

Introduction to International Relations

Lecture 13: Trade and Interdependence

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May 25, 2005

Overview. We study the fundamentals of international trade and attempt to understand why trade is beneficial. We analyze the notions of absolute and comparative advantage and note that free trade is good because it expands the production possibilities, enabling all participants to prosper. We then turn to the question why free trade is so rare and contentious, which is a puzzle given its apparent beneficial effects. We study protectionism, the policies designed to curb trade, and discover many reasons why a government might want to protect its own inefficient domestic producers.

OUTLINE OF LECTURE 13: TRADE AND INTERDEPENDENCE

1. Why trade?
 - a) absolute advantage
 - b) comparative advantage
 - production possibilities
 - specialization
 - term of trade
 - gains from trade
 - expansion of production
2. Why restrict trade?
 - a) autarky and free trade
 - b) social/political/security costs of trade liberalization
 - c) reasons for protectionism:
 - national security
 - domestic welfare
 - political autonomy
 - infant industries
3. Methods for protectionism:
 - a) tariffs (trade war)
 - b) non-tariff barriers (NTBs):
 - quotas
 - voluntary export restrictions (VERs)
 - regulations (red tape)
 - subsidies
 - nationalization
4. Economic threats
 - a) sanctions
 - b) boycott
 - c) embargo

We have already gently begun easing into economic questions with our last lecture. We now move fully from the realm of international security into the realm of international political economy (IPE) which encompasses the study of trade, financial relations, international economic organization, development, and multinational corporations. To our joint relief, we shall find that all theoretical concepts of bargaining power, credibility, information, and self-enforcement are equally applicable in this area as well. Hence, it will be a “simple” matter of applying them in the study of questions where military force is replaced by economic force, and where one’s “attack” takes the form of imposing a tariff or changing the exchange rate. Hence, we shall use these concepts to study political bargaining over economic issues.

When the well-being of a state depends on the behavior of another state (or states), the first state is dependent on the second. When the two states are simultaneously dependent on each other, then they are **interdependent**. States depend on each other not just economically but also politically, and so interdependence is a complicated phenomenon. It may be asymmetrical (one state is more dependent on the other), which means that such a state is vulnerable, especially if there are no alternative sources of the goods and services that its dominant partner is supplying.

We begin with the most visible and contentious issue of IPE: international trade, which amounted to about 40% of global economic activity and accounted for about \$13 trillion worth of goods traded between states in 2000. This is a huge number, about ten times larger than the world’s military spending. Because of its vast economic importance, trade is a contentious political issue with serious ramifications for domestic politics in all states. We shall examine some of these consequences as we discuss the organization of world trade. First, however, we need to answer a deceptively simple question: why trade? The equally deceptively simple answer is that trade is profitable. We now examine what we mean by that.

1 Why Trade?

1.1 Absolute Advantage

Why do states trade with each other? Adam Smith provides one logical answer that is easy to grasp: if a country is better at producing a particular good (e.g. it can do it cheaper than another country), then it can benefit by trading some of that good for another, which the other country is better at producing.

This concept of **absolute advantage** is quite intuitive. Imagine two countries, say the U.S. and Mexico, and two goods, high-tech widgets and low-tech gadgets. A country has an absolute advantage when it can produce the same amount of output with less input relative to another country. Table 1 lists the hypothetical number of labor hours each country would take to produce one widget and one gadget respectively.

According to these hypothetical data, the U.S. has an absolute advantage in

	1 Widget	1 Gadget
U.S.	6 hrs	3 hrs
Mexico	8 hrs	2 hrs

Table 1: Each country has an absolute advantage in one good.

widget production (it takes 6 instead of 8 hours to make a widget) and Mexico has absolute advantage in gadget production (it takes 2 instead of 3 hours to make a gadget). Hence, the U.S. should devote its resources to producing widgets, while Mexico should **specialize** in producing gadgets, and export some of them in trade for American widgets.

To see that this is the case, we first examine what each country could produce in the absence of trade. Suppose each has a total of 120 labor hours available, and these have to be allocated solely to the production of these two goods. Since an American widget costs 6 hours of work, and an American gadget costs 3 hours, in 120 hours the U.S. could produce any mix of widgets and gadgets that satisfies the *budget constraint*:

$$\text{U.S.: } 6 \times W + 3 \times G = 120,$$

where W is the number of widgets and G is the number of gadgets. The set of all possible production bundles of widgets and gadgets can be obtained by plotting the points that satisfy this equation, as shown in Figure 1.

