

MACRO UNIT 5

International Economics and Trade (plus comparative advantage)

International Trade is essential for the survival of all countries.

In the US alone we depend on other countries for things like bananas, cocoa, coffee, spices, tea, nickel, tin.... We in turn export things like wheat, cotton, tobacco and rice.

The US is the leader in trading volume.

International trade is the way that countries can specialize, increase the productivity of their resources, and realize a larger total output than otherwise.

Countries like individuals are able to specialize in their production.

The distribution of resources (human, natural and capital goods) and technologies leads to this specialization.

Some countries can produce goods that are labor-intensive while others can produce goods that are capital-intensive. Still others can produce goods that are land intensive.

Comparative Advantage: The ability to produce a good or service at a lower opportunity cost compared to other producers.

Absolute Advantage: The ability to produce more output from given inputs of resources than other producers can.

You are an accountant that charges \$50 an hour to do someone's taxes. A painter who makes \$15 an hour is trying to decide if he should hire you to do his taxes. He knows it will take him 10 hours to do the accounting. He knows it will take you 2 hours. Should he hire you? Yes.

Here is the logic behind it: If the painter needs to do his accounting should he hire you.

$$10 \times 15 = \$150$$

$$2 \times 50 = \$100. \text{ He should hire the accountant.}$$

Each person has a comparative advantage in their specialty. Even though both could do the work themselves it is to their advantage to hire someone else.

The same can be said for two countries.

In order to look at this we must assume.

1) Just two countries and two products (coffee and wheat)

2) Constant costs: This means that production possibility curves are straight. (They are not really straight because as production increases the variable costs increase the cost of production.)

Comparative Advantage:

Input method: looks at the amount of inputs (usually time) necessary to do an activity.

	x	y	Converted to output method	
			x	y
USA	10	5		
Japan	14	4		

Solve for x (or y)

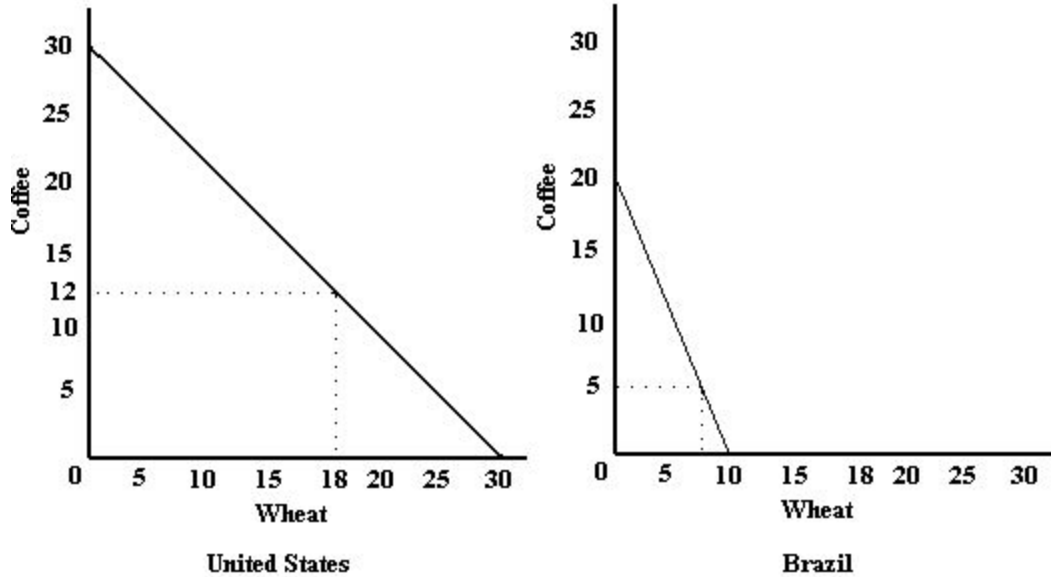
The one with the least opportunity cost COMPARED TO OTHER PRODUCERS is the one you choose. You then compare x for USA to x for Japan.

