Module 2a

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Recap

Recap

Microeconomics is the study of decision making undertaken by individuals (or households) and by firms

Macroeconomics us the study of the behavior of the economy as a whole.

Economic models is a simplification of reality that can help us understand patterns and similarities across different situations.

Marginal change in something is the smallest possible change you could possibly make.

- If we change some factor x by a marginal amount, then some outcome y may also change, which we call the marginal effect of changing x.

Recap

Ceteris paribus is a fancy way of saying *keeping all other factors fixed*

Positive Economics is purely descriptive statements or scientific predictions.

Normative Economics analysis involving value judgments, *what ought to be*

Opportunity Cost

Opportunity Cost is the value of the best forgone alternative action.

Amy is thinking about going to the movies tonight. A ticket costs $7 and she will have to cancel her dog-sitting job that pays $30. The total cost (money cost plus opportunity cost) of seeing the movie is

a. $7

b. $30

c. $37

The direct (monetary cost) is $7, and the opportunity cost is $30 since that's the value of the other option, so the total cost is $37.

d. $37 minus the benefit of seeing the movie.

Scarcity Questions

What?

What, How, and For Whom?

- Goods and services are the objects that people value and produce to satisfy human wants.

What?

- Based on our unlimited wants & limited resources (scarcity)
- If more of a particular item is produced, then less of something else will be produced during the same period, with a given set of resources.

How?

How?

Goods and services are produced by using productive resources (inputs) that economists call factors of production.

Four categories:

- Land
- Labor
- Capital
- Technology/Entrepreneurship

How?

Land

- Natural resources or the gifts of nature

Labor

- The human resource

How?

Physical Capital & Human Capital

- All manufactured resources
- Accumulated training and education of workers

Technology/Entrepreneurship

- Labor that organizes, manages, and assembles the other resources
- Risk taker (Elon Musk)
- Maker of basic business policy decisions
- Blueprints

For Whom?

Who gets the goods and services depends on the incomes that people earn.

Four categories:

- Land earns rent.
- Labor earns wages.
- Capital earns interest.
- Entrepreneurship earns profit.

PPC

PPC: Scarcity, Choice, and Opportunity Cost

- Recall, whenever resources are used for any activity, the user is **trading off the opportunity to use those resources** for other things.
- Now, look at the first model to illustrate these concepts.

PPC: Scarcity, Choice, and Opportunity Cost

Scarcity, choice and opportunity cost graphically:

- The production possibilities curve (PPC) represents all possible combinations of total output that could be produced.
- Along the production possibilities curve, there is a fixed quantity of productive resources of a given quality being used efficiently.

PPC: Scarcity, Choice, and Opportunity Cost

Production possibilities assumptions

- Resources are fully employed
- Production is for a specific time period
- Resources are fixed for the time period
- Technology does not change over the time period