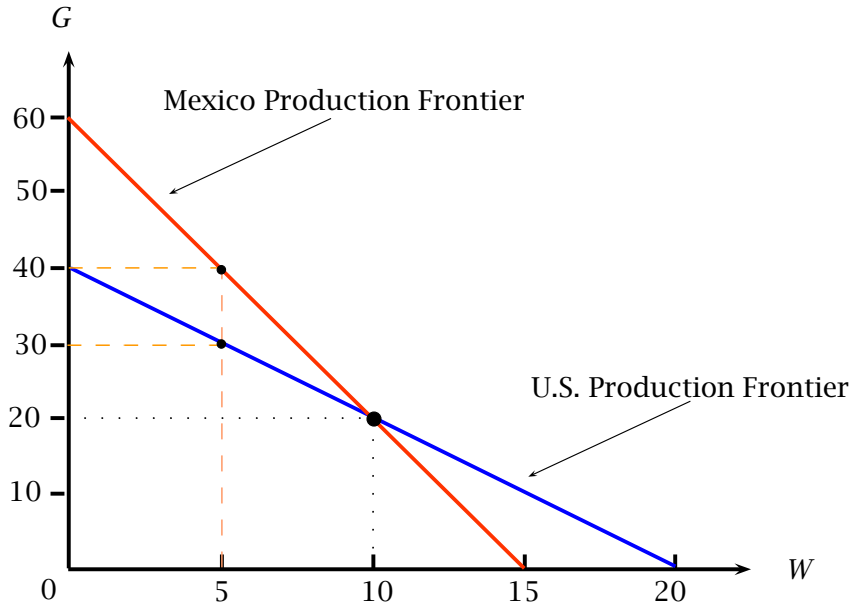


Figure 1: Absolute Advantage.

Analogously, a Mexican widget costs 8 hours, and a Mexican gadget costs 2 hours of work, so in 120 hours Mexico could produce any mix that satisfies the

following:

$$\text{Mexico: } 8 \times W + 2 \times G = 120.$$

For example, if the U.S. produces $W = 0$ widgets, it can produce $G = 40$ gadgets; conversely if it produces $G = 0$ gadgets, it can produce $W = 20$ widgets. If Mexico produces $W = 0$ widgets, it can produce $G = 60$ gadgets, and if it produces $G = 0$ gadgets, it can produce $W = 15$ widgets. You can also think about the *production possibilities* in terms of how many items of one product a country can produce if it wants to produce some number of the other: If the U.S. wants to produce $W = 5$ widgets, it can also produce $G = 30$ gadgets; and if Mexico wants to produce $G = 40$ gadgets, it can also produce $W = 5$ widgets.

The figure, then, depicts what each country can do if trade with the other is not possible. Let's assume that each country wants to have $W = 10$ widgets, and as many gadgets as possible. Without trade, this means that each would get $G = 20$ of these. The total world production would be $(W = 20, G = 40)$.

Now we want to see if there are any advantages to trading. Suppose that each country specialized in the good in which it had an absolute advantage and then traded some of the production with the other. If the U.S. specializes in widgets, it could produce 20 widgets. If Mexico specializes in gadgets, it could produce 60 gadgets. The total world production is now $(W = 20, G = 60)$, which is better than what would have occurred if each country produced both goods.

Suppose that the **terms of trade** specify that each widget is exchanged for 3 gadgets; that is, the $W : G$ ratio is 1 : 3. Mexico wants $W = 10$, and under the terms of trade, it will have to pay $G = 30$ to the U.S. This now leaves the U.S. with $(W = 10, G = 30)$, which is ten gadgets better than if it produced everything itself. Mexico is left with $(W = 10, G = 30)$, which is also ten gadgets better than if it produced everything itself. In other words, *both countries are better off if each specializes in the good in which it has an absolute advantage and then trade. Moreover, the production possibilities frontier is expanded, and the total world production is increased under a free trade regime.*

The terms of trade 1 : 3 distribute the $G = 20$ surplus equitably and each country gets half of the surplus. You can imagine that there may be other terms of trade that privilege one of the countries. Suppose that after strenuous negotiation, the U.S. manages to utilize its superior economic position and extracts 1 : 3.5 terms of trade; that is, each widget is exchanged for 3.5 gadgets. Now, by trading $W = 10$, the U.S. would obtain $G = 35$ in return, leaving it with the bundle $(W = 10, G = 35)$. This means that Mexico's bundle is now $(W = 10, G = 25)$. Note that it is still the case that both countries are better off with the free trade regime, although the U.S. has succeeded in securing a larger share of the gadget surplus for itself.

