

Module 2

Lecture 8

Topics

2.5 David Ricardo II

2.5.1 Ricardo's distribution theory

2.5.2 Comparative Advantage

2.5 David Ricardo II

2.5.1 Ricardo's distribution theory

- The theory of rent was part of Ricardo's interest in distribution theory. He was more interested in knowing how income distribution changes over time in response to policy changes such as Corn Laws.
- Ricardo's theory of distribution can be explained by a simple diagrammatic presentation.
- Suppose labor and capital is applied in one to one proportion. The curve ABQ represents the marginal product curve of both the inputs together.
- Assume OC is the dose of LK .
- Marginal product is BC . Therefore total output is $OABC$.
- ABD must be paid to the landowner as rent at the margin becomes zero. Wage is the subsistence wage $EFJQN$. Hence total profit $EDBF$. This called the residual method of calculating factor payments.
- Ricardo was interested to know how the distribution was changing. Ricardo agreed that rate of profit would fall over time but refuted Smith's reasoning.

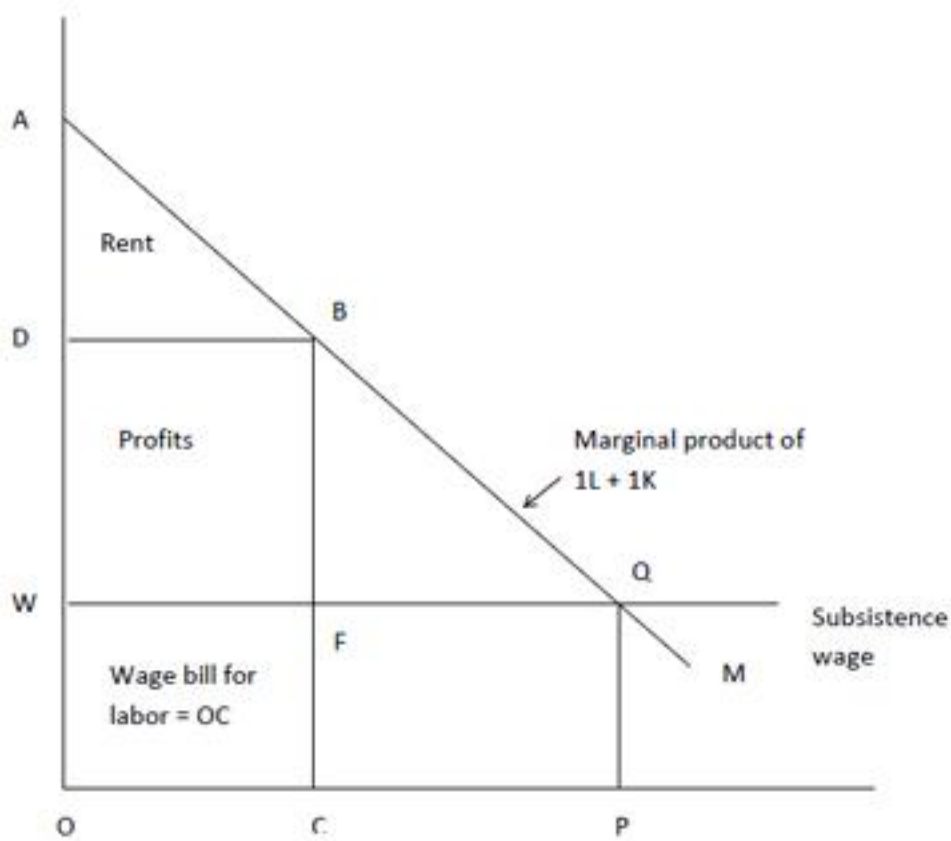


Figure 1: Distribution

- Ricardo reasoned using Malthusian doctrine that if w rises population will rise too as consumption and fertility will increase. As a result in the long run w will fall again.
- Smith's other reasoning was that the competition in investment and commodity market would lead to fall in profit. This is not possible if Say's Law is assumed. Because if Say's law is true any supply can be sold, demand is not an issue.
- Ricardo agrees that profit will fall with time but did not accept Smith's reasoning.
- Ricardo's Explanation was as follows:
- High rate of profit leads to capital accumulation which in turn will increase the demand for profit
- This will raise wages which in turn will increase population. With high population demand for food will rise too

- The extensive and intensive margins of agricultural production are pushed down.
- As a result rents increase and profit would decrease.
- However, this arguments shows that profit goes down only in agriculture where rent is a significant portion of income. Then what about manufacturing?
- If profit goes down in agriculture, capital will move to industry. Since the rate of profit must be same in all the sectors in the long run it must also fall in manufacturing.
- Ricardo used this analysis to find out the impact of corn law. As a result of corn law, international supply of corn would go down and as a result domestic cultivation must go up. This would mean that intensive and extensive margins must be pushed down. This would increase rent and decrease profit. In the long run this would discourage capital accumulation and hurt growth prospect.

2.5.2 Comparative Advantage

- The theory of comparative advantage is a major contribution of Ricardo in trade theory. The trade theory that existed before Ricardo was Smith's theory of absolute advantage.
- Both theories have similar assumptions: labor is the only factor of production, both countries have different technologies and constant co-efficient of labor.
- In table 1, Portugal has absolute advantage in wine. England has absolute advantage in cloth.
- Now consider table 2, where England has absolute advantage in both. Does it mean that England also comparative advantage in both?
- The answer is no. In fact, it's not logically possible that one country has comparative advantage in all lines of productions
- Comparative advantage is determined by relative productivity. Now look at the third table to understand the calculation of comparative advantage.
- If England increases one unit of cloth it needs $\frac{1}{6}$ lab which would sacrifice 2 gallon of wine.

- If Portugal increases one unit of cloth, it requires 1 unit of lab which decreases the production of wine by 8 gallons.
- Hence, it's better for England to specialize in cloth and for Portugal in wine.
- To put it differently, in terms of cloth, wine production is much cheaper in Portugal ($1/8$ yards of cloth) than in England ($1/2$ yards of cloth)
- This theory has a very important policy implication. According to the theory of comparative advantage, each country must have comparative advantage in one good or the other. Because this a relative position it is simply impossible not to have comparative advantage in at least one good.

Output per Unit Of labor		
Countries	Wine	Cloth
England	4	2
Portugal	8	1

Table 1: Absolute advantage

Output per Unit Of labor		
Countries	Wine	Cloth
England	12	62
Portugal	8	1

Table 2: Comparative Advantage

- Hence, both countries can gain if they engage in free trade. The comparative advantage theory has been the biggest argument for free trade even in recent times.

Countries	Wine	
England	$1/2$ yard of cloth	2 gallon of wine
Portugal	$1/8$ yard of cloth	$1/8$ yard of cloth

Table 3: Opportunity cost