be much more than offset by gains to consumers and taxpayers in those countries, but because these benefits will be very widely spread they may be little noticed. Similarly, the liberalization of trade in textiles and clothing will produce some concentrated pain for workers and companies in those industries, offset by considerably larger but far less visible consumer gains.

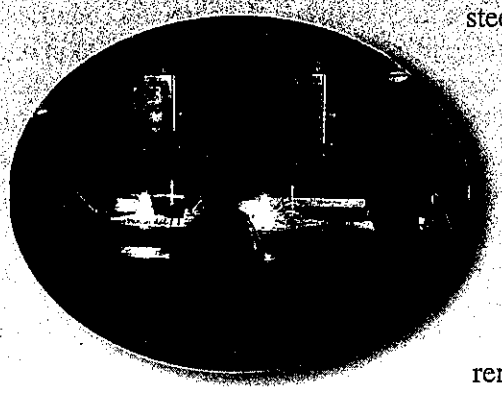
Given these strong distributional impacts of the Uruguay Round, it is actually remarkable that an agreement was reached at all. Indeed, after the failure to achieve anything close to agreement by the 1990 target, many commentators began to pronounce the whole trade negotiation process to be dead. That 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 Program 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 that a failed round would not mean mere 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 for 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 now had 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 economics against major economic powers like the United States or the EU.

The answer may not be long in coming. In March 2005, in a landmark decision, the WTO agreed with Brazil's claim that U.S. subsidies to cotton producers are illegal. Will the U.S. government decide that international agreements take precedence over the interests of a politically powerful lobby? Stay tuned.

Preferential Trading Agreements

The international trade agreements that we have described so far all involved a "nondiscriminatory" reduction in tariff rates. For example, when the United States agrees with Germany to lower its tariff on imported machinery, the new tariff rate applies to machinery from any nation rather than just imports from Germany. Such nondiscrimination is normal in most tariffs. Indeed, the United States grants many countries a status known formally as that of "most favored nation" (MFN), a guarantee that their exporters will pay tariffs no higher than that of the nation that pays the lowest. All countries granted MFN status pay the same rates. 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 others' 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 others' 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.[8]

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

[8] 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.

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 minimized 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 that 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.

Canada, the United States, and Mexico, creates a free 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?

Do Trade Preferences Have Appeal?

Over the last few years the European Union has slipped repeatedly into bunches of trouble over the question of trade preferences for bananas.

Most of the world's banana exports come from several small Central American nations—the original "banana republics." Several European nations have, however, traditionally bought their bananas instead from their past or present West Indian colonies in the Caribbean. To protect the island producers, France and the United Kingdom impose import quotas against the "dollar bananas" of Central America, which are typically about 40 percent cheaper than the West Indian product. Germany, however, which has never had West Indian colonies, allowed free entry to dollar bananas.

With the integration of European markets after 1992, the existing banana regime became impossible to maintain, because it was easy to import the cheaper dollar bananas into Germany and then ship them elsewhere in Europe. To prevent this outcome, the European Commission announced plans in 1993 to impose a new common European import quota against dollar bananas. Germany angrily protested the move and even denied its legality: The Germans pointed out that the Treaty of Rome, which established the European Community, contains an explicit guarantee (the "banana protocol") that Germany would be able to import bananas freely.

Why did the Germans go ape about bananas? During the years of communist rule in East Germany, bananas were a rare luxury. The sudden availability of inexpensive bananas after the fall of the Berlin Wall made them a symbol of freedom. So the German government was very unwilling to introduce a policy that would sharply increase banana prices.

In the end the Germans grudgingly went along with a new, unified system of European trade preferences on bananas. But that did not end the controversy: In 1995 the United States entered the fray, claiming that by monkeying around with the existing system of preferences the Europeans were hurting the interests not only of Central American nations but those of a powerful U.S. corporation, the Chiquita Banana Company, whose CEO has donated large sums to both Democratic and Republican politicians.

In 1997 the World Trade Organization found that Europe's banana import regime violated international trade rules. Europe then imposed a somewhat revised regime; but this halfhearted attempt to resolve the banana split proved fruitless. The dispute with the United States escalated, with the United States eventually retaliating by imposing high tariffs on a variety of European goods, including designer handbags and pecorino cheese.