We are now in familiar territory: both countries know that **gains from trade** exist and they want to coordinate on some mutually beneficial terms. However, they conflict over which of the possible terms of trade they will select. In other words, we have a case of distributive conflict, and an occasion for bargaining. Our rationalist bargaining theories of war now apply.

To see that, note that in the absence of an agreement, the countries will revert to domestic production without trade. This is equivalent to the war outcome in our bargaining model because this specifies the production bundles that each can assure for itself without trading. This now implies that no country would agree to any terms of trade that would leave it worse off than what it can ensure through domestic production. For example, Mexico would not agree to any terms of trade that demand more than 4 gadgets per widget (1 : 4) because this means that to obtain $W = 10$ widgets, it would have to give up more than $G = 40$ gadgets, leaving fewer than 20 after trade, which is worse than just producing everything domestically. Analogously, the U.S. would not agree to an exchange that involves fewer than 2 gadgets per widget (1 : 2) because doing so means that it would obtain fewer than $G = 20$ gadgets for ten of the widgets, which is worse than what it could have produced domestically.

Hence, the bargaining range over the terms of trade is between 1 : 2 and 1 : 4, and any ratio that falls within range will be mutually acceptable. Obviously, the U.S. prefers terms closer to Mexico's reservation point; that is, as close to 1 : 4 as possible. On the other hand, Mexico prefers terms that are as close to the American reservation point of 1 : 2 as possible. The gain for one actor is an automatic loss for another. Hence, even though both actors know that the bargaining range exists and even though both want to coordinate on some terms within that range, the actors conflict over which of the possible bargains they will choose. We can now conclude that trade negotiations can sometimes fail for reasons analogous to bargaining failure and war: private information with incentives to misrepresent, and commitment problems, among others.

1.2 Comparative Advantage

The simple example in the previous section clearly demonstrates the benefits of free trade in a world where a country enjoys an absolute advantage in some good. But perhaps this is unrealistic. What if a country were so lagging in its development that it did not have an absolute advantage in anything? Would trade then come to a halt?

To analyze this scenario, consider another hypothetical example depicted in Table 2. We keep everything as in Table 1 except Mexico's cost of gadget production, which is now 12 hrs rather than 2. This time, the U.S. is more efficient at producing *both* widgets and gadgets. It would appear that under these circumstances, the U.S. would produce everything it needs for domestic consumption and forego any trade with Mexico.

	1 Widget	1 Gadget
U.S.	6 hrs	3 hr
Mexico	8 hrs	24 hrs

Table 2: One country has an absolute advantage in both goods.

As before, let's assume each country has a total of 120 labor hours available.

We already know the American production possibilities frontier given by the equation $6 \times W + 3 \times G = 120$. The new equation for Mexico is:

$$\text{Mexico: } 8 \times W + 24 \times G = 120.$$

We now plot the production possibilities in Figure 2. The figure seems to make it very clear that perhaps there is nothing the U.S. could gain from trading with Mexico: its production frontier is everywhere above the Mexican.

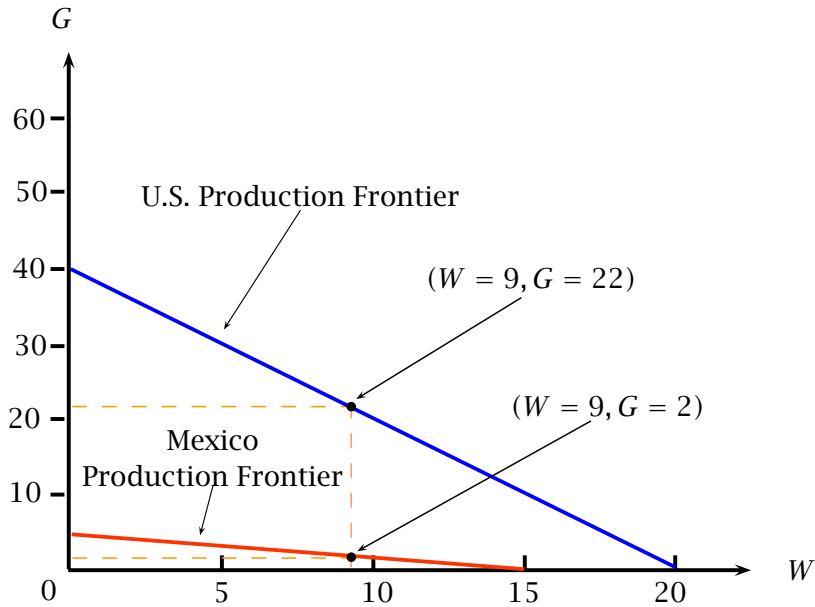


Figure 2: Comparative Advantage.

