ECO101: Introduction to Microeconomics

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SECTION: 11

WEEK 01, LECTURE 02

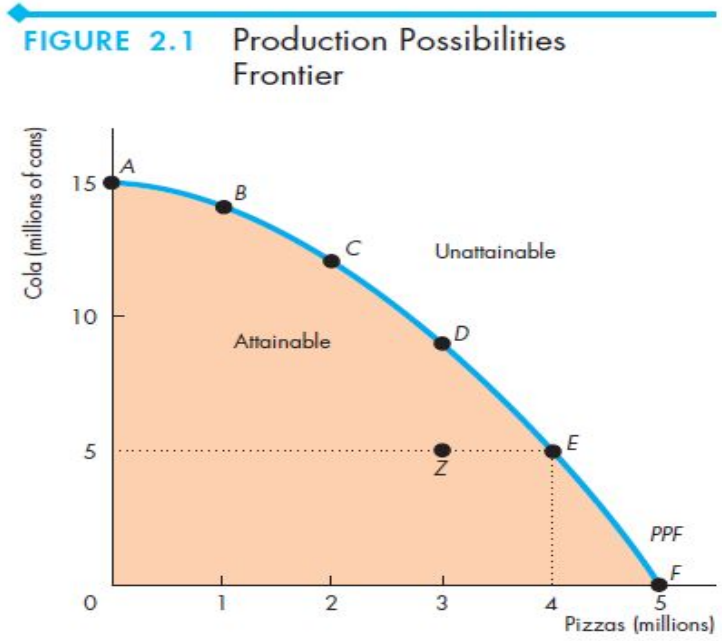
Previously on ECO101

Six key ideas that define the *economic way of thinking*. These ideas are:

- A choice is a ***trade-off***.
- People make ***rational choices*** by comparing benefits and costs.
- ***Benefit*** is what you gain from something.
- Cost is what you ***must give up to get something***
- Most choices are “how-much” choice made at the ***margin***.
- Choices respond to ***incentives***.

Production Possibility Frontier (PPF)

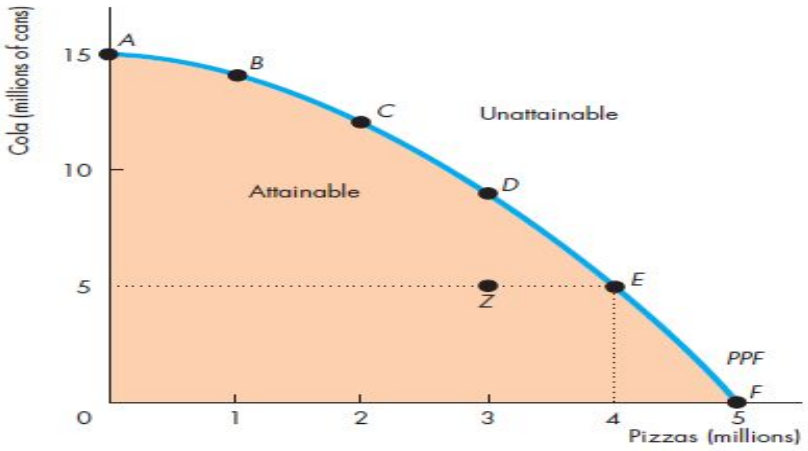
- The **production possibilities frontier** (*PPF*) is the boundary between those combinations of goods and services that can be produced and those that cannot.
- The *PPF* illustrates ***scarcity***
  - we cannot attain the points outside the frontier.
  - We can produce at all the points *inside* the *PPF* and *on* the *PPF*. They are attainable points.
- We achieve **production efficiency** if we produce goods and services at the lowest possible cost.
  - When production is efficient, we are at a point *on* the *PPF*.
  - If we are at a point *inside* the *PPF*, such as point *Z*, production is *inefficient* because we have some *unused* resources or we have some *misallocated* resources or both.



