EW Customized Tutor

English, Economics, Politics, and Philosophy

Unit 1 Evolution of Economics
Lesson 1.2b: The Economists and graphs

Pertinent Concepts

- The Structure of Market
- Production Possibilities Frontier (PPF)

Learning Goals:

- I will be introduced to different sectors of the market

- I will be able to calculate the opportunity cost for PPF

- **Success Criteria:**

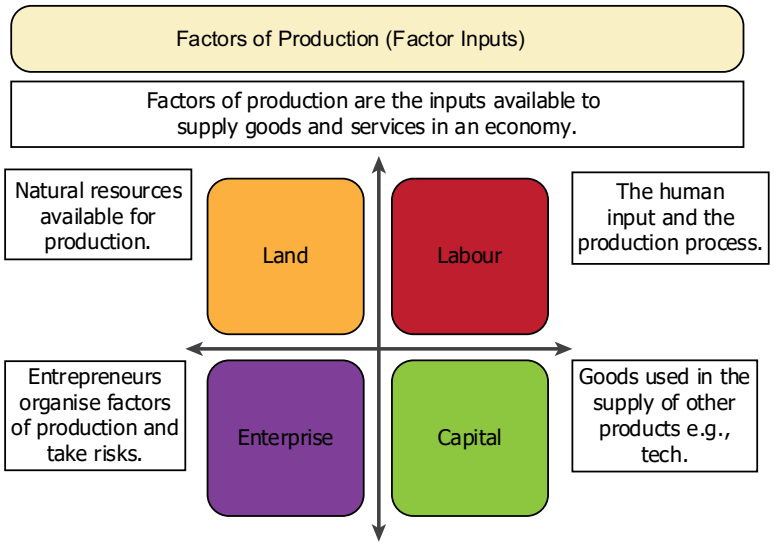
- I will be able to answer some practice questions

Opportunity Cost
you can only do one thing at one time;
you cannot do both
e.g., either watch tv or do the laundery

MINDS ON

Question 1:

We have learned the factors of production in economics (i.e., land, labour, capital, entrepreneurship) thus far; which one do you think is the most valuable or the most important amongst the four factors discussed,?



~~Entrepreneurship is the most important; because they~~ organize factors of production and take risks.They also decide the usage of market information. For example, if they know there will be a opportunity for the innovation combining product A and B, they will use Land/labour/ capital to produce such “new” goods.
use verb/usage noun

I. The structure of market

Just as how we categorized goods and services into tangible and intangible groups, when we are evaluating a 'sector' of the economic (market), we also classify them into different groups – that is, the primary, the secondary, or the tertiary sector, each of which is 'intensified' by different dynamics.

The primary sector (industry) concentrates their efforts to convert natural resources (from agriculture, mines, forest, etc.) into products. These products are then manufactured into the end products for consumers by the secondary sector. Finally, the tertiary sector will be in charge of selling/marketing/advertising/delivering these products through their services. In short, three sectors are interrelated and cannot function without the supplies/demands of each other.

they collect things

factories

sell and supply the good

delivery

modify (adjust)

Question 2: Can you think of a real life example for each sector?

For primary sector, hunter/wood cutter/ farmers are people in this industry.

For secondary sector, manufactures which make fruits into shapes that are more popular amongst teenagers can be seen as a case.

For tertiary sector, advertiser may emphasize the product's 'low' price, its good quality, and its special shapes.

What is the Primary, Secondary & Tertiary Sectors

PRIMARY SECTOR

- Primary sector is the sector that deals with raw materials and their production.
- This sector consists of all of the areas of human activity that convert natural resources into products.
- These raw materials are products produced from agriculture, animal husbandry, crop production, fishing, forestry and mining.

argriculture = 農業 (n)

SECONDARY SECTOR

- The secondary sector involves economic activities that generate finished products for consumption.

- Raw materials from the primary activities are taken and utilized to manufacture end products.

use

TERTIARY SECTOR

- The tertiary sector is the service sector. This sector is responsible for services delivered to both the primary and secondary sector.
- Services related to insurance, banking, trade and communication come in this sector.