In 2001, Europe and the United States agreed on a plan to phase out the banana import quotas over time. The plan created much distress and alarm in Caribbean nations, which feared dire consequences from their loss of privileged access to the European market. But it turns out that the story isn't over yet. In January 2005 the European Union announced that it would eliminate import quotas on bananas, but that it would *triple* the tariff on bananas that do not come from the so-called ACP countries (Africa, Caribbean, and Pacific—essentially former European colonies.) Latin American banana producers promised to challenge the new tariff. Meanwhile, the banana saga continues.

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 that 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.

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.

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 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 largely 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—if the pact diverted trade instead of creating it—it could 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, 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, 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.

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 practice, trade policy is dominated by considerations of income distribution. No single way of modeling the politics of trade policy exists, but several useful ideas have

been proposed. Political scientists often argue that policies are determined by competition among political parties that try to attract as many votes as possible. In the simplest case, this leads to the adoption of policies that serve the interests of the *median voter*. While useful for thinking about many issues, however, this approach seems to yield unrealistic predictions for trade policies, which typically favor the interest of small, concentrated groups over the general public. Economists and political scientists generally explain this by appealing to the problem of *collective action*. Because individuals may have little incentive to act politically on behalf of groups to which they belong, those groups which are well organized—typically small groups with a lot at stake—are often able to get policies that serve their interests at the expense of the majority.

6. If trade policy were made on a purely domestic basis, progress toward freer trade would be very difficult to achieve. In fact, however, industrial countries have achieved substantial reductions in tariffs through a process of *international negotiation*. International negotiation helps the cause of tariff reduction in two ways: It helps broaden the constituency for freer trade by giving exporters a direct stake, and it helps governments avoid the mutually disadvantageous *trade wars* that internationally uncoordinated policies could bring.
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 they do not charge tariffs on each others' 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.

KEY TERMS

binding, p. 226
collective action, p. 219
customs union, p. 232
domestic market failures, p. 214
efficiency case for free trade, p. 208
free trade area, p. 232
General Agreement on Tariffs and Trade (GATT), p. 226
international negotiation, p. 223
marginal social benefit, p. 214
median voter, p. 218
optimum tariff, p. 213
political argument for free trade, p. 210
preferential trading agreement, p. 232
Prisoner's dilemma, p. 224
terms of trade argument for a tariff, p. 213
theory of the second best, p. 215
trade creation, p. 235
trade diversion, p. 235
trade round, p. 226
trade war, p. 224
World Trade Organization (WTO), p. 226

PROBLEMS

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 out 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. "The more oil the United States imports, the higher the price of oil will go in the next world shortage."
   b. "The growing exports of off-season fruit from Chile, which now accounts for 80 percent of the U.S. supply of such produce as winter grapes, are contributing to sharply falling prices of these former luxury goods."
   c. "U.S. farm exports don't just mean higher incomes for farmers—they mean higher income for everyone who sells goods and services to the U.S. farm sector."
   d. "Semiconductors are the crude oil of technology; if we don't produce our own chips, the flow of information that is crucial to every industry that uses microelectronics will be impaired."
   e. "The real price of timber has fallen 40 percent, and thousands of timber workers have been forced to look for other jobs."
3. A small country can import a good at a world price of 10 per unit. The domestic supply curve of the good is

$$S = 50 + 5P.$$

   The demand curve is

$$D = 400 - 10P.$$

   In addition, each unit of production yields a marginal social benefit of 10.
   a. Calculate the total effect on welfare of a tariff of 5 per unit levied on imports.
   b. Calculate the total effect of a production subsidy of 5 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 that 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 $2 of either consumer gain or government revenue. Calculate the effects *on the government's objective* of a tariff of 5 per unit.
5. Suppose that upon entering the European Union, it is discovered that the cost of automobile production in Poland is €14,000 while it is €20,000 in Germany. Suppose that the EU, which has a customs union, has a X percent tariff on automobiles and that 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 $Y = €10{,}000$
   b. $X = 100\%$ and $Y = €10{,}000$
   c. $X = 100\%$ and $Y = €8{,}000$

6. "There is no point in the United States complaining about trade policies in Japan and Europe. Each country has a right to do whatever is in its own best interest. Instead of complaining about foreign trade policies, the United States should let other countries go their own way, and give up our own prejudices about free trade and follow suit." 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 Figure 9-3? What is the equilibrium solution to the game if governments formulate policy in this way? Would they ever choose the strategy of protectionism?
9. Suppose that citizens in a country like United States are concerned with working conditions in factories overseas. They feel that overseas factories create social *costs* in the form of pollution and poor conditions for workers that are unaccounted for in the market price of goods. Are tariffs and quotas economically justified in this context? Why or why not?