To make things a bit more concrete, let's look at what each country could do if it wanted to produce $W = 9$ widgets. For the U.S., this leaves $120 - 6 \times W = 66$ labor hours available for widgets, and at 3 hours per gadget, this translates into $G = 22$ domestically produced gadgets. Analogously, for Mexico, the remaining gadget time is $120 - 8 \times W = 48$ hours, which translates (at 24 hours per gadget) into $G = 2$ gadgets. The corresponding production bundles, $(W = 9, G = 22)$ for the U.S. and $(W = 9, G = 2)$ for Mexico, are indicated in Figure 2.

It is worth noting that the production of widgets in greater quantity can only come at the expense of producing gadgets in smaller quantity (and conversely, the production of gadgets in greater quantity can only come at the expense of producing widgets in smaller quantity). The only way to increase the production of both is through the more intensive use of resources, technological improvement, or increases in productivity. It would appear that there are no gains from trade to be made under these circumstances: the U.S. is more efficient at producing both outputs, and there seems to be no reason to trade with Mexico.

However, this conclusion would entirely miss the *opportunity costs* we just mentioned: in order to produce one widget, the U.S. has to sacrifice 2 gadgets

since that requires 6 labor hours that must be drawn from the production of gadgets. In other words, for each widget the U.S. produces (6 labor hours), it must sacrifice two gadgets (at 3 labor hours each). This is the opportunity cost of producing each additional widget. In these terms, in the American case, one widget costs 2 gadgets, and 1 gadget costs $\frac{1}{2}$ of a widget. The widget-to-gadget opportunity cost ratio for the U.S. is $W : G = 1 : 2$.

In Mexico, the production of one gadget (24 labor hours) requires the sacrifice of 3 widgets (at 8 labor hours each). In other words, each gadget costs 3 widgets, and each widget costs $\frac{1}{3}$ of a gadget. The widget-to-gadget opportunity cost ratio for Mexico is $W : G = 3 : 1$.

We now see that the opportunity costs of widget production are lower in Mexico: It takes only a third of a gadget to produce one widget in Mexico rather than the 2 gadgets it takes to do so in the U.S. Conversely, the opportunity costs of gadget production are lower in the U.S.: It takes half a widget to produce one gadget in America rather than the 3 widgets it takes to do so in Mexico. This now means that Mexico has a **comparative advantage** in widgets, whereas the U.S. has a comparative advantage in gadgets.¹

This now means that Mexico should specialize in the production of widgets, whereas the U.S. should specialize in the production of gadgets, and the two should trade with each other. The two countries would have to agree to some terms of trade. Obviously, neither would not agree to anything that leaves it worse off than just producing everything domestically. Given the opportunity costs, the U.S. would not agree to pay more than two gadgets per widget, and Mexico would not pay more than three widgets per gadget. In other words, any terms of trade between $1 : 2$ and $3 : 1$ would benefit both sides. That is, as long as the terms of trade are less than the domestic opportunity costs, gains from trade will exist.

Let's take, for example, $2 : 1$, that is, two widgets would trade for one gadget. These terms of trade certainly fall in the bargaining range of acceptable terms, which implies that both countries should be able to benefit from them. The U.S. could not acquire one widget by paying just half a gadget rather than two; and Mexico could acquire one gadget by paying just two widgets rather than three.

Suppose that Mexico wants $G = 6$ gadgets and as many widgets as possible, whereas the U.S. wants at least $W = 12$ widgets and as many gadgets as possible. Note first that Mexico could not have produced domestically the gadgets it wants even if it produces no widgets whatsoever: the bundle with the most gadgets it can produce with 120 labor hours is $(W = 0, G = 5)$. If the U.S. were to produce everything domestically, after getting its five widgets, it would have $120 - 6 \times W = 48$ labor hours to spend on gadgets, so it would end up with the production bundle $(W = 12, G = 16)$.

