B.E. International Program

Faculty of Economics, Thammasat University

EE 211 Principle of Microeconomics

Semester 1/2017

Exercise 1

1. How does a production possibility curve illustrate scarcity, choice, and opportunity cost?

Scarcity is reflected by the unattainable points that lie outside the PPC. Choice is reflected by the need for society to choose among the series of point on the PPC. The downward sloping of the PPC reflects the opportunity cost, which to increase the production of one product it need to trade-off with one another.

2. Suppose you are selling your car in the used-car market after having spent 50,000 baht fixing it. Unfortunately, the transmission is broken just before you sell it. The used-car retailer informs you that you can sell your car for 3,000,000 baht if the transmission does not work. However, if the transmission works, you can sell your car for 3,200,000 baht. Should you fix the transmission if it costs 50,000 baht?

   If we sell without fixing the transmission we will get $ 3,000,000

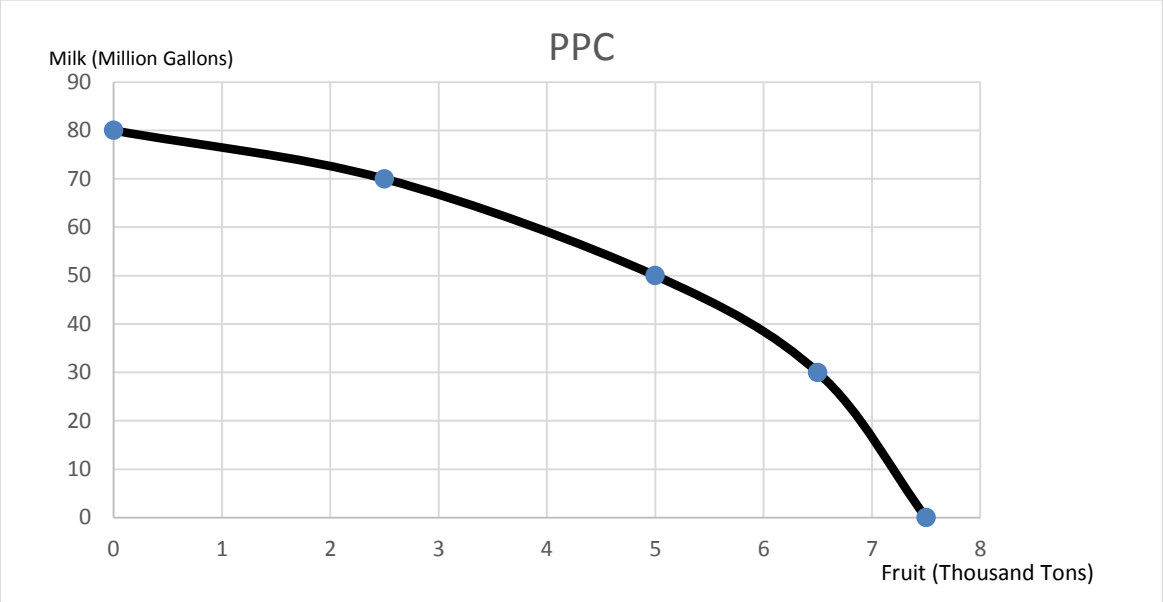
   If we fixed the car and sell it we will get (3,200,000 – 3,000,000)-50,000 = $ 150,000 more.

   So, we should fix the transmission.

3. Suppose an economy can produce two products. When all resources are used efficiently, the combinations of outputs are given in the table below.

Milk (Million Gallons/Year)	Fruits (Thousand Tons/Year)
0	80
2.5	70
5	50
6.5	30
7.5	0

a. Draw a graph that illustrates these combinations of outputs. What is it called? Correctly label the graph.



b. Explain why the curve is downward sloping, and why it is concave to the origin.

Due to the limited in resources, to increase the production of one product it need to substitute with the decrease in product production of another product. Which cause the PPC slopes down from left to right.

The PPC is concave due to the increasing in marginal opportunity cost. For example, to increase the production of milk from 0 to 2.5 million gallons, we need to sacrifice 10,000 tons of fruit. To increase the next 2.5 million gallons of milk (from 2.5 to 5), we need to sacrifice up to 20,000 tons of fruit.

c. What do we know about the use of resources if the economy produces 2,500,000 tons of milk and 60,000 tons of fruits? What about if it produces 3,000,000 tons of milk and 70,000 tons of fruits?

(60, 2.5) is the point inside the PPC, at this point that the production is inefficient because it actually can increase the efficiency of production by producing more product until the production lie on the PPC.