Opportunity Cost

- Every choice along the PPF involves a trade-off.
  - At any given point in time, we have a fixed amount of labour, land, capital and entrepreneurship. We can employ these resources and technology to produce goods and services, but we are limited to what we can produce.
- All trade-offs involve an opportunity cost.
- The opportunity cost of an action is the highest-valued alternative foregone.
  - The opportunity cost of an additional can of cola is the quantity of pizza we must forgo.
- **Opportunity cost is a Ratio.**
  - It is the decrease in the quantity produced of one good divided by the increase in the quantity of another good as we move along the PPF.
- The outward-bowed shape of the PPF reflects increasing opportunity cost.

Opportunity Cost is a Ratio:



Possibility	Pizzas (millions)		Cola (millions of cans)
A	0	and	15
B	1	and	14
C	2	and	12
D	3	and	9
E	4	and	5
F	5	and	0

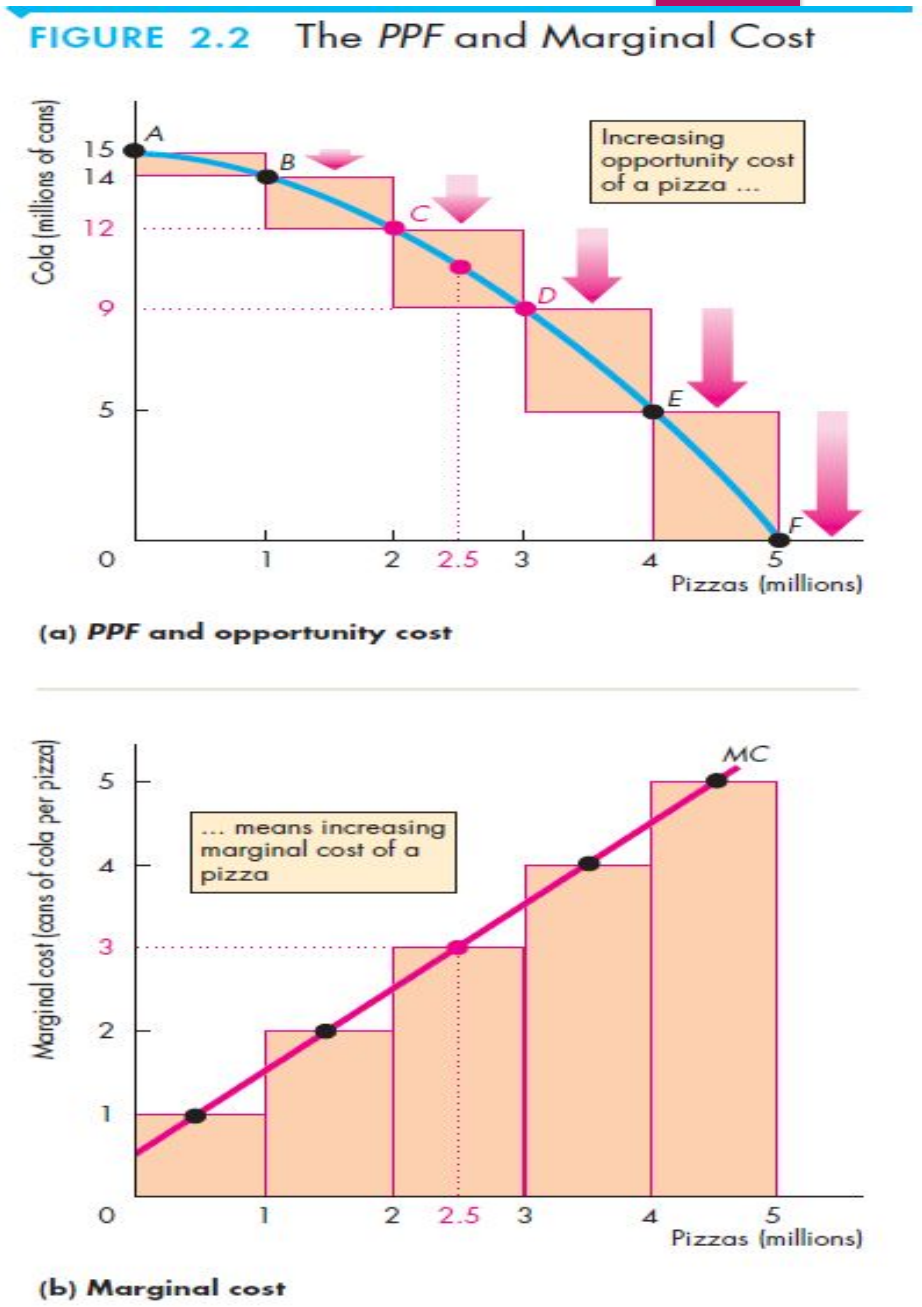
- Moving from C to D, the opportunity cost of a pizza is 3 cans of Cola.
- Because Opportunity Cost is a ratio, the cost of producing one additional can of cola is equal to the inverse of the opportunity cost of producing additional pizza.
- The inverse of 3 is 1/3, so if we decrease the production of pizza and increase the production of Cola (moving from D to C), the opportunity cost of a can must be 1/3 pizza.
- **The ratio is always $\Delta y / \Delta x$**

