# Lecture #2
# Economics 181
# International Trade
# The Ricardian Model, Continued

## I. Production Possibility Frontiers (PPF) and opportunity cost once again.

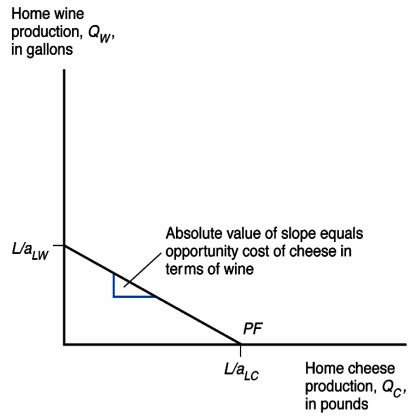
Recall the example from last class:
Two countries: Home (USA) and Foreign (France). Two goods: wine and cheese.

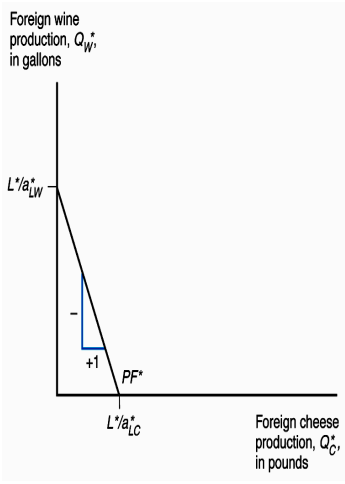
Unit labor requirements (ULR): number of labor hours needed to produce one unit of wine or Cheese

Hours to Produce 1 pound of Cheese or 1 gallon of wine

| | Cheese | Wine | Total Labor Force (Billion Hours) |
|---|---|---|---|
| Home (USA) | $a_c = 1$ | $a_w = 2$ | 120 |
| Foreign (France) | $a_c^* = 6$ | $a_w^* = 3$ | 60 |

We can use these ULR's to derive production possibility frontier (PPFs):




Defining Opportunity Cost: The Opportunity cost of a pound of cheese in terms of wine is the number of gallons of wine that an economy would have to give up to produce an extra point of cheese. Equal to $a_c/a_{w,}$ , which is the absolute value of the slope of the PPF.

## II. Relative prices and trade.

- Autarky prices (means prices before trade) equal to opportunity cost of cheese in terms of wine.
- There will be gains from trade as long as autarky prices in two countries are not equal.
- In other words, there will be gains from trade as long as two slopes are not equal.
- In our example, USA has comparative advantage in producing cheese, France in wine.
- Traded price will fall between ½ and 2.
- USA will export cheese, France will export wine.

Some examples:

Unit Labor Requirements (Hours)

| | Cheese (per pound) | Wine (per bottle) |
|---|---|---|
| Switzerland | 1 | 5 |
| France | 8 | 4 |

Who is the most efficient producer of cheese? Of wine?

Unit Labor Requirements (Hours)

| | Cheese (per pound) | Wine (per bottle) |
|---|---|---|
| Switzerland | 1 | 2 |
| France | 8 | 4 |

Who is the most efficient producer of cheese? Of wine?
Can mutually beneficial trade still take place?

Matrix of opportunity costs = cost of producing one good in terms of the other:

| | Cheese | Wine |
|---|---|---|
| Switzerland | | |
| France | | |

So why doesn't the US export steel?

## III. Deriving the traded goods price, P*. Will P* be closer to ½ or 2?

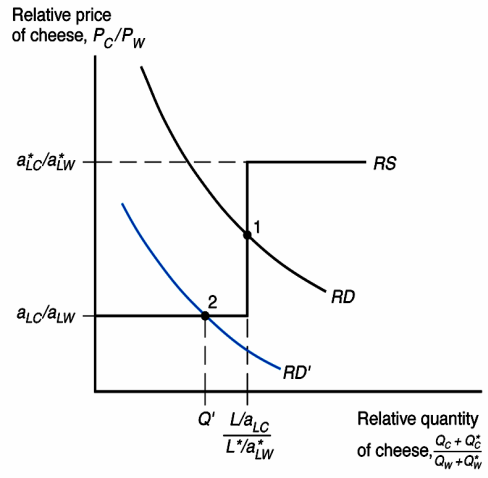
Answer depends on intersection of demand and supply:
All values in RELATIVE terms (cheese in terms of wine)

Notes:

If P* < ac/aw, no world supply
If P* = ac/aw, produce on first "step": country indifferent;
So output between 0 and L/ac
If ac/aw < P* < ac*/aw*, home produces cheese
If ac/aw < ac*/aw* < P*, both countries export cheese

(=2)

(=1/2)




## IV. Another Way to Show Gains from Trade

Trade expands the possibilities for consumption, by separating out production possibilities from consumption possibilities. So your consumption expands because you are not restricted to consume what you produce.