Output method: looks at the amount of output over a given time.

	A.	B.
Germany	12	15
England	4	2

Solve for A (or B)

Each should specialize where it has the comparative advantage.



In this case they each have separate cost curves. That is why the production possibility curves are shaped as they are.

Comparative Advantage:

Look at the possible points of production. US might choose 18W and 12C while Brazil might choose 8W and 4C. (THIS SHOWS WHAT EACH NATION CHOOSES TO CONSUME)

In our example the US has a comparative advantage in wheat. It can produce 1 wheat at the cost of only 1 C. The world economy would not be helped if Brazil produced W when the US can produce it cheaper.

Brazil has the comparative advantage in C. It must only give up 1/2 a ton of C for one ton of Wheat. It would be bad for the world economy for the US to produce C.

If each country produces the maximum amount of their good the world actually has more of that good. The US can produce 30 wheat and Brazil can produce 20 coffee (base on production possibility curve.)

Now that each country has specialized in its production it must now trade in order to get what it needs.

The US knows that if it produced 1C it would have to give up 1W. It must therefore get more than 1C for its 1W.

Brazil knows that it can produce 1W for its 2C. It must therefore get 1W for less than 2C.

Terms of Trade

Each country wants to export as little as it can in order to get as much as it can. The actual exchange rate is based on this idea.

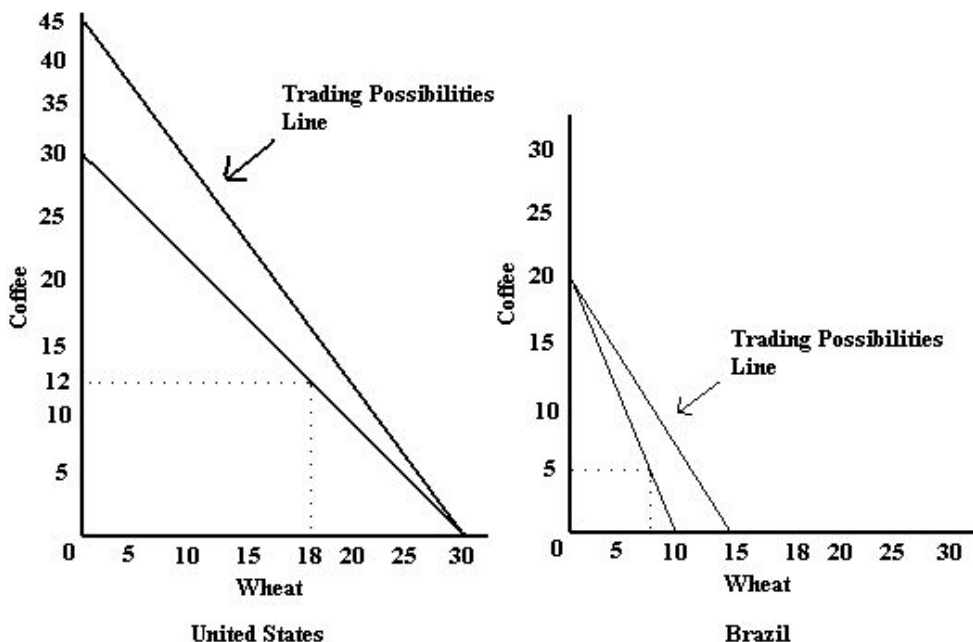
No matter what the US would want to get more than one C for each wheat. The reason being is that it can get one by itself.

No matter what Brazil will want to get more than one wheat for 2 coffee. It can get that by itself.

Suppose it came out to be $1W = 1 \frac{1}{2}C$. Each nation can then go in and make a Trading possibility curve base on $1W = 1 \frac{1}{2}C$.

Trading Possibilities Curve: By trading, each country can reach a point beyond their production possibility curve. (Both get more of each product (or have to give up less to get more)).

The net result of all this is that the world produces more if the countries specialize.