PPC: Scarcity, Choice, and Opportunity Cost

Production Possibility Curve

Combination	**Corn**	**Beads**
A	160	0
B	120	10
C	80	20
D	40	30
E	0	40

PPC: Scarcity, Choice, and Opportunity Cost

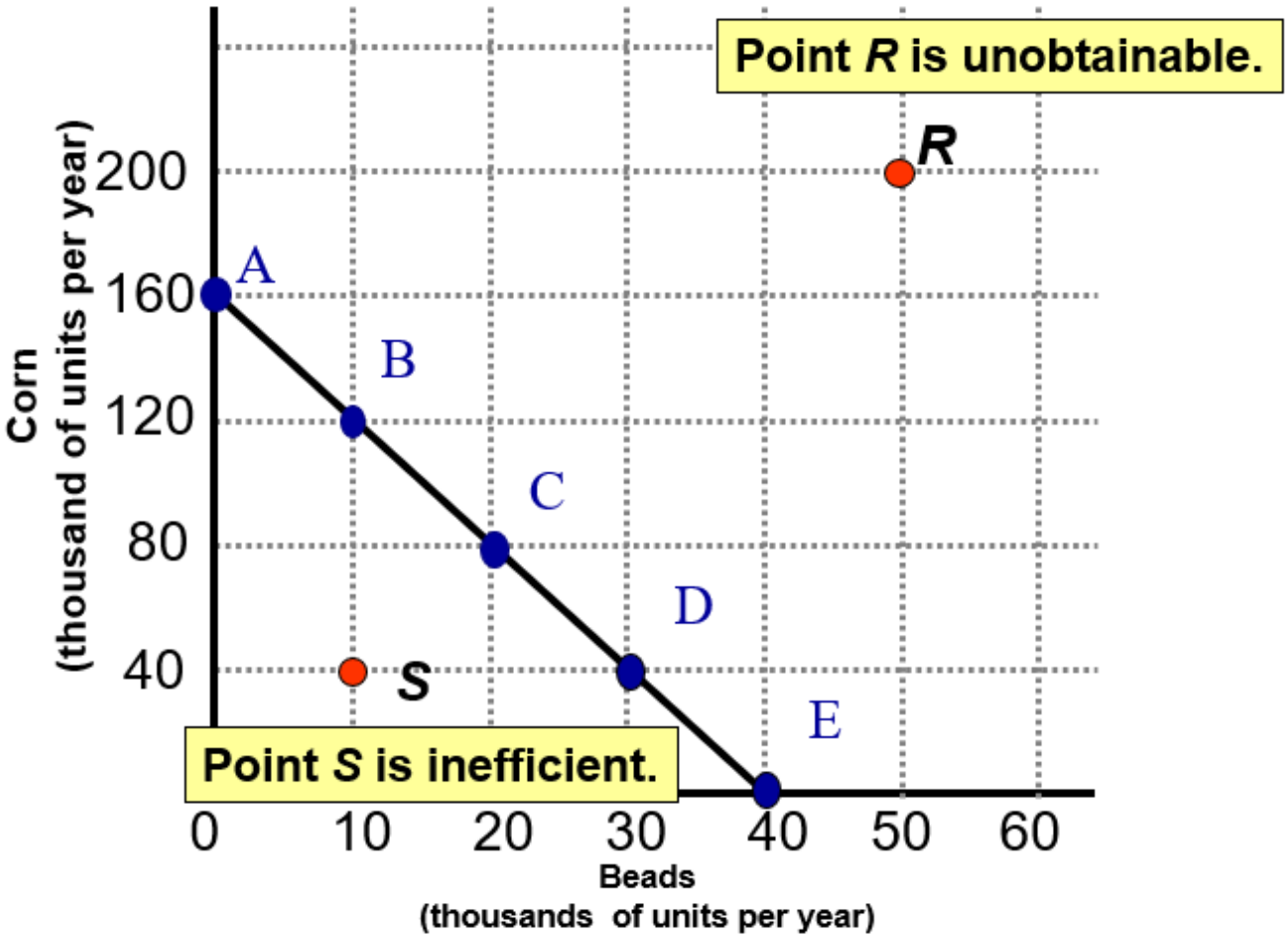


Figure 1: Graph of PPC

PPC: Scarcity, Choice, and Opportunity Cost

Every choice along the PPC involves a tradeoff (points A – E).

On this PPC, we must give up some Corn to get more Beads or vice versa.

Thus, we can illustrate and measure opportunity cost Moving from B to A

Costs, Preferences, and Benefits

Law of Increasing Relative Costs

As society attempts to produce more of a good, the opportunity cost of additional units of that good generally increases.

Bowed-out PPC, not straight line

The **marginal cost** of a good or service is the opportunity cost of producing one more unit of it.