If the U.S. specializes completely in gadget production, it will make $G = 40$ of them; if Mexico specializes in widget production, it will make $W = 15$ of them. Under the terms of trade, the U.S. could export 6 gadgets to Mexico in return

¹The notion of comparative advantage is due to the economist David Ricardo.

for 12 widgets. This would leave the U.S. with a bundle ($W = 12, G = 34$), which is clearly better than what it would have obtained through domestic production only. After the trade, Mexico would gain the gadgets it wants, leaving it with ($W = 3, G = 6$), which is also clearly better than the best it can do domestically. In other words, if each country specialized in producing the good in which it has a comparative advantage, gains from trade exist.

Furthermore, the world production is also higher with specialization and trade. To see that, note that if each produced everything domestically, the world would get the bundle ($W = 12, G = 21$), whereas under free trade, the bundle is ($W = 15, G = 40$).

Again, observe how actors want to coordinate on mutually beneficial terms of trade but that they conflict over the precise terms. As we noted, the bargaining range is between $1 : 2$ and $3 : 1$, and we picked $2 : 1$ as the example. Suppose now after strenuous negotiation, the two countries agree on $2.5 : 1$; that is, two and a half widgets would trade for one gadget. To obtain its desired $G = 6$ gadgets, Mexico would now have to pay $W = 15$ widgets. This leaves it with the bundle ($W = 0, G = 6$), which is still better than the entirely domestically produced one of ($W = 0, G = 5$). The U.S. does even better: it now obtains ($W = 15, G = 34$) rather than the domestically produced ($W = 12, G = 16$) or even the ($W = 12, G = 34$) under the previous terms of trade. In other words, the U.S. has managed to extract the entire surplus widget production from Mexico just by shifting the terms of trade.

This illustrates the distributional conflict yet again, this time in the context of comparative advantage. Any terms of trade close to $1 : 2$ would favor Mexico because the U.S. will be forced to pay nearly as much per widget as it would if it were to produce everything by itself. Conversely, any terms of trade close to $3 : 1$ would benefit the U.S. because Mexico would be forced to pay nearly as much per gadget as it would if it were to produce them domestically. In the current example, no terms of trade that exceed $2.5 : 1$ would be able to satisfy Mexico's need for $G = 6$ gadgets because it can pay up to $W = 15$ widgets to get them. If Mexico agree to worse terms, then it would have to live with fewer gadgets than that, although it would still get more than five (the domestic limit) as long as the terms are in the bargaining range. Hence, whereas comparative advantage makes trade possible, the conflict over its terms may be quite difficult to resolve, and negotiations are subject to the same asymmetric information and commitment problems we have discussed.

You may have noticed that in these examples we conveniently assumed that the total amount of widgets wanted by the U.S. and Mexico does not exceed the maximum amount that Mexico can produce under full specialization. Suppose now that both U.S. and Mexico need 9 widgets each. This gives a total world production of 18 widgets, which clearly exceeds Mexico's capacity (it can only produce up to 15). Now, the U.S. could satisfy its demand through domestic production and get ($W = 9, G = 22$). Similarly, Mexico could meet its demand with ($W = 9, G = 2$). The total world production would be ($W = 18, G = 24$).

Can trade still help?

Sure it can. Assume Mexico specializes in widgets and makes 15 of them. Since it only needs 9, it can trade the remaining 6 widgets for gadgets. The U.S. can therefore obtain up to 6 widgets from Mexico, and so it needs to produce only $W = 3$ more to meet its domestic demand. This leaves $120 - 6 \times W = 102$ labor hours for gadget production, which means the U.S. would make $G = 34$ gadgets. Under the original terms of trade, two widgets will trade for one gadget, and so to obtain the 6 widgets from Mexico, the U.S. would pay 3 gadgets. The result, then is $(W = 9, G = 31)$ for the U.S., and $(W = 9, G = 3)$ for Mexico. Compare these bundles with the ones in Figure 2, and note that both countries are better off now. The world production is $(W = 18, G = 34)$, which also exceeds the amount under purely domestic production and no trade. In other words, free trade helps here too: as long as the U.S. produces only the amount of the expensive widgets that Mexico cannot supply and relies on imports for the rest, trade will benefit both states.