Assume the terms of trade are agreed to be $1w = 1.5$ Coffee. That means that for every 1 w that US trades they get 1.5 coffee. This is how we get the trading possibilities curve. For example, if US produces the 30 wheat and trades 12 (leaving them with the 18 they originally wanted) they

would get $1.5 \times 12 = 18$ coffee. This gives them 6 more coffee than if they had tried to produce both themselves. If produce 30 w and trade them all away (on the world market) they could get 45 coffee. This is 15 more than they could do on their own.

Trade Barriers:

How do the following trade barriers affect the economy?

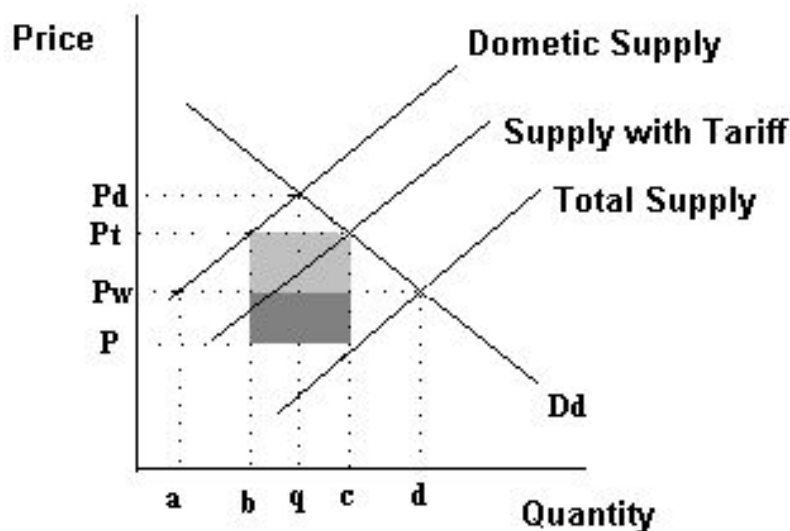
1) Revenue Tariffs: taxes on imported goods to get money for the federal government. These are usually on goods that can not be produced in the US.

2) Protective Tariffs: taxes on imported goods to put them at a disadvantage to domestic goods. This is usually done for on fledgling industries or industries that could prove vital to national defense (cars...)

3) Import Quotas: limits on amounts that can be imported.

*** They only serve to reduce the comparative advantage.

The effects of a Tariff:



Q is the equilibrium quantity

Pd is the equilibrium price (domestic)

Now assume a foreign producer brings in a product. They have the absolute advantage in producing this item and can do it at a lower price

This will drop the price to Pw (World Price). At this price d will be sold.

The difference between d and a is the amount that the foreign producer sells.

Once the US imposes a tariff it will drive the price up. People will want less of the quantity. It will move up to the point where Demand intersects the new tariff price. (Q is C and Price is P_t)

Quantity demanded decreases and price increases.

Furthermore, the domestic producers are now getting more for their goods. They get P_t instead of P_w . They will also move up their supply curve (from O_a to O_b .) This means they are getting more money and increase sales.

The US government will get the amount equal to the difference between P_t and P_w . (Gray section) (Price of tariff ($P_w - P$) times the number of foreign goods (bc))

From all of this we get:

1. A decline in consumption in the United States. (Because of higher prices.) This means US consumers are hurt.
2. An increase in Domestic Production (over the amount prior to the tariff.) They will move up the supply curve.
3. A decline in imports. (It costs more to sell to us now.)
4. An increase in Tariff revenue for the government. (gray rectangle.) This is in effect a transfer of money from the consumers to the government.
5. Fewer dollars in the foreign country means they can now buy less American goods.
6. US companies now are operating (using resources) in a less efficient manner.

If a country imposes a barrier against its imports, what is likely to happen to the amount imported and the price of the imported goods?

If the price of imported goods rises when a barrier is erected, what is likely to happen to the output of domestic firms that produce goods which can be substituted for imports?

Who is made worse off as a result of import barriers?

- (1) Foreign producers
- (2) domestic consumers who must pay higher prices.
- (3) domestic producers who produce goods that complement the imported goods.)