Law of Increasing Relative Costs

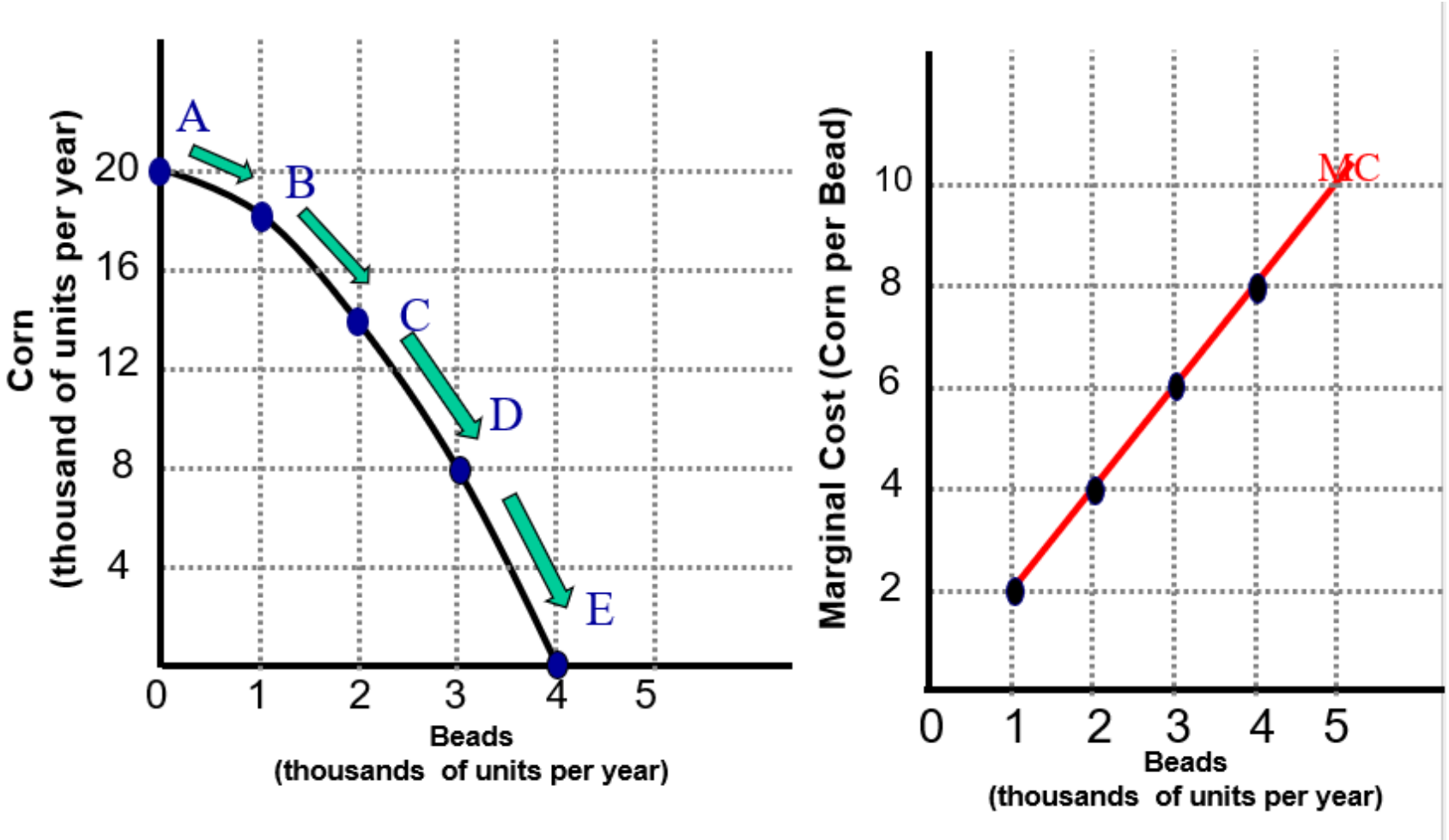


Figure 2: Increasing Marginal Cost

Preferences and Marginal Benefit

Preferences are a description of a person's likes and dislikes.

- To describe preferences, economists use the concepts of marginal benefit and the marginal benefit curve.

The **marginal benefit** of a good or service is the benefit received from consuming one more unit of it.

- We measure marginal benefit by the amount that a person is *willing* to pay for an additional unit of a good or service.

Preferences and Marginal Benefit

- It is a general principle that the more we have of any good, the smaller is its marginal benefit and the less we are willing to pay for an additional unit of it.
- We call this general principle the principle of **decreasing marginal benefit**
- The **marginal benefit curve** shows the relationship between the marginal benefit of a good and the quantity of that good consumed.

Production and Allocative Efficiency

Production Efficiency

We achieve **production efficiency** if we cannot produce more of one good without producing less of some other good. Points on the curve are efficient.

Any point inside the curve is **inefficient.**

At **S**, resources are either **unemployed** or **misallocated**

At such a point, it is possible to produce more of one good without producing less of the other good.