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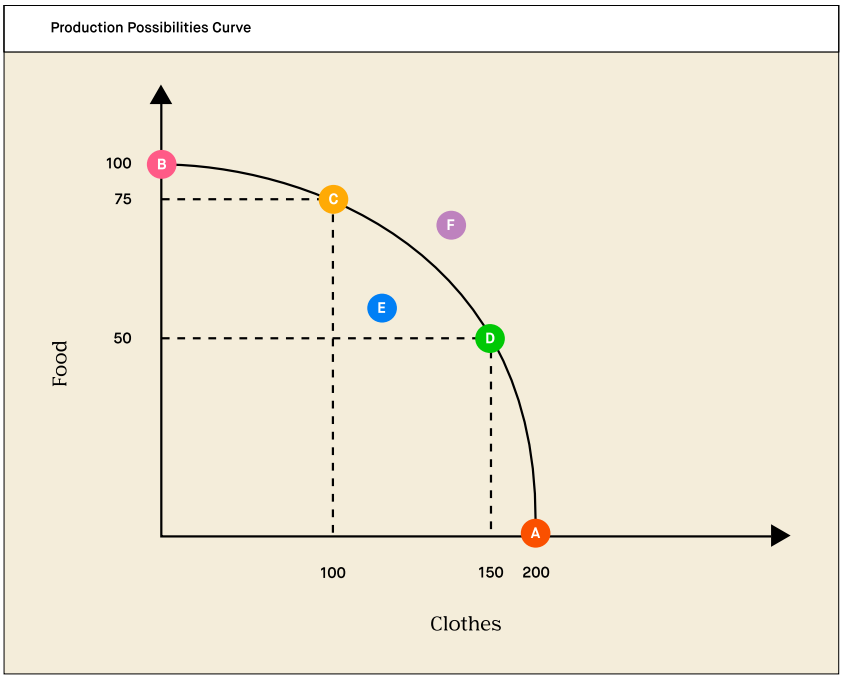
Opportunity Cost (OC)

II. Production Possibilities Frontier (PPF)

When we are producing a product, we will have to use the scarce resources; however, the production of some goods requires the utilization of the same resources (that can be time, gasoline, metal etc.). The goal for economists is then to 'optimize' the usage of resources and to make sure all resources are allocated effectively and efficiently; they do so by graphing a PPF.

1. All points on the frontier are efficient and attainable BCDA
2. All points inside/under the frontier are inefficient and attainable E
3. All points outside the frontier are unattainable F



When we quantify given information on the PPF into an equation, we can then calculate the Opportunity Cost of each point on the frontier.

Let's practice:

Suppose an economy faces the following PPF:

$$Y = 14 - \frac{X}{6} - \frac{X^2}{12}$$

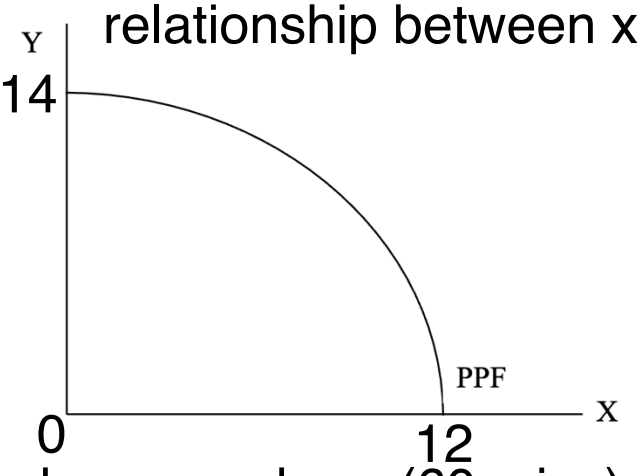
y = -0.083x^2 - 0.16 x +14

relationship between x and y

X	Y
0	14
2	13.33
4	12
6	10
8	7.33
10	4
12	0

0 min

60mins



Given that we only have one hour (60 mins)

What is the opportunity cost of X if this economy produces from the point (0, 14) to (2, 13.33).

Hint: find the average rate of change of this interval.

deltay/deltax

the rate of change of y/ the rate of change of x

y2-y1/x2-x1

12-13.33/4-2=-1.33/2 = -0.6605

the cost = 0.6605

= opportunity cost for producing 1 extra x from x=2 y=13.33 to x=4 y= 12

= OC of x is 0.6605 units of y per x