We achieve production efficiency at every point on the PPF, but which point is the best?

Answer: The point on the PPF at which the goods and services are produced in the quantities that provide the greatest possible benefit. For this we must compare Cost and benefit.

PPF and the Marginal Cost

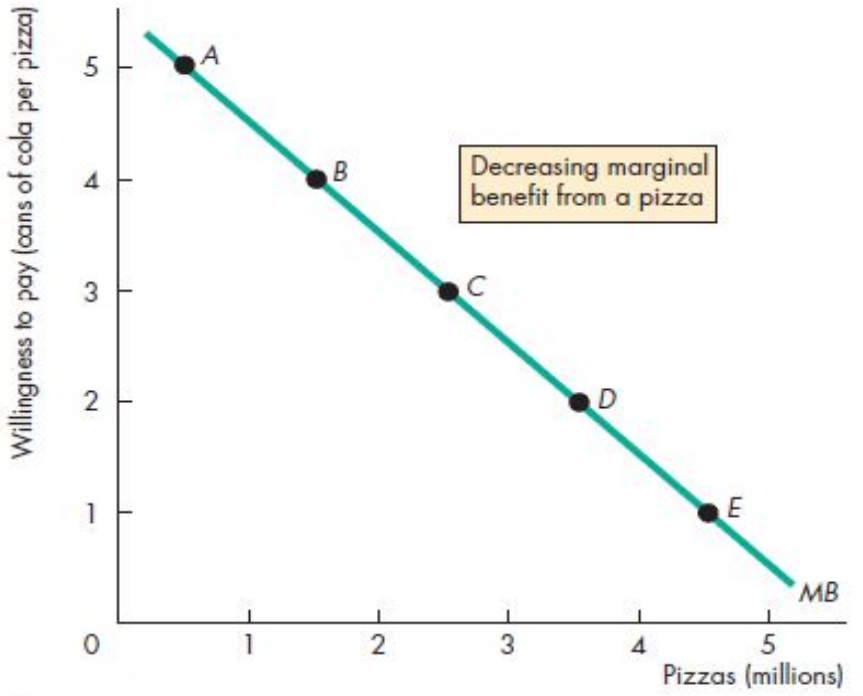
- **Marginal cost** is the opportunity cost of producing one more unit.
- We can calculate marginal cost from the slope of the PPF
- As the quantity of Pizzas produced increases the slope becomes steeper and the marginal cost of a pizza increases.



Marginal Benefit

- The marginal benefit from a good or service is the benefit received from consuming one more unit of it.
- This benefit is subjective. It depends on people's preferences- likes and dislikes and the intensity of those feelings.
- The Marginal Benefit curve shows the relationship between the marginal benefit from a good and the quantity consumed of that good.
- Note: Marginal benefit curve is unrelated to the PPF and cannot be derived from it.
- The ***principle of decreasing marginal benefit***.
- The smaller the quantity of pizzas produce the more cola people are willing to give up for an additional pizza.