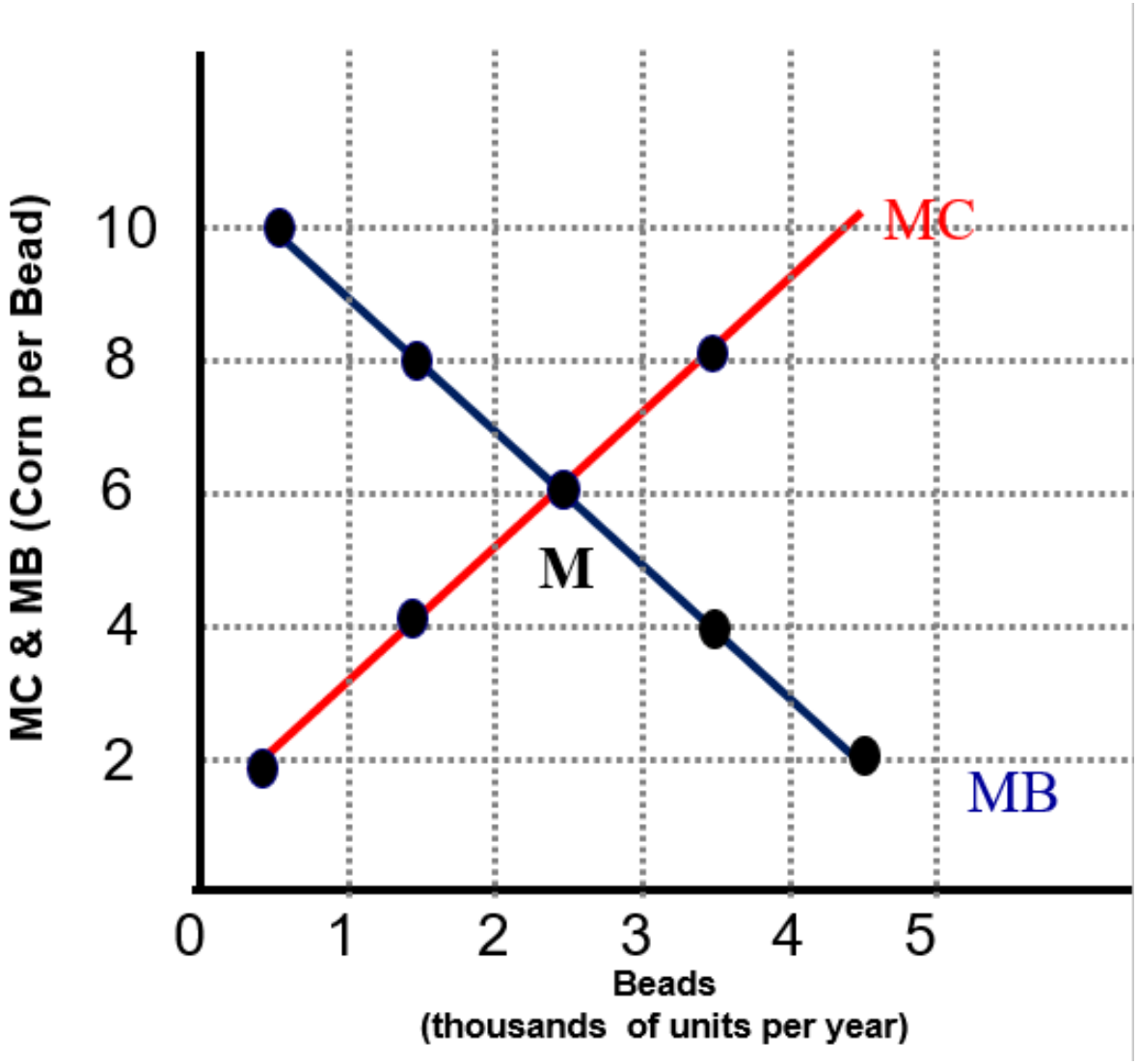
Efficient Use of Resources

When we cannot produce more of any one good without giving up some other good, we have achieved **production efficiency** (on PPC).

When we cannot produce more of any one good without giving up some other good that we value more highly, we have achieved **allocative efficiency.**

We are producing at the (best) point on the PPC that we prefer above all other points.

Production and Allocative Efficiency



Production and Allocative Efficiency

If we produce fewer than 2.5 thousand beads, marginal benefit exceeds marginal cost.

If we produce more than 2.5 thousand beads, marginal cost exceeds marginal benefit.

Only one point represents allocative efficiency. It's where marginal benefit equals marginal cost. Point **M**.

Lesson

Marginal Analysis

You are a computer manufacturer

Looking at last year's figures, you see:

- Average cost for computer was = \$1,000
- Average revenue of project P = \$1,250

You have extra time. Should you ramp up production?

Marginal Analysis

Marginal Cost vs Marginal Benefit

# Computer	Total Cost	Marginal Cost	Average Cost	Price
0	0			
1	$600	$600	$600	$1,250
2	$1,400	$800	$700	$1,250
3	$2,400	$1,000	$800	$1,250
4	$3,600	$1,200	$900	$1,250
5	$5,000	$1,400	$1,000	$1,250

Sunk Cost

Example 1

A cost is **sunk** if it cannot be recovered by taking any of the alternatives under consideration.

Imagine you're on your way to a concert.

It's not sold out (obviously)

Ticket costs $40, and you value the experience at $50

You show up and realize you've lost your ticket

Do you buy another at the door?

Example 2

Annual gym membership for $400 vs. $10 per visit

If the value of going on a given Saturday is $8, then you should go only if you bought the membership

Economic surplus of $8 w/ membership vs. -$2 without.

But notice that this conclusion is the same independent of the price of the annual membership.

Key point: under the membership, it may be rational to workout more often

NOT because of the cost of the membership, but because the extra cost of going has been reduced.

Example 3

You had to pay $600 (non-refundable) for your meal plan for Fall semester which gives you up to 150 meals. If you eat only 100 meals, your marginal cost for the 101st meal is

a. $6
b. $4
c. $0.25
d. $0