How does the Ricardian notion of trade based on comparative advantage relate to Smith's idea of trade based on absolute advantage? Going back to our original example, we note that the production of 1 widget costs the U.S. 2 gadgets, or 1 : 2 cost ratio, whereas the production of a widget costs Mexico 4 gadgets, or 1 : 4 cost ratio. The U.S. has a comparative advantage in widget production, and Mexico has a comparative advantage in gadget production. Hence, under these circumstances, there are gains from free trade to be realized if both countries specialized in their comparative advantage goods (which, naturally happen to be the absolute advantage goods too). The notion of comparative advantage is thus more general than the notion of absolute advantage because it covers more cases than the latter.

Finally, let me emphasize that the production possibilities frontier expands with specialization and free trade. We have seen this in the examples even when the U.S. is more efficient than Mexico in producing each good. To benefit from specialization and free trade, the U.S. should pick the good in which it is "most best" at producing while Mexico should pick the good in which it is "least worst" at producing. International free trade generally expands the production frontier by allocating global resources more efficiently among states that have comparative advantage in producing particular kinds of commodities.

2 Why Restrict Trade?

Free trade is (apparently) great, so what is all the fuss then? Free trade is a rarity even in our modern globalized world. In fact, it is as rare as **autarky**, the policy of full domestic sufficiency; that is, the policy of minimizing trade in favor of domestic production. Between the two extremes of autarky and free trade lies the domain of **protectionism**, one of policies designed to restrict, but not eliminate, trade. Why would a country seek to minimize trade given the advantages of utilizing comparative advantage through specialization and the free exchange of goods?

Imagine what would happen if a country suddenly liberalized its trade. Gradually, firms which enjoy comparative advantage relative to foreign rivals would expand production, leading to increased employment in that sector and better competitiveness of their output. However, firms in sectors where foreign rivals have the comparative advantage would seek to move out of the country, eliminating jobs in the process. While the overall efficiency would increase, the societal and political costs associated with this process can be quite severe.

First, a country may not want to see particular industries move out even if they are less cost-efficient than foreign ones. One crucial consideration is the importance for national security. A government would be loath to allow a critical industry, such as manufacture of silicon chips, move out thereby making the country heavily dependent on foreign production for a good of crucial importance. Similarly, the U.S. protected its automobile industry against Japanese competition because of the sheer size of the sector: opening it up would have led to massive labor outlays, plant closures, and the economic deterioration of entire communities. The auto industry is a heavy consumer of steel, rubber, and electronics (among other things) and such a decline would have dragged these other industries along with it because it would have reduced the demand for their products. Hence, governments may seek to protect certain sectors for national security or national economic health reasons despite their inefficiency.

When the Great Depression hit in the 1920s and unemployment sky-rocketed, all major industrial states sought to restrict imports and encourage domestic production as a means to increase employment. This only aggravated the situation because it shut down international trade almost completely. It would take the shock of the Second World War to lift the world out of the slump.

Second, countries may seek to isolate themselves from the vagaries of trade and, by extension, economic influence of others by restricting imports in order to ensure some sort of political autonomy. If a country becomes heavily dependent on another for the supply of some important good, then it exposes itself to political blackmail, especially if there are no easy substitutes for that good. Suppose, for example, that the U.S. promises Mexico free access to its market for, say, oil that is refined according to strict standards unique to the U.S. (that is, oil refined in this way could only be sold to the U.S., it would be too expensive to ship elsewhere). Mexico then specializes in producing oil according to this particular specification and builds expensive plants to do it. Once the plants are constructed and the investment is sunk, however, Mexico is exposed to American political blackmail. The U.S. could now threaten to withhold market access unless Mexico complies with some demand. The threat is credible because the U.S. could get its oil from somewhere else. Even worse, Mexico has no outlet for its new production and would have to comply or lose both the investment and the market.

Countries could go to extremes to avoid this hold-up problem and the interference in their domestic politics. Japan went into complete isolation in the 17th century, closing the country to international trade and shutting down in-

teraction with the world, limiting it to the occasional Portuguese or Dutch ship restricted to one port. During the Cold War, Albania also went autarkic, mostly to preserve its unique brand of home-bred communism. The country was communist but did not get along with the Soviet Union and after a while it also got estranged from the Chinese, finding itself without a major ideologue protector and supplier of economic aid. Albania went its own way and unlike Tito's Yugoslavia did not flirt with the West. As a result, it is still the most backward country in Europe.