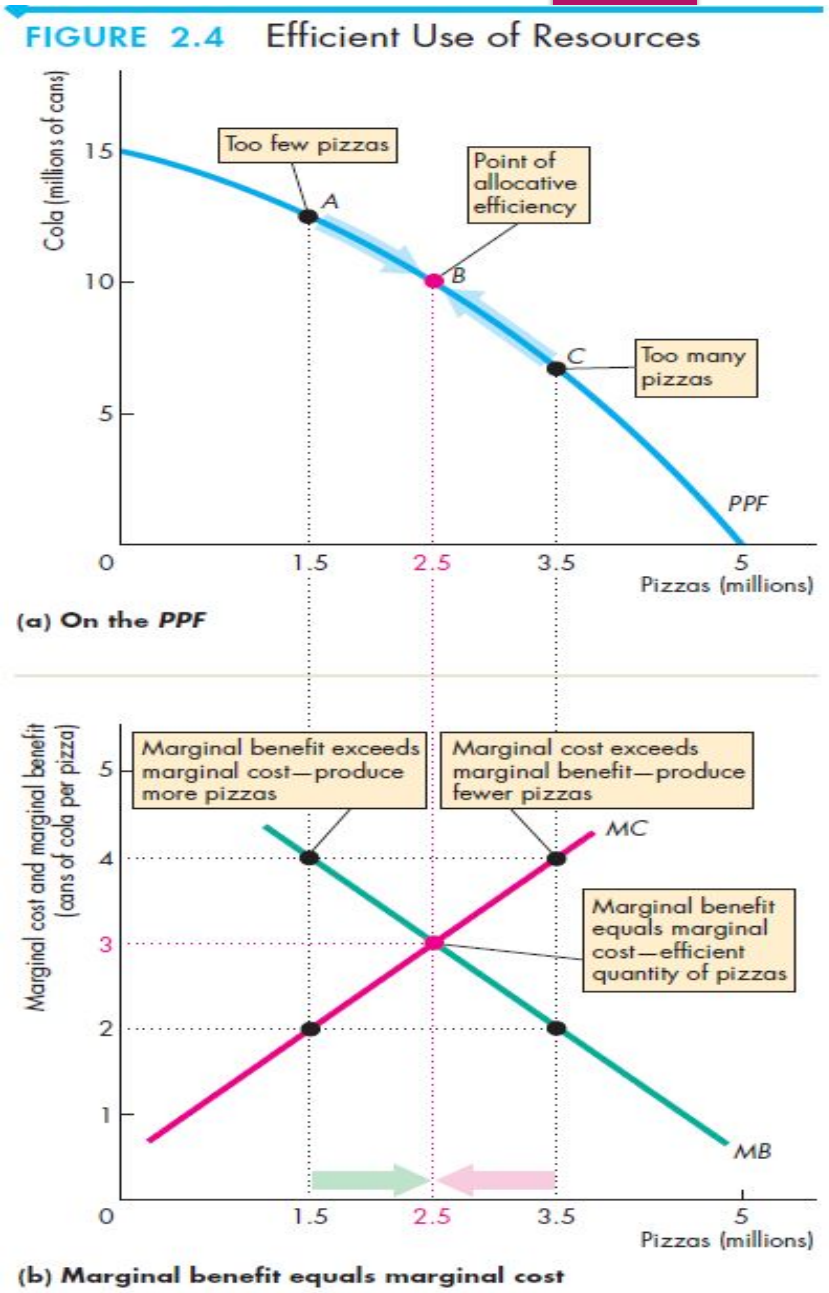
FIGURE 2.3 Preferences and the Marginal Benefit Curve



Possibility	Pizzas (millions)	Willingness to pay (cans of cola per pizza)
A	0.5	5
B	1.5	4
C	2.5	3
D	3.5	2
E	4.5	1

