# Part 5: The Impact of Trade Barriers

In Parts 1 and 2, we saw that trade can benefit both countries. In some cases we try to restrict trade, for example, for national defense purposes and infant industries (these are discussed in the book). How will attempts to restrict trade affect a domestic industry?

First, we start with the embargo equilibrium. This means that no imports of a product are allowed at all. So the price and quantity are determined only by the domestic supply and demand. The graph below shows this.

Embargo equilibrium
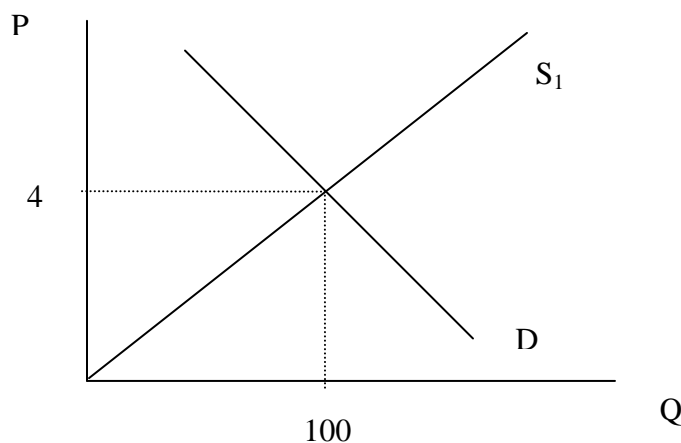
Notice that supply is labeled S_1. We will change the supply line in the next graph. In the next graph, called the free trade equilibrium, there is no restriction on imports. Foreign companies can supply as much as they want.

Free trade equilibrium
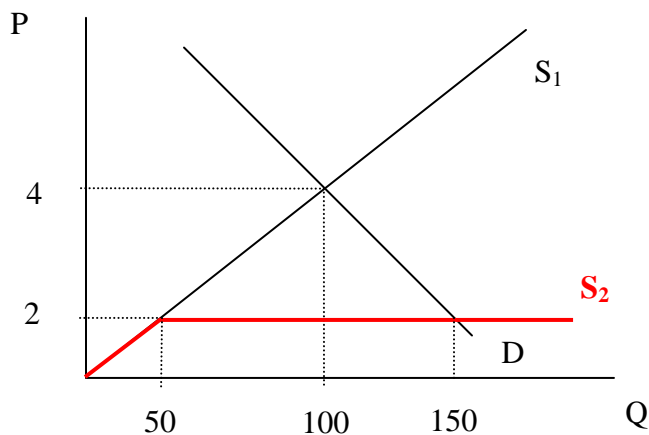
If all foreign companies are allowed to sell in the USA, the supply curve becomes the red S_2 line. It is a kinked supply line. Recall from Part 4, that the USA imported from Japan at a price below the USA intersection of supply and demand. In this case, the price will be 2 when imports are allowed. The U.S. companies will supply 50 units to the market at a price of 2 (like in Part 4, at a price of 40, the U.S. companies still supplied some quantity to the market).

Since the total quantity in the market is 150, it means that the quantity supplied by foreign companies will be 100 units. This means that at P = 2, the foreign companies will sell the U.S. consumers as much as they are willing to buy. This discussion only matters if allowing imports brings down the domestic price. If the price is not affected, we would not need to look at this issue.

Going from the embargo equilibrium to the free trade equilibrium creates some winners and losers. American consumers gain because they get to buy more at a lower price. Foreign sellers gain because they can now sell to U.S. consumers. But American companies lose because they sell less at a lower price (they sold 100 units at a price of 4 in the embargo equilibrium).

But if there is an attempt to restrict imports (but not completely block them), the market will be affected. The next case looks at the tariff equilibrium. In Chapter 21 we discussed excise taxes. A **tariff** is a tax on imports. That means that only the foreign companies have to pay the tax. They collect the tax at the time of the sale and turn it over to the government. So the supply line has to shift up by the amount of the tax, just like with an excise tax.

Suppose that the excise tax is $1. So in the next graph, the supply line is shifted up by $1.