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Jeffrey Schott. *The Uruguay Round: An Assessment*. Washington, D.C.: Institute for International Economics, 1994. A mercifully brief and readable survey of the issues and accomplishments of the most recent GATT round, together with a survey of much of the relevant research.

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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

$$D = a - b\tilde{P}, \tag{9A-1}$$

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

$$Q = e + f\tilde{P}. \tag{9A-2}$$

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

$$D - Q = (a - e) - (b + f)\tilde{P}. \tag{9A-3}$$

Foreign's export supply is also a straight line,

$$(Q^* - D^*) = g + hP_W, \tag{9A-4}$$

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

$$\tilde{P} = P_W + t. \tag{9A-5}$$

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 9A-1).

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

$$(a - e) - (b + f) \times (P_W + t) = g + hP_W. \tag{9A-6}$$

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

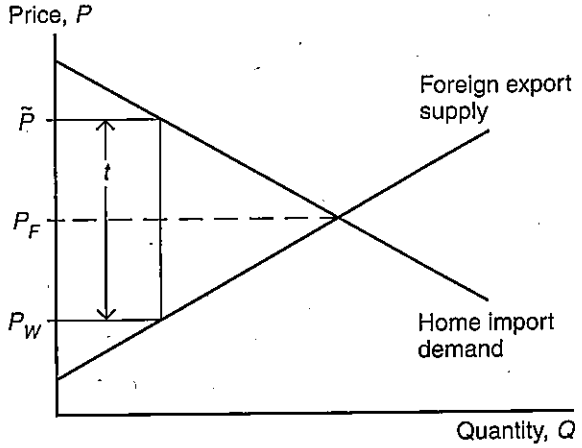
$$\tilde{P} = P_F + th/(b + f + h), \tag{9A-7}$$

while lowering the world price to

Figure 9A-1

Effects of a Tariff on Prices

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



$$P_W = P_F - t(b + f)/(b + f + h). \tag{9A-8}$$

(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.)

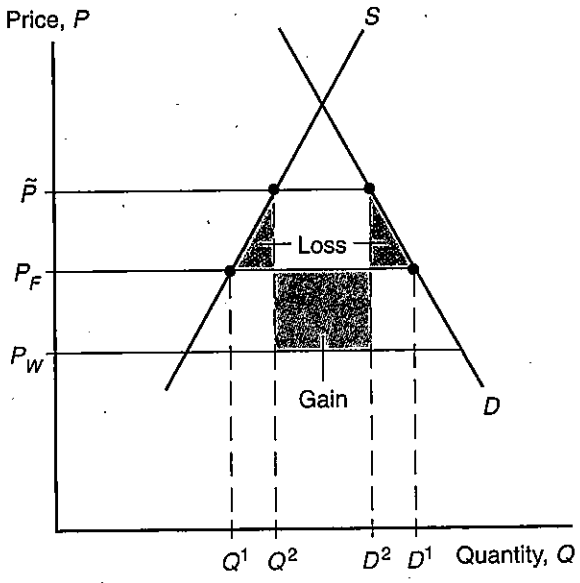
The Tariff and Domestic Welfare

We now use what we have learned to derive the effects of a tariff on Home's welfare (Figure 9A-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

Figure 9A-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.



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

and

$$D^2 = D^1 - tbh/(b + f + h). \tag{9A-10}$$

The gain from a lower world price is the area of the rectangle in Figure 9A-2, the fall in the price multiplied by the level of imports after the tariff:

$$\begin{aligned}\text{Gain} &= (D^2 - Q^2) \times t(b + f)/(b + f + h)\\ &= t \times (D^1 - Q^1) \times (b + f)/(b + f + h) - (t)^2 \times h(b + f)^2/(b + f + h)^2.\end{aligned} \tag{9A-11}$$

The loss from distorted consumption is the sum of the areas of the two triangles in Figure 9A-2:

$$\begin{aligned}\text{Loss} &= (1/2) \times (Q^2 - Q^1) \times (\widetilde{P} - P_F) + (1/2) \times (D^1 - D^2) \times (\widetilde{P} - P_F)\\ &= (t)^2 \times (b + f) \times (h)^2/2(b + f + h)^2.\end{aligned} \tag{9A-12}$$

The net effect on welfare, therefore, is

$$\text{Gain} - \text{loss} = t \times U - (t)^2 \times V, \tag{9A-13}$$

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 that 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.