Efficient Use of Resources

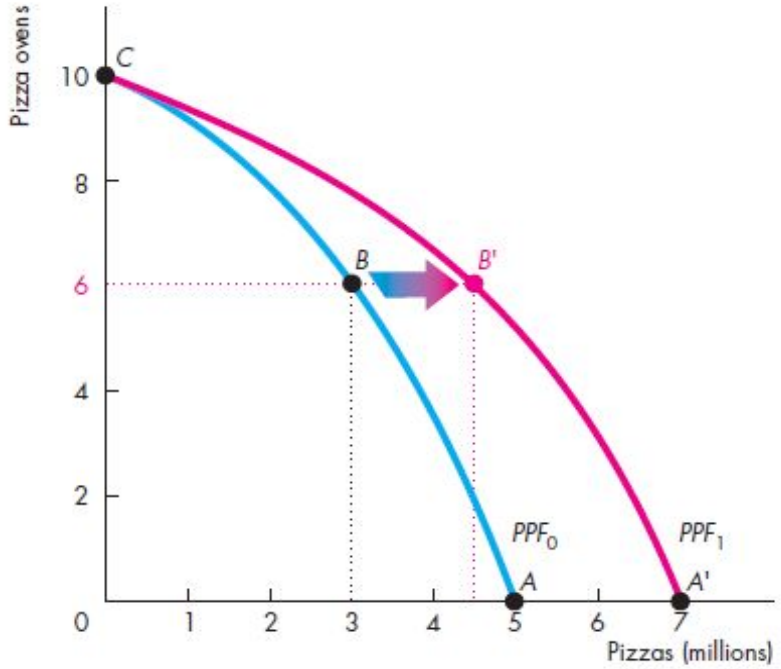
- At the best point on the PPF, we cannot produce one more of one good without giving up some other good that provides greater benefit.
- At point A, the marginal benefit exceeds the marginal cost.
- At point C, the marginal cost exceeds the marginal benefit.
- At point B, Marginal Cost = Marginal Benefit.
  - If more pizzas are produced, the foregone cola is worth more than the additional pizzas. If fewer pizzas are produced, the foregone pizzas are worth more than the additional cola.



Economic Growth

- An expansion of production possibilities is called economic growth.
- Economic growth increases our *standard of living,* but it doesn't overcome scarcity and avoid opportunity cost.
- Economic growth comes from:
  - **Technological change** is the development of new goods and of better ways of producing goods and services.
  - **Capital accumulation** is the growth of capital resources, including *human capital*.
- The opportunity cost of producing more pizzas in the future is fewer pizzas today.

FIGURE 2.5 Economic Growth



Comparative Advantage and Absolute Advantage

- A person has a **comparative advantage** in an activity if that person can perform the activity at a lower opportunity cost than anyone else.
- A person who is more productive than others has an **Absolute advantage**.
- Absolute advantage involves comparing productivities—production per hour—whereas comparative advantage involves comparing opportunity costs.
- A person who has an absolute advantage does not have a *comparative* advantage in every activity.
- People can produce for themselves all the goods and services that they consume, or they can produce one good or a few goods and trade with others.
- Producing only one good or a few goods is called *specialization.*

Gains from Trade

TABLE 2.1 Liz's Production Possibilities

Item	Minutes to produce 1	Quantity per hour
Smoothies	2	30
Salads	2	30

TABLE 2.2 Joe's Production Possibilities

Item	Minutes to produce 1	Quantity per hour
Smoothies	10	6
Salads	2	30

TABLE 2.3 Liz and Joe Gain from Trade

(a) Before trade	Liz	Joe
Smoothies	15	5
Salads	15	5
(b) Specialization	**Liz**	**Joe**
Smoothies	30	0
Salads	0	30
(c) Trade	**Liz**	**Joe**
Smoothies	sell 10	buy 10
Salads	buy 20	sell 20
(d) After trade	**Liz**	**Joe**
Smoothies	20	10
Salads	20	10
(e) Gains from trade	**Liz**	**Joe**
Smoothies	+5	+5
Salads	+5	+5

Read from the book: (Chapter 2) Economic Coordination

NEXT CLASS : Demand and Supply