Tariff equilibrium
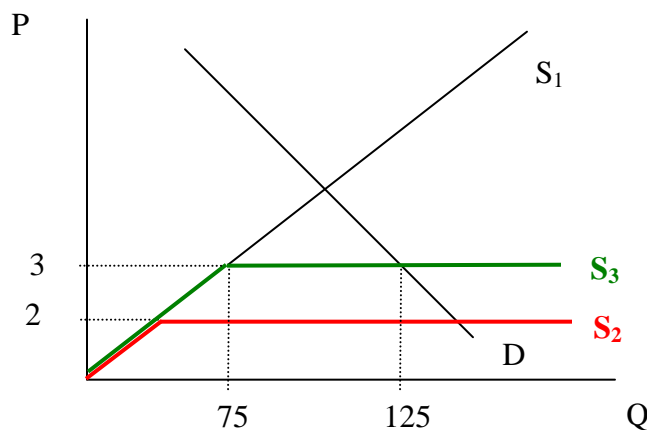
Notice that S_3 is one dollar above S_2. This is because the tariff is $1.

Moving from the free trade equilibrium to the tariff equilibrium also creates winners and losers. U.S. companies gain because they can sell 75 units at a price of 3 (instead of P = 2 and Q = 50). The U.S. companies don't have to pay the tax, so they get to keep all $3 from each sale. The U.S. government gains because it gets some tax revenue.

U.S. consumers lose because the have to pay more and get less (the quantity falls from 150 to 125). Foreign sellers lose because they sell less (only 50 units) but do not get a higher price. They get $3 per unit, but must give $1 per unit to the U.S. government. That leaves them with $2 per unit, just as in the free trade equilibrium. The U.S. companies get to keep all $3 from each sale.

Another way in which trade can be restricted is with a quota. Here, the U.S. government tells foreign sellers how much they can sell (and no more than that). This is the next case, called the quota equilibrium.

P   S₁   S₄   50   3   D   Q   125
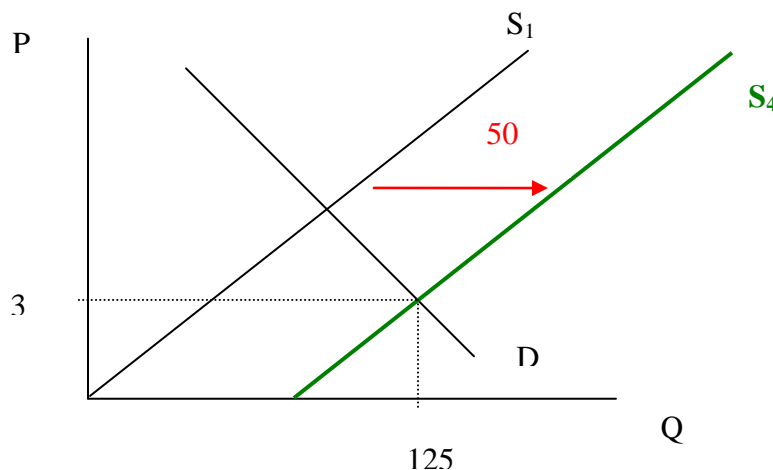
Here, the quota is 50 units. The U.S. government allows foreign sellers to sell 50 units. So we illustrate this by shifting the initial supply curve (S₁) to the right by 50. This creates a price of 3 and a quantity of 125.

Who gains and who loses by having a quota equilibrium instead of a tariff equilibrium?

The U.S. consumer is no better or worse off. P = 3 and Q = 125 in each case. The U.S. companies also are no better or worse off because they sell at the same price in each case while they sell a quantity of 75 (we know it is 75 in the quota equilibrium because 125 total units are sold and 50 are sold by the foreign companies-that leaves 75 for the U.S. companies).

The foreign sellers are actually better off with the quota equilibrium than the tariff equilibrium. They sell 50 units in each case but with the quota, they have a higher price (P = 3 instead of P = 2). In the quota equilibrium, they get to keep the entire $3 from each sale, unlike the tariff case.

The U.S. government gets no tax revenue in this case. So they lose out compared to the tariff equilibrium case.