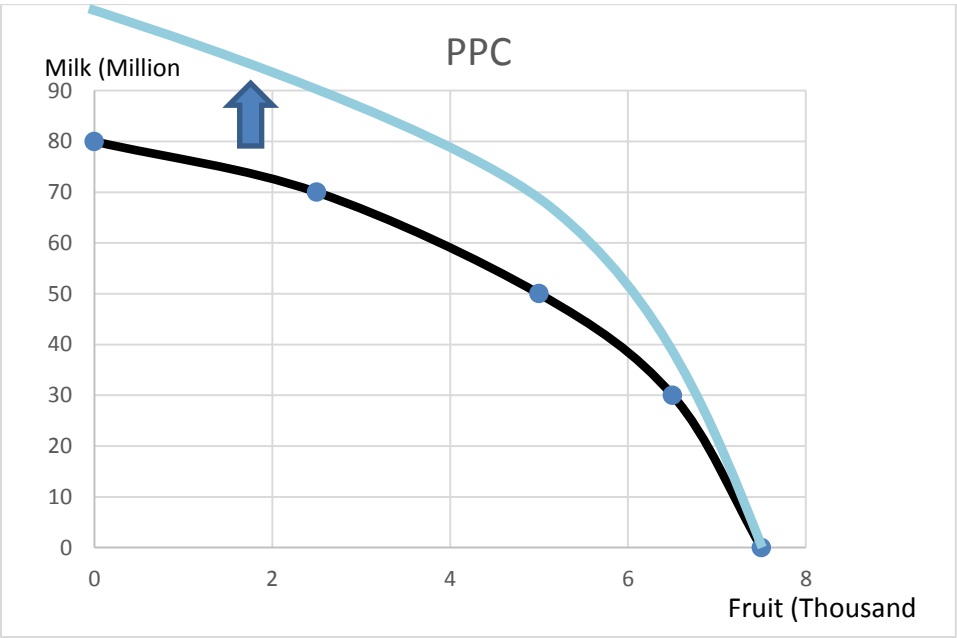
(70,3) is above the PPC, this point is unattainable due to the limited in resources.

d. Suppose the economy is initially producing 5,000,000 gallons of milk and 50,000 tons of fruit, calculate the opportunity cost of producing additional 20,000 tons of fruits. How does this compare to the opportunity cost if the economy were initially producing 30,000 tons of fruits?

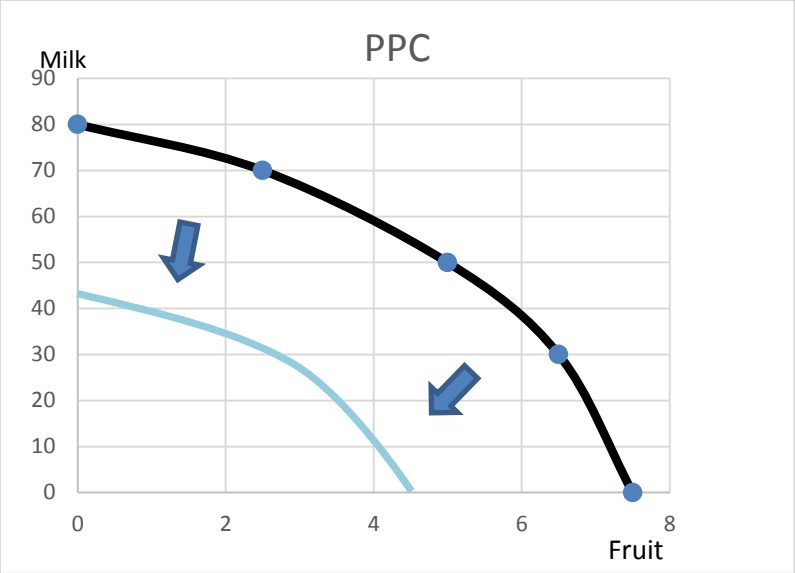
50 to 70 tons of fruit: To increase 20,000 tons of fruit, we need to sacrifice 2.5 million gallons of milk

30 to 50 tons of fruit: To increase 20,000 tons of fruit, we need to sacrifice 1.5 million gallons of milk.

e. Suppose that a group of scientists invent new medicine that can increase cow's milk production. How would the curve drawn in part b. change? Assume everything else remains constant.



f. Suppose instead that there is a flood that affects both milk and fruit production. How would the curve drawn in part b. change? Assume everything else remains constant.



4. Consider the following statements. Which is positive, and which normative?
    a. Bitcoin is a digital currency. (positive)
    b. Bitcoins are desirable only among certain groups of population. (positive)
    c. The use of bitcoins could become more popular in the future. (normative)
    d. Taxes on supercars are likely to increase next year. (normative)
    e. The NESDB forecasts that the GDP will increase by 3% this year. (positive)