Who gains and who loses from subsidies to our export industries?

Export producers gain
taxpayers who must provide the subsidy lose through paying higher taxes.

Why Have Protectionism:

1. Self-sufficient Military:

Can you name any industry that does not contribute either directly or indirectly to national security? (The war effort)

2. Increase domestic employment- preserve jobs.

While it does cause local manufactures to increase production (thus creating jobs) it also causes us to lose jobs. Some people are involved in importing the goods. Someone has to sell the foreign goods.

3. Level the playing field:

protect the American workers from foreign labor. If they can produce at a cheaper rate than us we would be better off using our resources in other areas.

4. Help infant industries:

Do these industries really need protecting in order to be competitive on a global market? Perhaps a subsidy would be in better order.

5. Diversify the economy:

We are already very diversified. We do not depend on one industry.

6. Protect against dumping:

Dumping goods in the American market to drive down the price and therefore drive out American producers is very rare. When it does happen the American consumer gains in the short run.

Other issues not discussed:

1. The other nations may retaliate. If they stop importing American goods we are hurt.
2. Inefficient use of resources leads to higher prices.
3. Foreign nations need to sell goods to us in order to afford our goods. (use our money.)

Balance of Trade

Unit 6: Lesson 3

When dealing with international trade one of the things you have to deal with is the difference in the currencies. Each country wants to be paid in its currency. This means they must go through the foreign exchange market.

When we buy things overseas we pay them in their currency (yen). We get these yen from a major bank. We give dollars for yen. They then have to buy the Yen from a Japanese bank.

1. In so doing we have created a demand for Yen. This gives the Japanese access to American dollars.

2. When we deposit our dollars in a bank in exchange for Yen that bank must hold those dollars for later exchanges. They have lost Yen. This represents a leakage from the money supply. If we do not export to Japan to get back those dollars our money supply is decreased.

American exports create a foreign demand for dollars (to replenish their money supply). It also creates a surplus of the foreign money available to consumers.

Why would the bank make the exchange? It is in the business buying and selling dollars for foreign currency. It does so at a fee.

Are countries concerned with I going outside their country? YES! If business take their money outside the US the US loses I. This means GDP decreases.

How do countries keep I inside the country? by providing a stable economy.

Balance of Payments: is all the international trade and financial transactions. For the US it includes all transactions with all other countries.

Example of U.S. Balance of Payments

Current Account: Summarizes Trade in G &S, Income Payments and Receipts, and Transfers	
U.S. Exports: Goods and Services	
U.S. Imports: Goods and Services	
Balance of Trade	
Financial Account: Summarizes Trade in Assets	
U.S. Assets sold to residents in other nations including:	
U.S. Currency	
U.S. Stock	
U.S. Treasury Bonds	
Foreign assets purchased by U.S. residents, including	
Foreign Currency	
Foreign Stocks	
Foreign treasury bonds	
Balance of Financial Account: U. S. assets owned by world residents – Foreign assets owned by U.S. residents	
Balance of Payments: (Current Account + Financial Account) Should be Zero	

Current Account: The US trades in currently produced goods and services.

The following explanation is from the perspective of the US. An inflow means coming into the US while an outflow means going out of the US.

If the United States sends dollars to China to buy imports (current account deficit), then the Chinese will have to either use those US dollars to buy our products ("current" account inflow), or invest those US dollars in financial assets (a capital account inflow).

Governments, businesses, or consumers abroad can only use the US dollars in the United States (for the most part, ignore technicalities for the sanity of understanding), and thus if foreigners don't spend the US dollars on US products (the current account) then they will spend, out of economic self interest, them on financial assets.

Thus, in short, a country's current account deficit is always offset by its capital account, and vice versa. This has been the case in the USA and every other country every year.

Exports in effect pay for imports.

A negative balance of trade means we are decreasing the money supply.

A deficit or surplus is not necessarily bad. It depends on

1) the events causing them (why is the country losing money. Can it not compete on foreign markets?

2) the persistence through time (a deficit over the period of time will cause the reserves to be depleted.