Third, and most commonly, government may wish to protect "infant industries" until they become efficient enough to compete with foreigners. Newly industrialized countries (NICs) engage in protectionism because without it they would be unable to develop any industry whatsoever: their established foreign rivals are usually much better equipped, more efficient; if necessary, they could slash prices to drive a fledgling competitor out of business. When the new industry wields domestic political influence through a well-organized pressure group, the government has even stronger incentives to protect it.

More generally, the costs and benefits of both free trade and protectionism are not distributed evenly within a state, which means that there will be both winners and losers from any policy. Which policy the government chooses would then depend on the strategic importance of the sector, its impact on national economic health, and the organization of its representatives. While free trade would benefit all consumers (because it will lower the price of all goods), it would impose costs that are concentrated in the industry that will be outperformed by foreign competitors. The pattern of dispersed benefits and concentrated costs practically ensures that the consumers will be unable to wield enough influence relative to the better organized industrial sector, and hence protectionism would be the likely outcome.

3 Methods for Protectionism

How do governments protect sectors from foreign competition? A state could impose a **tariff** on products entering it. The tariff is a tax levied on imports which raises revenue for the government and makes the imported good more expensive relative to domestically-produced one, which in turn means that consumers would buy relatively fewer units of it. Because tariffs influence the foreign state's ability to sell its products in the host country, they can be used as a political tool: threatening to impose tariffs is equivalent to denying the other the revenue from business. That is, tariffs impose costs on the foreign rivals, and can therefore be used as strategic threats for bargaining purposes. Of course, the foreign state could retaliate with imposing tariffs on one's products. The resulting situation is called a **trade war** and can be quite expensive to both sides, much like a shooting war.

Tariffs are visible and highly charged politically, which means that while they do protect, they may be inconvenient tools of policy. States can also engage in

protectionism by using **non-tariff barriers to trade** (NTBs). The most straightforward NTB is the imposition of *quotas*, that is, limiting the amount of a particular good that could be imported from a given country. For example, the European Union imposes quotas on imports of produce from Eastern Europe because it is cheaper and would undermine the inefficient French farmers (among others). Some quotas are worked out between governments and instead of the host country limiting the quantity it allows to be imported, the exporting country “voluntarily” limits the quantity that it exports to that country. Such was the voluntary export restriction by Japan that sharply reduced the number of Japanese cars available to U.S. consumers.

Another NTB is to place special and extensive *regulations* and *restrictions* that make it hard to market and distribute the products. For example, a country may demand very expensive modifications to certain products to ensure that they meet local regulations which may exist solely for the purpose of inflating the prices of imports. Even more insidious is an extensive local bureaucracy that is deeply entrenched within the government and that makes access by outsiders for business purposes a nightmare of red tape.

Another NTB the government can use is direct *subsidy* of its domestic producers. Through loans, grants, tax breaks, or guaranteed high prices (the government buys from the producers at an inflated price and then resells in the markets at a lower price, absorbing the loss) the government can subsidize inefficient production, making it artificially cheaper and hence more competitive with imports. In extreme circumstances, a government may *nationalize* an industry, thereby cutting out all foreign competition altogether. The result is the same: fewer of the more efficiently produced goods are sold in the domestic market.

4 Economic Threats

Economic threats have long been used for political purposes between countries. In addition to tariffs and NTBs, *economic sanctions* of various kinds can be employed to punish a foreign state for political or economic misdeeds. States can band together to *boycott* the goods exported by another. Of course, for a boycott to be effective, the resulting closure of markets must be extensive enough to make an impact on the targeted country. Napoleon’s France engaged in an extreme form of economic boycott through its Continental System designed to eliminate continental Europe as a market for British goods. Since Napoleon could not get at the island nation militarily and the British had consistently displayed an ability to raise and resurrect coalition after coalition to fight the French, Napoleon resolved to strangle his nemesis economically. It did not work well, mostly because Britain had the wherewithal to trade within its empire while the Europeans were shut off from important imports to their detriment. It did not help that Britain had a navy while Napoleon could not enforce his own decrees on the high seas.

While the boycott cuts off the target state's export markets, an *embargo* cuts off the target state from supplies of particular goods. Both boycotts and embargoes can be quite painful for the states that impose them, and it is no surprise that there are seldom effective: there are just too many temptations to defect from the punishing coalition and surreptitiously trade with the targeted state.