

**[Lecture 2] Absolute Advantage vs. Comparative Advantage**

Adam Smith (1776): Division of Labor in Pin Factory  $\Rightarrow$  International Division of Labor can lead to a level of world production that would far exceed the sum of autarky levels. (How to allocate the surplus from trade among the people in a country?)

At that time, British Government practiced to restrict international trade (Mercantilism) by levying severe tariffs on the imported goods. Smith argued that by discouraging the availability of foreign goods and encouraging the exports of domestic goods, mercantilism served to lower the wealth, or standard of living, of a country ( $\Leftrightarrow$  Free Trade).

Now, how would it be determined who should produce what in free trade? What should be the exact distribution of goods once they are produced?

**1. Assumptions**

- 1) Factors of production cannot move between countries
- 2) No trade barriers
- 3) Exports must pay for imports (trade must be balanced)
- 4) Labor is only relevant factor of production in terms of productivity and costs analyses
- 5) Constant Returns to Scale

**2. Absolute Advantage**

		Country	
		A	B
Goods	Soybeans (S)	3	12
	Textiles (T)	6	4

Numbers in the table reflect the hours it takes to make 1 unit of output of a good in a certain country.

In this case, rather than autarky, country A should concentrate on ( ) production and country B should do on ( ) production.

Suppose the unit of T is reduced by 1 in country A. This would free up ( ) hours of labor. Let that worker move to S production, eventually s/he will increase output of S by ( ) units.

In similar fashion, let the output of S in country B drop by 1 unit which leads to ( ) hours of labor released to T industry, finally ( ) additional units of T can be produced.

	Per Unit Gain	
	S production	T production
In A		
In B		
In World		

Lets' total the results. For the world as a whole, the output of S rises by ( ) and T by ( ). We see the benefits of an international division of labor.

The problem remains as to what is required to persuade workers in each country to concentrate their efforts along the lines of absolute advantages – as Adam Smith saw it, the solution to this problem is simple. Market forces (invisible hand is working!) would guarantee that this will happen. Explain!

Labor theory of value states that pre-trade prices of goods are determined by their labor content. Under perfect competition, in each country, we can establish that the price of a good in autarky is simply equal to the labor input costs which equals wage (W).

In country A,

$$P_S = W_A \times \text{hours}_{SA} = W_A \times 3, \quad P_T = W_A \times \text{hours}_{TA} = W_A \times 6$$

$$\text{So, } P_S / P_T = (W_A \times 3) / (W_A \times 6) = 1/2.$$

In country B, likewise, we get

$$P_S / P_T = 12/4 = 3.$$

In autarky, S costs 1/2 units of T in country A. But 3 units of T in country B. Once trade is allowed, consumers in B will want to buy their S from country A rather than from their domestic producers because A's price is lower (demand for A's soybeans will rise).

But, how can production rise to meet this rising demand? The resources must come from the T industry. Will they? Again, market forces will see that this happens.

In particular, A's autarky price of T is 2 units of S, while B's price is only 1/3 unit. Hence, once the opportunity exists for A's consumers to buy from B, their demand for T from their own producers will fall. Falling demand for T in A will lead to layoffs. Workers leave that T industry for the expanding S industry. Of course, the exactly opposite situation occurs in country B, where rising demand for T leads to an expansion while S industry shrinks.

### 3. Comparative Advantage (David Ricardo and Robert Torrens)

		Country	
		A	B
Goods	Soybeans (S)	3	12
	Textiles (T)	6	8

Country A has an absolute advantage in Both goods (S & T).

	Per Unit Gain	
	S production	T production
In A		
In B		
In World		

Law of Comparative Advantage: Countries must specialize where they have their *greatest absolute advantage* (if they have absolute advantage in both goods) or in their *least absolute disadvantage* (if they have absolute advantage in neither goods).