The balance of payments all depends initially on the exchange rate of money.

Exchange Rates (Unit 6 Lesson 4)

Fixed Exchange Rate: when a government artificially fixes the exchange rate.

Free Floating Exchange Rates: This is all determined by Supply and Demand of that foreign money.

Managed (dirty float) exchange rates: when countries buy and sell currency to attempt to control exchange rate.

Free floating: The Demand is downward sloping because as the price decreases the cost of foreign goods is decreased. This means we will demand more of that money.

The Supply curve is upward sloping because as the price of the dollar in terms of pounds falls the British will be more willing to buy our goods.

When the dollar value goes from 1\$ for 1 Euro to \$2 dollars for one Euro the value of the dollar has depreciated. It means it takes more dollars to buy one Euro. (Notice that the Euro has appreciated).

A strong dollar is one that exchanges for large amounts of foreign currency.

Importers want strong dollars while exporters want weak dollars.

Example:

Year One: \$1 = four Euros

Year Two: \$1 = five Euros

- a. has the dollar appreciated or depreciated.
- b. has the Euro appreciated or depreciated?
- c. What is the price of one Euro in year one?
- d. What is the price of one Euro in Year two?
- e. If a good was made for \$1 in Year One, what would it sell for in Europe?
- f. If a good was made for \$1 in year Two, what would it sell for in Europe?
- g. If the French made a good for four Euros in year one, what would it sell for in the US?
- h. How would the depreciation of the French Euro affect French exports and imports?

Determinants of Exchange Rates

1) **Changes in Tastes:** If we have goods that they want they are willing to pay more. The dollar will then appreciate. (They will give us more pounds for the dollar.)

2) **Relative Income Changes:** As an economies income increases it will buy more goods (both domestic and foreign). This means that if the US economy increases faster than the foreign economy we will be importing more than we are exporting. The value of the dollar will therefore depreciate.

3) **Relative Price Changes:** If the price levels increase more rapidly domestically than it does in other countries the US consumers will buy the foreign goods and this will depreciate the dollar.

Since consumers are only willing to pay certain prices for goods and services the relative price of a good in foreign currency is not important. If a good is priced very high in their currency it means the dollar can buy more of that good.

This leads to the Purchasing power parity theory: differences in exchange rates equate the purchasing power of various currencies. Ex. If a bundle of goods costs \$500 to buy an 100 pounds to buy this means the exchange rate should be \$5 to 1 pound.

4) **Relative Interest Rates:** If an economy decreases its money supply to curb inflation what will happen to interest rates? (Increase) This means the US is a good place to put funds. More foreign money will flow into the economy and the value of the dollar will appreciate. (If the exchange rate changes bundle costs change.) This would then allow the American dollar to purchase more foreign goods making imports higher and exports lower.

*** **The relative Interest Rate effect was part of an A.P. Free Response Question in 1992**

5) **Expectations:** If they feel a change in any of the above will cause the dollar to appreciate the value of their currency will depreciate.

One theory says that the flexible exchange rates will take care of the balance of payments. If the exchange rate changes (ex. our dollar depreciates) the price of the foreign goods will not change but the amount of dollars needed to cover the exchange will change (in this case increase) this means that the balance of payments changes.

Ex. If for some reason there is a large demand for British goods we will find an unfavorable balance of trade. This will drive up the demand for pounds. Eventually the market will take over and our dollar will depreciate. If before the depreciation a 2 pound widget costs \$4 at a \$2 for 1 pound exchange rate. If after the depreciation the exchange rate changes to \$3 for 1 pound exchange that same widget costs \$6. This means demand for that widget will be decreased and the US will import less of that product. In the end the balance of payments will take care of itself.

Problems with this:

1) Uncertainty: If I do not know what I will have to pay in the upcoming months I may not be willing to place the order now.

2) The instability of the fluctuating exchange rate may cause the economy to go coo-coo. If you are operating at full employment and the dollar depreciates you will have an increase demand for your goods. This will lead to demand pull inflation.